

# Compulsory English

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part I Examination**  
**Compulsory English First Semester**  
**(To be implemented from the session 2020-21 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbook:**

*A Novel Beginning* edited by Urmila Dabir, Priya Wanjari, Renu Dalela (Orient BlackSwan)

**Objectives-**

1. To generate interest of the students in English Language through Interesting lessons.
2. To motivate the students through the Life Sketches of successful entrepreneurs.
3. To develop interest in poetry through poems which are easy to comprehend.
4. To make the students understand the poems of different genres.
5. To make students understand structure of sentences through prescribed grammar.

**Outcome**

1. The moral imparted in Prose will have a positive impact on the mindset of the students.
2. The life of great personalities will motivate them to toil to be successful.
3. The syllabus will contribute in vocabulary enhancement.
4. The learners will get an opportunity to study Indian and English poets and develop a critical outlook through comparison.
5. The drafting skills of the learners will be honed through the prescribed items of grammar.

**Unit I – Prose**

1. The Thief – Ruskin Bond
2. Between the Mosque and the Temple – Boman Desai
3. A Letter by Hazlitt to His Son - William Hazlitt
4. Education Provides a Solid Foundation - A. P. J. Abdul Kalam

**Unit II – Personalities**

1. Ramchandrarao Kirloskar and Laxmanrao Kirloskar
2. Sudha Murty
3. Muhammad Yunus

**Unit III - Poetry**

1. In the Bazaars of Hyderabad – Sarojini Naidu
2. Daffodils - William Wordsworth
3. To Autumn – John Keats
4. The Highwayman - Alfred Noyes

**Unit IV - Grammar and Composition**

1. Comprehension
2. Letter Writing (Application with Resume, Placement of Order, Complaint Letter)
3. Synonyms and Antonyms

**Internal Assessment:**

There shall be two Assignments based on prescribed syllabus carrying 10 marks each. ( $10 \times 2 = 20$ )

*Dinesh  
Dwivedi  
Mohit  
Mehta  
Yashwant  
Shrikant  
Naveen  
D.V.N.  
V.V.Bhaydikar  
Om*

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part I Examination (Second Semester)**  
**Compulsory English**  
**(To be implemented from the session 2020-21 and onwards)**

**Theory marks: 80**

**Internal Assessment:20**

**Prescribed Textbook:** *A Novel Beginning* edited by Urmila Dabir, Priya Wanjari, Renu Dalela (Orient BlackSwan)

**Objectives-**

1. To keep the interest of the learners alive though lessons containing humour and but conveying a moral at the same time
2. To attract the students to attend classes, interesting and inspiring life sketches of people who brought revolutionary changes have been included.
3. To inculcate the quality of Patriotism and to convey evils of materialism selected poems have been incorporated on such themes
4. The grammar and composition portion intends to develop confidence regarding grasping and understanding of English language and encourage proper use of tenses.

**Outcomes-**

1. The learners will get an opportunity to study lessons based on themes containing humour, emotional bonding, ethics and values as these qualities are well expected in an Indian citizen.
2. The life sketches of successful people will motivate them to excel despite adverse conditions.
3. The poems will encourage the learners to shun violence and materialism
4. Through Grammar and Composition the learners will gain confidence in Spoken English

**Unit I – Prose**

1. The Romance of a Busy Broker - O. Henry
2. Miss Brill - Katherine Mansfield
3. The Homecoming - Rabindranath Tagore
4. Values in Life - Rudyard Kipling

**Unit II – Personalities**

1. Ratan Tata
2. Sundar Pichai
3. Louis Braille

**Unit III - Poetry**

1. An Irish Airman Foresees His Death - W. B. Yeats
2. Money Madness – D.H. Lawrence
3. Stay Calm – Grenville Kleiser
4. The Lotus - Toru Dutt

**Unit IV - Grammar and Composition**

1. Comprehension
2. Paragraph Writing
3. Subject-Verb Agreement

**Internal Assessment:**

There shall be two Assignments based on prescribed syllabus carrying 10 marks each. (10 X 2 =20)

*Comm. Date  
Michael  
Mr. ....  
V.V.Bhangale  
Secty  
One  
D.V.W.  
W.S.J.*

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part II Examination (Third Semester)**  
**Compulsory English**  
**(To be implemented from the session 2021-22 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbook:**

*Rhymes and Sketches* edited by Dnyanesh Naik, Sanjay Tappe, Alka Zade (Orient BlackSwan)

**Objectives**

1. To make the learners understand the value of natural resources and the importance of their preservation
2. To make the learners understand the role of the element of humour in conveying a lesson
3. To encourage the learners to nurture aspirations to be successful in their lives after reading about the lives of people who made an everlasting impact.
4. To encourage humanity and goodwill through poetry section
5. To train the learners how to exercise brevity or explain in detail through Grammar and Composition

**Outcomes-**

1. The learners will learn lessons of morality and humanity
2. The aim is to make the students realize the importance of having unpolluted water and conserve natural resources by worshiping nature for the sake existence of mankind.
3. The prescribed life sketches of successful people will act as an inspirational story and these successful people may become their role models
4. The learners will imbibe lessons of humanity and justice through the poetry section
5. The power of expression of the learners will get enhanced through the Grammar and Composition Section

**Unit I - Prose**

1. The Lottery Ticket - Anton Chekhov
2. The Three Questions - Leo Tolstoy
3. Water: The Elixir of Life - C.V. Raman
4. With the Photographer - Stephen Leacock

**Unit II – Personalities**

1. Mallika Srinivasan
2. G.D. Naidu
3. Akio Morita

**Unit III - Poetry**

1. Yussouf - James Russell Lowell
2. Lord Ullin's Daughter - Thomas Campbell
3. To India - My Native Land - Henry Derozio
4. When We Two Parted – Lord Byron

**Unit IV- Grammar and Composition**

1. Precis Writing
2. Voice
3. Expansion of an Idea or a Proverb

**Internal Assessment:**

There shall be two Assignments based on prescribed syllabus carrying 10 marks each (10 X 2 = 20)

*Dinesh  
Naik  
Minal  
Uma  
Dewar  
V.V. Bhagat  
Sachin  
Shanti  
Devi  
Om  
Nag  
D.N.W.*

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part II Examination (Fourth Semester)**  
**Compulsory English**  
**(To be implemented from the session 2021-22 and onwards)**

Theory marks: 80

## **Internal Assessment: 20**

### **Prescribed Textbook:**

*Rhymes and Sketches* edited by Dnyanesh.Naik, Sanjay Tappe, Alka Zade (Orient BlackSwan)

## **Objectives-**

1. To make the students understand importance of religious values and be satisfied with what they possess, through the prose prescribed
  2. To develop an urge to succeed just as the great personalities whose life stories have been prescribed.
  3. To make the learners imbibe the spirit to struggle and nurture indomitable spirit through the poetry section.
  4. To boost confidence about narration skills and email drafting techniques

## **Outcomes-**

1. The students will learn how immaterial the materialistic world is.
  2. The landmark achievements of the revolutionary figures will be a lesson to the learners to emulate.
  3. The contents of poetry section will serve as a lesson which will help the learners when they are low in spirit.
  4. The learners will acquire drafting skills which will help them in their career

**Unit I - Prose**

1. The Last Salvation – R.P. Sisodia
  2. Forgetting – Robert Lynd
  3. The Diamond Necklace – Guy de Maupassant
  4. Lawley Road – R.K. Narayan

## **Unit II - Personalities**

1. Vijay Bhatkar
  2. Priya Paul
  3. Steve Jobs

### **Unit III - Poetry**

1. Say Not the Struggle Nought Availeth - Arthur Hugh Clough
  2. The Tiger and the Deer - Sri Aurobindo
  3. Polonius to Laertes - William Shakespeare
  4. Nature – H. W Longfellow

## **Unit IV- Grammar and Composition**

1. Story Writing
  2. Narration
  3. Writing Email

## **Internal Assessment:**

There shall be two Assignments based on prescribed syllabus carrying 10 marks each. (10 X 2 = 20)

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Final Examination (Fifth Semester)**  
**Compulsory English**  
**(To be implemented from the session 2022-23 and onwards)**

**Theory marks: 80**

### **Internal Assessment: 20**

### **Prescribed Textbook:**

*Emanating Voices* edited by Ajit Jachak, Neehal R. Sheikh, Sawan Dharmapuriwar (Orient BlackSwan)

## **Objectives-**

1. To encourage the spirit of universal brotherhood and belief in humanity through the messages conveyed in Prose section
  2. To encourage the student to have a vision just as the prescribed personalities had
  3. To make the students the playful mode in the poetry section but having a strong undercurrent of a meaningful message.
  4. To make the learners realise how tenses play an important role while communicating in English.

## **Outcomes-**

1. The learners will imbibe and implement the tenets of tolerance and simplicity in their daily lives
  2. In an era when we are facing the problem of unemployment the student will feel encouraged towards self employment after reading about the three great personalities.
  3. The strong message that touches the life of common people conveyed through the poetry section will have a positive impact on the minds of the learners.
  4. The Grammar and Composition section will boost their self confidence resulting into effective communication skills

## **Unit I - Prose**

1. The Mother of a Traitor - Maxim Gorky
  2. Speeches at the Parliament of the Religions, 1893 - Swami Vivekananda
  3. Whitewashing the Fence - Mark Twain
  4. Appro JRD - Sudha Murthy

## **Unit II - Personalities**

1. Dhirubhai Ambani
  2. Kalpana Chawla
  3. L.M. Thapar

### **Unit III - Poetry**

1. Dirge – James Shirley
  2. The Mountain and the Squirrel - Ralph Waldo Emerson
  3. Annabel Lee - Edgar Allan Poe
  4. A Lament – P.B. Shelley

## **Unit IV- Grammar and Composition**

1. Essay Writing
  2. Tenses
  3. Inventory Reports

## **Internal Assessment:**

There shall be two Assignments based on prescribed syllabus carrying 10 marks each. (10 x 2 = 20)

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Final Examination (Sixth Semester)**  
**Compulsory English**  
**(To be implemented from the session 2022-23 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbook:**

*Emanating Voices* edited by Ajiet Jachak, Neehal R. Sheikh, Sawan Dharmapuriwar (Orient BlackSwan)

**Objectives-**

1. To make the Learners realise that an egoistic attitude brings doom through the prose prescribed
2. To make the Learners realise the dignity of Labour as conveyed by A.P.J. Abdul Kalam
3. To encourage the Learners struggle to be successful just as the great personalities on whom lessons have been prescribed.
4. To make the students understand the futilities of war and believe in self to attain glory as conveyed through poetry section.
5. To attain vocabulary enrichment and develop writing skills

**Outcomes-**

1. The learners will understand that friendship and human relationship beats an egoistic attitude based on monetary interests as conveyed in Prose section
2. The students will enjoy a great impact on their lives after reading the thoughts on the struggling spirit by A.P.J. Abdul Kalam
3. The tremendous success achieved by the great personalities will make the learners realize that 'If there is a Will, there is a Way'
4. The message of spreading peace and tranquility will receive a boost through the poetry section.

**Unit I - Prose**

1. After Twenty Years - O. Henry
2. The Gold Frame - R.K. Laxman
3. The Bet - Anton Chekov
4. Work Brings Solace - A.P.J. Abdul Kalam

**Unit II - Personalities**

1. Rahul Bajaj
2. G.R. Gopinath
3. Sabeer Bhatia

**Unit III - Poetry**

1. Bangle Sellers - Sarojini Naidu
2. The Soldier - Rupert Brooke
3. On His Blindness - John Milton
4. Invictus - W.E. Henley

**Unit IV - Grammar and Composition**

1. Punctuation
2. One Word Substitution
3. Newspaper Reports
4. Drafting Advertisements

**Internal Assessment:**

There shall be two Assignments based on prescribed syllabus carrying 10 marks each. (10 X 2 = 20)

*Omaji*

**B. A. Part I**  
**Semester I**  
**Subject- Compulsory English**  
**Total Marks-80**

Question no. 1 (A)- 3 Short Answer Questions on Unit I (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit I (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 2 (A)- 3 Short Answer Questions on Unit II (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit II (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 3 (A)- 3 Short Answer Questions on Unit III (Poetry) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit III (Poetry) (Choose the correct option form)-  
**5 Marks**

Question no. 4 (A) – Comprehension- **10 Marks**

(B) – Letter Writing (Application with Resume, Placement of Order, Complaint Letter)-  
**5 Marks**

(C) – Synonyms/Antonyms (In Match the pair Form)- 5 items-  
**5 Marks**

**B. A. Part I**  
**Semester II**  
**Subject- Compulsory English**  
**Total Marks-80**

Question no. 1 (A)- 3 Short Answer Questions on Unit I (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit I (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 2 (A)- 3 Short Answer Questions on Unit II (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit II (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 3 (A)- 3 Short Answer Questions on Unit III (Poetry) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit III (Poetry) (Choose the correct option form)-  
**5 Marks**

Question no. 4 (A) – Comprehension- **10 Marks**

(B) – Paragraph Writing- **5 Marks**

(C) – Subject-Verb Agreement (Choose the correct option form)- 5 items- **5 Marks**

*Pulkit* *Minal* *Parth* *Nishant* *Disha* *Shivam* *Aayush* *D.V.P.* *V.D.S.* *Karan* *V.V.Bhagat* *Omkar*

**B. A. Part II**  
**Semester III**  
Subject- Compulsory English  
**Total Marks-80**

Question no. 1 (A)- 3 Short Answer Questions on Unit I (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit I (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 2 (A)- 3 Short Answer Questions on Unit II (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit II (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 3 (A) 3 Short Answer Questions on Unit III (Poetry) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit III (Poetry) (Choose the correct option form)-  
**5 Marks**

Question no. 4(A) – Precis Writing- **10 Marks**

(B) – Change the Voice (Five questions of one mark each) - **5 Marks**  
(C) – Expansion of an Idea or a Proverb- **5 Marks**

**B. A. Part II**  
**Semester IV**  
Subject- Compulsory English  
**Total Marks-80**

Question no. 1 (A)- 3 Short Answer Questions on Unit I (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit I (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 2 (A)- 3 Short Answer Questions on Unit II (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit II (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 3 (A)- 3 Short Answer Questions on Unit III (Poetry) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit III (Poetry) (Choose the correct option form)-  
**5 Marks**

Question no. 4(A) – Story Writing- **10 Marks**

(B) Change the Narration (Five questions of one mark each) - **5 Marks**  
(C) – Writing Email - **5 Marks**

*Dinesh Mohan* *10* *V.V.Bhagatam* *N.Singh* *Devender Singh*

**B. A. Part III  
Semester V  
Subject- Compulsory English  
Total Marks-80**

Question no. 1 (A)- 3 Short Answer Questions on Unit I (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit I (Prose) (Choose the correct option from)- **5 Marks**

Question no. 2 (A)- 3 Short Answer Questions on Unit II (Prose) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit II (Prose) (Choose the correct option form)-  
**5 Marks**

Question no. 3 (A)- 3 Short Answer Questions on Unit III (Poetry) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit III (Poetry) (Choose the correct option form)- **5 Marks**

**Question no. 4 (A) – Essay Writing - 10 Marks**

(B) Correct the following sentences (Five questions of one mark each) - **5 Marks**  
(C) – Inventory Report - **5 Marks**

**B. A. Part III  
Semester VI  
Subject- Compulsory English  
Total Marks-80**

**Question no. 1 (A)- 3 Short Answer Questions on Unit I (Prose) with internal choice- (5 marks on each question.)- 15 Marks**

(B)- 5 Objective type questions on Unit I (Prose) (Choose the correct option form)- **5 Marks**

**Question no. 2 (A)- 3 Short Answer Questions on Unit II (Prose) with internal choice- (5 marks on each question.)- 15 Marks**

(B)- 5 Objective type questions on Unit II (Prose) (Choose the correct option from)-

Question no. 3 (A)- 3 Short Answer Questions on Unit III (Poetry) with internal choice- (5 marks on each question.)- **15 Marks**

(B)- 5 Objective type questions on Unit III (Poetry) (Choose the correct option from)- **5 Marks**

**Question no. 4 (A) – Punctuation - 5 Marks**

(B) - One word for (Five questions of one mark each) - **5 Marks**  
(C) - Newspaper Reports - **5 Marks**  
(D) - Drafting Advertisements- **5 marks**

*Dinesh* *Mohsin* *Wali* *Mr. M.* *Harsh* <sup>11</sup> *Shreyas* *Niraj* *Suresh* *V.V. Bhagatkar*  
*Hong* *D.V.N.*

## **Workload and Slots for each prescribed section (for all semesters):**

- 4 lectures per week of 48 minutes each (3.2 hours per week)
- 15 weeks of teaching in each semester
- Unit I (Prose): 4 weeks (16 days)
- Unit II (Biographies): 3 weeks (12 days)
- Unit III (Poetry): 2 weeks (8 days)
- Unit IV (Grammar and Composition): 2 week (8 days)
- Internal Assessment Student's Seminar, Viva Voce, Home Assignment: 3 weeks (12 days)
- Revision/Test: 1 week (4 days)

**Note:** There will be a batch of 20 students for tutorial which will be conducted once a week for each batch.



V.V.Bhagdikan

# राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

मानव्यशास्त्र विद्या शाखा (HUMANITIES)

बी. ए. : आवश्यक मराठी

**B.A. Compulsory Marathi**

अभ्यासक्रम (SYLLABUS)

बी. ए. प्रथम सत्र अभ्यासक्रम : आवश्यक मराठी

## अभ्यास ग्रंथ – साहित्यरंग भाग १ (सत्र एक)

गद्य विभाग :

१. पाखाला बाळक पांगुरवणे - म्हाइंभट
२. शिक्षण - महात्मा फुले
३. तरुणांनो निर्भय बना, शूर बना! - स्वामी विवेकानंद
४. कोकराची कथा - अरविंद गोखले
५. नववर्षाच्या उदयाचलावर उद्योगाचे ध्वजारोपण - राष्ट्रसंत तुकडोजी महाराज

पद्य विभाग :

१. माय मराठी - मुकुंदराज
२. ज्ञानेश्वरांचे अभंग  
(विराण्य) - (अ) घनु वाजे घुणुघुणा  
- (आ) पैल तो गे काऊ कोंकताहे
३. दवाचे थेंब - केशवसुत
४. भंगू दे काठिण्य माझे - बा. सी. मर्ढकर
५. चार शब्द - नारायण सुर्वे

व्यावहारिक मराठी :

१. व्यावहारिक मराठी : स्वरूप आणि भूमिका

२. भाषिक संवादव्यवहाराची मूलतत्त्वे

## बी. ए. दुसरे सत्र

(Semester II)

अभ्यासक्रम : आवश्यक मराठी

### अभ्यास ग्रंथ – साहित्यरंग भाग १ (सत्र दोन)

गद्य विभाग :

- |    |                          |                         |
|----|--------------------------|-------------------------|
| १. | भारतीय लोकशाहीचे भवितव्य | - डॉ. बाबासाहेब आंबेडकर |
| २. | गाडगेबाबांनी शाळा दिली   | - सीमा साखरे            |
| ३. | अजातशत्रू अटलजी          | - शरदचंद्र पवार         |
| ४. | विवेकवाद                 | - डॉ. नरेंद्र दाभोळकर   |
| ५. | कृष्णविवर                | - डॉ. जयंत नारळीकर      |

पद्य विभाग :

- |    |                  |                  |
|----|------------------|------------------|
| १. | मृणमयी           | - इंदिरा संत     |
| २. | उषःकाल होता होता | - सुरेश भट       |
| ३. | मेंढं            | - विठ्ठल वाघ     |
| ४. | पुन्हा एकदा      | - यशवंत मनोहर    |
| ५. | आई, मारू नको     | - उषाकिरण आत्राम |

व्यावहारिक मराठी :

- |    |             |
|----|-------------|
| १. | पत्रलेखन    |
| २. | सारांश लेखन |

०००

## बी. ए. तिसरे सत्र

(Semester III)

अभ्यासक्रम : आवश्यक मराठी

### अभ्यास ग्रंथ – साहित्यरंग भाग २ (सत्र तीन)

- |                    |  |                      |
|--------------------|--|----------------------|
| गद्य विभाग :       | १. हत्तीचा दृष्टांत (दृष्टांतपाठ)                  | - केशिराजबास         |
|                    | २. वाचन  | - गोपाळ गणेश आगरकर   |
|                    | ३. सर्प (कथा)                                      | - जी. ए. कुलकर्णी    |
|                    | ४. आम्ही वानरांच्या फौजा (लघुनिबंध)                | - श्रीनिवास कुलकर्णी |
|                    | ५. नियतीच्या विक्राळ जबड्यात (मी वनवासी)           | - सिंधुताई सपकाळ     |
| पद्य विभाग :       | १. दोन अभंग - १. पुण्य पर उपकार                    | - संत तुकाराम        |
|                    | २. जे का रंजले गांजले                              |                      |
|                    | २. माझी माय सरसोती                                 | - बहिणाबाई चौधरी     |
|                    | ३. या जगण्यावर शतदा प्रेम करावे                    | - मंगेश पाडगावकर     |
|                    | ४. उन्हउतरणी                                       | - श्रीधर शनवारे      |
|                    | ५. यूनोत पाणी                                      | - भुजंग मेश्वाम      |
| व्यावहारिक मराठी : | १. मुलाखतीचे तंत्र आणि लेखन प्रक्रिया              |                      |
|                    | २. जाहिरातींची लेखनकौशल्ये (मुद्रित व दृक्श्राव्य) |                      |

०००

## बी. ए. चौथे सत्र

(Semester IV)

अभ्यासक्रम : आवश्यक मराठी

अभ्यास ग्रंथ – साहित्यरंग भाग २ (सत्र चार)

- |                    |   |                       |
|--------------------|---|-----------------------|
| गद्य विभाग :       | १. रांजकर्तव्ये (आज्ञापत्र)                               | - रामचंद्रपंत अमात्य  |
|                    | २. स्वराज्य आणि सुराज्य                                   | - लोकमान्य टिळक       |
|                    | ३. मध्यान्ह   | - कुसुमावती देशपांडे  |
|                    | ४. अद्वैताचा साक्षात्कार                                  | - साने गुरुजी         |
|                    | ५. आधार   | - वि. स. जोग          |
| पद्य विभाग :       | १. अभंगवाणी (तीन अभंग)      १. पंढरीचे सुख नाही त्रिभुवनी | - संत चोखामेळा        |
|                    | २. उपजले विटाळी   |                       |
|                    | ३. कोण तो सोवळा   |                       |
|                    | २. क्रांतीचा जयजयकार                                      | - कुसुमाग्रज          |
|                    | ३. सत्याच्या जातीला                                       | - शरच्चंद्र मुक्तिबोध |
|                    | ४. रातझडीचा पाऊस  | - ना. धो. महानोर      |
|                    | ५. माझ्या कवितेची चव                                      | - इंद्रजित भालेराव    |
| व्यावहारिक मराठी : | १. पटकथा व संवादलेखन                                      |                       |
|                    | २. स्मरणिका व इतर संपादनकार्य                             |                       |

०००

## बी. ए. पाचवे सत्र

(Semester V)

अभ्यासक्रम : आवश्यक मराठी

### अभ्यास ग्रंथ – साहित्यरंग भाग ३ (सत्र पाच)

- |                    |   |                               |
|--------------------|---|-------------------------------|
| गद्य विभाग :       | १. साहित्याचा महिमा                           | - विनोबा भावे                 |
|                    | २. तवंग (कथा)                                 | - वसंत वळ्हाडपांडे            |
|                    | ३. आनंदवन (समिधा : आत्मकथन अंश)               | - साधना आमटे                  |
|                    | ४. अरण्यातील आत्मभान (ललितबंध)                | - महेश एलकुंचवार              |
|                    | ५. घरभरणी (दलित कथा)                          | - उर्मिला पवार                |
| पद्य विभाग :       | १. संत नामदेवांची अभंगवाणी                    | १. अमृताहुनि गोड - संत नामदेव |
|                    | २. घनश्याम सुंदरा                             | २. भेटीलागी जीवा              |
|                    | ३. एक प्रकारची प्रार्थना                      | - होनाजी बाळा                 |
|                    | ४. पाऊस                                       | - वसंत आबाजी डहाके            |
|                    | ५. दुनियेची रीत                               | - ग्रेस                       |
| व्यावहारिक मराठी : | १. मुद्रित माध्यमांसाठी लेखन प्रकार व कौशल्ये | - सुधाकर गायधनी               |
|                    | २. दृक्ष्राव्य माध्यमांसाठी लेखन कौशल्ये      |                               |

०००

## बी. ए. सहावे सत्र

(Semester VI)

अभ्यासक्रम : आवश्यक मराठी

### अभ्यास ग्रंथ – साहित्यरंग भाग ३ (सत्र सहा)

गद्य विभाग :

- |  |                       |
|--|-----------------------|
| १. भक्तिपंथ व महाराष्ट्र संस्कृती          | - प्रा. गं. बा. सरदार |
| २. भारतीयत्वाची संकल्पना आणि मराठी साहित्य | - डॉ. सुधीर रसाळ      |
| ३. भुताचा जन्म (कथा - विनोदी)              | - द. मा. मिरासदार     |
| ४. हिराबाई (व्यक्तिचित्र)                  | - पु. ल. देशपांडे     |
| ५. सामना (एकांकिका)                        | - सतीश आळेकर          |

पद्य विभाग :

- |                              |          |         |                   |
|------------------------------|----------|---------|-------------------|
| १. दोन भारुडे                | १. विंचू | २. एडका | - संत एकनाथ       |
| २. श्रावणमासाचे गाणे         |          |         | - बालकवी          |
| ३. घन तमी शुक्र बघ राज्य करी |          |         | - भा. रा. तांबे   |
| ४. वाटेवर काटे वेचित चाललो   |          |         | - अनिल            |
| ५. अजून वादळ उठले नाही       |          |         | - ज्योती लांजेवार |

व्यावहारिक मराठी : १. भाषांतर आणि अनुवाद : स्वरूप आणि वैशिष्ट्ये

२. मराठी शुद्धलेखन आणि मुद्रितशोधन

## प्रश्नपत्र रचना आणि गुणविभाजन

बी. ए. सत्र १ ते ६

आवश्यक मराठी

वेळ – ३ तास )

( एकूण गुण ८०

**सूचना :** १. सर्व प्रश्न सोडविणे अनिवार्य आहे.

२. सर्व प्रश्नांना समान गुण आहेत.

**प्रश्न क्र. १ :** गद्य विभागावर आधारित दीर्घोत्तरी प्रश्न.

किंवा

गद्य विभागावर आधारित दीर्घोत्तरी प्रश्न.

(गुण १६)

**प्रश्न क्र. २ :** पद्य विभागावर आधारित दीर्घोत्तरी प्रश्न

किंवा

पद्य विभागावर आधारित दीर्घोत्तरी प्रश्न

(गुण १६)

**प्रश्न क्र. ३ :** लघुतरी ४ उपप्रश्नांचा एक गट (पर्यायासह)

(गद्य विभागावर २ व पद्य विभागावर २ प्रश्न प्रत्येकी)

(गुण १६)

**प्रश्न क्र. ४ :** लघुतरी ४ उपप्रश्नांचा एक गट (पर्यायासह)

(व्याव. मराठी प्रकरण १ वर २ आणि प्रकरण २ वर २ प्रश्न)

(गुण १६)

**प्रश्न क्र. ५ :** अतिलघुतरी आठ प्रश्न. (सर्व अनिवार्य)

(गद्य विभागावर ३, पद्य विभागावर ३ व व्याव. मराठी विभागावर २ प्रश्न)

(गुण १६)

### गुणविभाजन

लेखी सत्रांत परीक्षा	८० गुण
अंतर्गत मूल्यमापन	२० गुण
<b>एकूण गुण</b>	<b>१०० गुण</b>

### विषयवार विभाजन

गद्य विभाग	३० गुण
पद्य विभाग	३० गुण
व्यावहारिक विभाग	२० गुण
<b>एकूण गुण</b>	<b>८० गुण</b>

## अंतर्गत मूल्यमापन

बी. ए. – मराठी आवश्यक

२० गुण : कृती विभाजन

१.	गृहपाठ	-	५ गुण
२.	लघू प्रकल्प	-	५ गुण
३.	गटचर्चा / परिसंवाद	-	५ गुण
४.	मौखिकी	-	५ गुण
एकूण			२० गुण

## **बी. ए. सेमेस्टर -I**

### **अनिवार्य हिंदी**

**पाठ्य पुस्तक - साहित्य वाटिका**

**इकाई - I**

**गद्य विभाग**

- |                                   |                  |
|-----------------------------------|------------------|
| 1. बातचीत में शिष्टाचार (निबंध) - | कामताप्रसाद गुरु |
| 2. पुरस्कार (कहानी) -             | जयशंकर प्रसाद    |
| 3. भोलाराम का जीव (व्यंग्य) -     | हरिशंकर परसाई    |
| 4. सरहद के उस पार (रिपोर्टाज) -   | फणीश्वरनाथ रेणु  |

**इकाई - II**

**पद्य विभाग**

- |                           |                  |
|---------------------------|------------------|
| 1. वे मुस्काते फूल नहीं - | महादेवी वर्मा    |
| 2. प्रथम रश्मि -          | सुमित्रानंदन पंत |
| 3. मैं वह धनु हूँ -       | अज्ञेय           |
| 4. बसंती हवा -            | केदारनाथ अग्रवाल |

**इकाई - III      अन्य पाठ्य सामग्री**

1. पारिभाषिक शब्दावली – पाठ्यपुस्तक में संलग्न सूची से ही अंग्रेजी से हिंदी तथा हिंदी से अंग्रेजी पारिभाषिक शब्दावली का अध्ययन
2. पत्र-लेखन - अर्थ, महत्व एवं विशेषताएँ।  
कार्यालयीन पत्र, व्यावहारिक पत्र, व्यावसायिक पत्र, आवेदन पत्र

**इकाई - IV      द्रुतवाचन –**

- अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय  
बालकृष्ण भट्ट, प्रेमचंद, राजकमल चौधरी, रामेश्वर शुक्ल 'अंचल',
- ब निम्नलिखित रचनाओं का संक्षिप्त परिचय  
हार की जीत (कहानी - सुदर्शन), अफसर (व्यंग्य-शरद जोशी), बाजार दर्शन (निबंध - जैनेंद्र कुमार), सखि, वे मुझसे कहकर जाते (कविता- मैथिलीशरण गुप्त)

## बी. ए. सेमेस्टर – II

### अनिवार्य हिन्दी

#### पाठ्य पुस्तक – साहित्य वाटिका

#### इकाई I गद्य विभाग

1.	जहाँ आकाश नहीं दिखाई देता (रिपोर्टाज)	-	विष्णु प्रभाकर
2.	फैसला (कहानी)	-	भीष्म साहनी
3.	जिंदगी और जोंक (कहानी)	-	अमरकांत
4.	सौंदर्य की नदी नर्मदा (यात्रा-वृतांत)	-	अमृतलाल वेगङ

#### इकाई II पद्य विभाग

1.	फसल	-	सर्वश्वरदयाल सक्सेना
2.	रत्न और पाषाण	-	रत्नाम्बर दत्त चंदोला
3.	छोटी दुनिया	-	अरुण कमल
4.	रंग खतरे में है	-	कुमार विकल

#### इकाई III कल्पना विस्तार, मुहावरे एवं लोकोक्तियाँ

#### इकाई - IV द्रुत वाचन

##### अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय

नामवर सिंह, स्वदेश भारती, ममता कालिया, राजेश जोशी

##### ब. निम्नलिखित रचनाओं का संक्षिप्त परिचय

दूसरी कहानी (कहानी - अलका सरावगी), सिक्के (कविता - लीलाधर जगौड़ी), नया साल मुबारक (ललित निबंध - अमृत राय), चश्मदीद शहादत (व्यंग्य - विभूति नारायण राय)

## **बी.ए. सेमेस्टर III**

### **अनिवार्य हिंदी**

#### **पाठ्य पुस्तक – साहित्य क्षितिज**

#### **इकाई – I गद्‌य विभाग**

- |                                      |                   |
|--------------------------------------|-------------------|
| 1. आंगन का पंछी (निबंध) -            | विद्यानिवास मिश्र |
| 2. गेहूँ और गुलाब (निबंध) -          | रामवृक्ष बेनीपुरी |
| 3. आत्मशिक्षण (कहानी) -              | जैनेंद्र कुमार    |
| 4. ज़िंदगी और गुलाब के फूल (कहानी) - | उषा प्रियंवदा     |

#### **इकाई – II पद्‌य विभाग**

- |                     |                   |
|---------------------|-------------------|
| 1. जीवन सरिता -     | सुमित्रानन्दन पंत |
| 2. पथिक से -        | उदयशंकर भट्ट      |
| 3. जो बीत गई -      | हरिवंशराय बच्चन   |
| 4. सत्य और स्वप्न - | अन्जेय            |

#### **इकाई – III अन्य पाठ सामग्री**

- |                     |   |  |
|---------------------|---|--|
| 1. फीचर लेखन (रूपक) | - | अर्थ, स्वरूप, तत्व, विशेषताएँ                            |
| 2. प्रूफ शोधन       | - | स्वरूप, प्रूफ शोधन के नियम, प्रूफ शोधक के गुण, विशेषताएँ |

#### **इकाई - IV द्रुत वाचन**

##### **अ. निम्नलिखित रचनाकारों का सामान्य परिचय**

शिवमंगल सिंह सुमन, मनोहर श्याम जोशी, रवीन्द्र कालिया, वित्ता मुद्गल

##### **ब. निम्नलिखित रचनाओं का सामान्य परिचय**

ठेले पर हिमालय (संस्मरण – धर्मवीर भारती), पतझड़ (कविता – रामकुमार वर्मा), दोपहर का भोजन (कहानी – अमरकांत), भोर का तारा (एकांकी – जगदीशचंद्र माथुर)

## **बी.ए. सेमेस्टर IV**

### **अनिवार्य हिंदी**

**पाठ्य पुस्तक - साहित्य क्षितिज**

#### **इकाई I गद्‌य विभाग**

- |  |                            |
|--|----------------------------|
| 1. प्राप्त का सुख : अप्राप्त का दुःख (निबंध) - | कन्हैयालाल मिश्र 'प्रभाकर' |
| 2. बिंदा (रेखाचित्र) -                         | महादेवी वर्मा              |
| 3. न खड़े होने का दर्द (व्यंग्य) -             | शरद जोशी                   |
| 4. अग्नि की उड़ान (आत्मकथा) -                  | ए.पी.जे. अब्दुल कलाम       |

#### **इकाई II पद्‌य विभाग**

- |                       |                    |
|-----------------------|--------------------|
| 1. अभिनव मनुष्य -     | रामधारी सिंह दिनकर |
| 2. छाया मत छूना -     | गिरिजाकुमार माथुर  |
| 3. कैकेयी का परिताप - | मैथिलीशरण गुप्त    |
| 4. पत्थर की बैंच -    | चंद्रकांत देवताले  |

#### **इकाई – III अन्य पाठ सामग्री**

- |                              |   |
|------------------------------|---|
| 1. विज्ञापन -                | अर्थ, परिभाषा, विज्ञापन का शीर्षक, उपशीर्षक, प्रकार, गुण, प्रयोजन, तत्व, लक्ष्य, भाषा |
| 2. हिंदी में संक्षिप्तीकरण - | स्वरूप, विशेषताएँ, निर्माण के सिद्धांत  |

#### **इकाई IV**

- |           |  |
|-----------|--|
| <b>अ.</b> | <b>निम्नलिखित रचनाकारों का सामान्य परिचय</b><br>रामनरेश त्रिपाठी, राहुल सांकृत्यायन, ओमप्रकाश वाल्मीकि, संजीव  |
| <b>ब.</b> | <b>निम्नलिखित रचनाओं का सामान्य परिचय</b><br>मधुर भाषण (निबंध – गुलाबराय), आशा (कविता – जयशंकर प्रसाद), अपराध (कहानी – उदय प्रकाश), ऊँचा कोट (व्यंग्य - शंकर पुणतांबेकर) |

## **बी.ए. सेमेस्टर V**

### **अनिवार्य हिंदी**

**पाठ्य पुस्तक – साहित्य मंजिरी**

**इकाई I - किसी भी एक विषय पर निबंध (लगभग 400 शब्दों में)**

**इकाई II -**

- |    |   |                        |
|----|---|------------------------|
| 1. | मानव सभ्यता (निबंध) -                               | पदुमलाल पुन्नालाल बछशी |
| 2. | कष्टों से भागना कायरता है -<br>(सुखदेव के नाम पत्र) | भगतसिंह                |
| 3. | दुर्मुख (रेखाचित्र) -                               | महादेवी वर्मा          |
| 4. | बबूल और कैकटस (ललित निबंध) -                        | रामदरश मिश्र           |

**इकाई III -**

- |    |                        |                |
|----|------------------------|----------------|
| 1. | दीपदान (एकांकी) -      | रामकुमार वर्मा |
| 2. | भाषा और समाज (निबंध) - | अजेय           |
| 3. | प्रायशिचित (कहानी) -   | भगवतीचरण वर्मा |
| 4. | पगला बाबा (कहानी) -    | गोविन्द मिश्र  |

**इकाई IV -**

#### **द्रुतवाचन**

**अ. निम्नलिखित रचनाकारों का सामान्य परिचय**

बद्रीनारायण चौधरी 'प्रेमघन', उपेन्द्रनाथ अश्क, गुणाकर मुले, रामविलास शर्मा

**ब.**

#### **निम्नलिखित रचनाओं का सामान्य परिचय**

चंपा काले अच्छर नहीं चीन्हती (कविता – त्रिलोचन), अतीतग्रस्तता और इतिहास बोध (लेख – लालबहादुर वर्मा), राखी का मूल्य (एकांकी - हरिकृष्ण प्रेमी), अखबार में नाम (कहानी – यशपाल)

## **बी.ए. सेमेस्टर VI**

### **अनिवार्य हिंदी**

**इकाई I एवं II**

- सूरज का सातवाँ घोड़ा (उपन्यास) – धर्मवीर भारती

**इकाई III -**

#### **अनुवाद**

अर्थ, परिभाषा एवं प्रकार

अनुवाद का महत्व, अनुवादक की योग्यताएँ

#### **कंप्यूटर**

परिचय, प्रमुख अवयव, उपयोगिता

इंटरनेट का सामान्य परिचय एवं उपयोगिता

**इकाई IV -**

#### **द्रुतवाचन**

**अ.** **निम्नलिखित रचनाकारों का सामान्य परिचय**

भुवनेश्वर, नरेश मेहता, गोपालदास ‘नीरज’, श्रीराम परिहार

**ब.** **निम्नलिखित रचनाओं का सामान्य परिचय**

अकाल और उसके बाद (कविता – नागार्जुन), सुख (कहानी – काशीनाथ सिंह), चोरी और प्रायशिचित (आत्मकथा – महात्मा गांधी), सीमारेखा (एकांकी – विष्णु प्रभाकर)

## **बी. ए. सेमेस्टर - I**

### **हिंदी साहित्य**

**पाठ्य पुस्तक - साहित्य किरण**

**इकाई - I पाठ्य पुस्तक के निम्नलिखित पाठ**

- |    |                             |                    |
|----|-----------------------------|--------------------|
| 1. | हिम्मत और ज़िंदगी (निबंध) - | रामधारी सिंह दिनकर |
| 2. | पर्यावरण और हम (निबंध) -    | डॉ राजीव गर्ग      |
| 3. | मकड़ी का जाला (एकांकी) -    | जगदीशचन्द्र माथुर  |
| 4. | सज्जनता का दंड (कहानी) -    | प्रेमचंद           |

**इकाई - II पाठ्य पुस्तक के निम्नलिखित पाठ**

- |    |                               |               |
|----|-------------------------------|---------------|
| 1. | उमस (कहानी) -                 | ममता कालिया   |
| 2. | रवीन्द्रनाथ ठाकुर (संस्मरण) - | महादेवी वर्मा |
| 3. | नाम-चर्चा (व्यंग्य-लेख) -     | नरेंद्र कोहली |
| 4. | सिनेमा (सिनेमा विधा) -        | मनमोहन चड्ढा  |

**इकाई - III हिंदी साहित्य का इतिहास**

आदिकाल का काल निर्धारण, पृष्ठभूमि एवं नामकरण  
 प्रमुख प्रवृत्तियाँ (सिद्ध साहित्य, नाथ साहित्य, जैन साहित्य, रासो साहित्य, लौकिक साहित्य),  
 आदिकाल की विशेषताएँ, प्रमुख कवि

**इकाई - IV द्रुत वाचन -**

**अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय**

भारतेन्दु हरिश्चंद्र, सियारामशरण गुप्त, प्रभा खेतान, राजी सेठ

**ब. निम्नलिखित रचनाओं का संक्षिप्त परिचय**

झाँसी की रानी की समाधि पर (कविता - सुभद्रा कुमारी चौहान), ग्रामलक्ष्मी की उपासना (निबंध - विनोबा भावे), मैं भी मानव हूँ (एकांकी - विष्णु प्रभाकर), अकेली (कहानी - मन्नू भंडारी),

## **बी. ए. सेमेस्टर – II**

### **हिंदी साहित्य**

#### **इकाई - I एवं II**

कबिरा खड़ा बजार में (नाटक) -

भीष्म साहनी

#### **इकाई – III साहित्य की विधाएँ**

महाकाव्य, खंडकाव्य, उपन्यास, कहानी, नाटक, एकांकी, संस्मरण, साक्षात्कार, आत्मकथा

#### **इकाई – IV द्रुत वाचन**

**अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय**

महावीर प्रसाद द्विवेदी, माखनलाल चतुर्वेदी, श्रीलाल शुक्ल, अशोक बाजपेयी

**ब. निम्नलिखित रचनाओं का संक्षिप्त परिचय**

स्नेह निझर बह गया है (कविता - निराला), रीढ़ की हड्डी (एकांकी - जगदीशचंद्र माथुर),

परमात्मा का कुता (कहानी – मोहन राकेश), हाथी के दाँत (ललित निबंध – अनंत गोपाल शेवडे)

## **बी. ए. सेमेस्टर – III**

### **हिंदी साहित्य**

**पाठ्य पुस्तक - साहित्य चंद्रिका**

**इकाई - I** कबीर

सूरदास

**इकाई – II** तुलसीदास

मीराबाई

**इकाई – III** रहीम

बिहारी

**इकाई –IV** द्रुतवाचन – इसके अंतर्गत निम्नलिखित रचनाकारों का संक्षिप्त परिचय -

रैदास, रसखान, नानकदेव, केशवदास, संत नामदेव, संत ज्ञानेश्वर, भूषण, सहजोबाई,

## **बी. ए. सेमेस्टर – IV**

## हिंदी साहित्य

### इकाई I एवं II

मृगनयनी (उपन्यास) - वृद्धावनलाल वर्मा

### इकाई – III

- |                |  |
|----------------|--|
| 1. रस -        | अर्थ, परिभाषा, प्रकार अवयव   |
| 2. अलंकार -    | शब्दालंकार – अनुप्रास, यमक, श्लेष, वक्रोक्ति<br>अर्थालंकार - उपमा, रूपक, उत्प्रेक्षा, अतिशयोक्ति |
| 3. शब्दशक्ति - | अभिधा, लक्षणा, व्यंजना   |
| 4. काव्य गुण - | माधुर्य, ओज, प्रसाद  |
| 5. काव्यदोष -  | अक्रमत्व, अप्रतीतत्व, ग्राम्यत्व   |

### इकाई - IV हिंदी साहित्य का इतिहास

- भक्तिकाल -** नामकरण एवं वर्गीकरण, हिंदी साहित्य में भक्ति का उदय और विकास, संत साहित्य की प्रवृत्तियाँ एवं प्रमुख कवि  
सूफी साहित्य का उद्भव, विकास एवं सामान्य प्रवृत्तियाँ  
रामभक्ति शाखा का उद्भव, विकास, विशेषताएँ एवं प्रमुख कवि  
कृष्णभक्ति शाखा का उद्भव, विकास, विशेषताएँ एवं प्रमुख कवि
- रीतिकाल -** पृष्ठभूमि, नामकरण  
सामान्य प्रवृत्तियाँ एवं प्रमुख कवि

## बी. ए. सेमेस्टर – V

## हिंदी साहित्य

### पाठ्य पुस्तक – साहित्य वैभव

#### इकाई I

- |    |                             |   |
|----|-----------------------------|---|
| 1. | जयशंकर प्रसाद -             | 'इडा' सर्ग (कामायनी)                                  |
| 2. | सूर्यकांत त्रिपाठी निराला - | 1. जुहो की कली, 2. विधवा, 3. भिक्षुक, 4. रानी की कानी |

#### इकाई II

- |    |  |
|----|--|
| 1. | गजानन माधव मुक्तिबोध - ब्रह्मराक्षस                            |
| 2. | भवानी प्रसाद मिश्र - 1. कवि, 2. सतपुड़ा के जंगल, 3. हवा ऐसी थी |

#### इकाई III

### हिंदी साहित्य का इतिहास

आधुनिक काल - भारतेंदु युग, द्विवेदी युग, छायावाद, प्रगतिवाद, प्रयोगवाद, नई कविता, साठोतरी कविता

#### इकाई IV

- |    |  |
|----|--|
| अ. | निम्नलिखित रचनाकारों का संक्षिप्त परिचय<br>हरिऔथ, मैथिलीशरण गुप्त, शमशेर बहादुर सिंह, श्रीकांत वर्मा   |
| ब. | निम्नलिखित रचनाओं का संक्षिप्त परिचय<br>बावरा अहेरी (कविता – अजेय), मुझे कुछ और करना था (कविता – रघुवीर सहाय), कवि कुंभनदास के प्रति (कविता – केदारनाथ सिंह), छायाएँ (कविता – नरेश सक्सेना), |

## बी. ए. सेमेस्टर – VI

## हिंदी साहित्य

### पाठ्य पुस्तक – साहित्य वैभव

#### इकाई I

- |     |  |                      |
|-----|--|----------------------|
| 1.  | क्रोध (निबंध) -                          | रामचंद्र शुक्ल       |
| 2.. | अशोक के फूल (निबंध) -                    | हजारीप्रसाद द्विवेदी |
| 3.  | समष्टि और व्यक्ति (निबंध) -              | नरेन्द्र देव         |
| 4.  | अंधी जनता और लँगड़ा जनतंत्र -<br>(निबंध) | विद्यानिवास मिश्र    |

#### इकाई II

- |    |   |                      |
|----|---|----------------------|
| 1. | लंगूर का बच्चा (कहानी) -                    | अमृतलाल नागर         |
| 2. | भरेपूरे-अधूरे (कहानी) -                     | कमलेश्वर             |
| 3. | जेल जीवन की झालक (संस्मरण) -                | गणेश शंकर विद्यार्थी |
| 4. | ईफेल टावर की छाया में -<br>(यात्रा-संस्मरण) | रामवृक्ष बेनीपुरी    |

#### इकाई III हिंदी साहित्य का इतिहास - आधुनिक काल

हिंदी की साहित्यिक विधाओं का क्रमिक विकास - उपन्यास, कहानी, निबंध, नाटक, एकांकी, आलोचना

#### इकाई IV

- |    |   |
|----|---|
| अ. | निम्नलिखित रचनाकारों का संक्षिप्त परिचय<br>महीप सिंह, जानरंजन, रमेश बख्शी, उषा प्रियंवदा  |
| ब. | निम्नलिखित रचनाओं का संक्षिप्त परिचय<br>एक बेचारा भला आदमी ( व्यंग्य – हरिशंकर परसाई), हींगवाला (कहानी – सुभद्रा कुमारी चौहान), कछुआ-धर्म( चंद्रधर शर्मा गुलेरी), नैन नैनीताल की छवि में पगे (यात्रा-वृतांत - विष्णुकांत शास्त्री |

## **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,

प्रथम खंड से पाँच प्रश्न पूछे जाएँगे, सभी का उत्तर लिखना होगा.

**5 X 02 = 10**

द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

**बी.ए. सेमेस्टर 2 (अनिवार्य हिंदी)**

**प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1.	प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	$1 \times 20$
प्रश्न 2.	द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	$1 \times 20$
प्रश्न 3.	यह प्रश्न तीसरी इकाई से दो खंडों में होगा, प्रथम खंड से कल्पना विस्तार के अंतर्गत दो विषय दिए जाएँगे जिनमें से एक का कल्पना विस्तार करना होगा. द्वितीय खंड में मुहावरे एवं लोकोक्तियों के अंतर्गत सात मुहावरे एवं लोकोक्तियाँ दी जाएँगी जिनमें से पांच हल करना होगा	$1 \times 10$
प्रश्न 4.	इकाई चार से अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा. ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.	$5 \times 02 = 10$ $2 \times 05 = 10$ $2 \times 05 = 10$

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### बी.ए. सेमेस्टर 3 (अनिवार्य हिंदी)

#### प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

$1 \times 20$

प्रश्न 2.	द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	$1 \times 20$
प्रश्न 3.	यह प्रश्न तीसरी इकाई से दो खंडों में होगा, प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.	$1 \times 10$
	द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.	$1 \times 10$
प्रश्न 4.	इकाई चार से अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा. ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.	$2 \times 05 = 10$
		$2 \times 05 = 10$

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### बी.ए. सेमेस्टर 4 (अनिवार्य हिंदी)

#### प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न 1.	प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	$1 \times 20$
प्रश्न 2.	द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	

**1 X 20**

- प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,  
प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

- द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

- प्रश्न 4. इकाई चार से  
 अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.  
 ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बी.ए. सेमेस्टर 5 (अनिवार्य हिंदी)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

- प्रश्न 1. प्रथम इकाई के अंतर्गत चार विषय दिए जाएँगे, जिनमें से किसी एक पर निबंध लिखना होगा.

**1 X 20**

- प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

- प्रश्न 3. तृतीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बी.ए. सेमेस्टर 6 (अनिवार्य हिंदी)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. उपन्यास ‘सूरज का सातवाँ घोड़ा’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. उपन्यास ‘सूरज का सातवाँ घोड़ा’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,

प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बा.ए. सेमेस्टर 1 (हिंदी साहित्य)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,

प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बी.ए. सेमेस्टर 2 (हिंदी साहित्य)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. नाटक 'कबिरा खड़ा बजार में' से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. नाटक 'कबिरा खड़ा बजार में' से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा. इसमें कुल छः प्रश्न पूछे जाएँगे, जिनमें से चार का उत्तर लिखना होगा.

**4 X 05 = 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### बी.ए. सेमेस्टर 3 (हिंदी साहित्य)

#### प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

1 X 20

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

1 X 20

प्रश्न 3. तृतीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

1 X 20

प्रश्न 4. इकाई चार के अंतर्गत छ: प्रश्न पूछे जाएँगे जिनमें से चार का उत्तर लिखना होगा.

4 X 05 = 20

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

## **बी.ए. सेमेस्टर 4 (हिंदी साहित्य)**

### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. उपन्यास ‘मृगनयनी’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. उपन्यास ‘मृगनयनी’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा. इसमें छः प्रश्न पूछे जाएँगे जिनमें से चार का उत्तर लिखना होगा

**4 X 05 = 20**

प्रश्न 4. यह प्रश्न चौथी इकाई से होगा. इसमें छः प्रश्न पूछे जाएँगे जिनमें से चार का उत्तर लिखना होगा

**4 X 05 = 20**

**आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)**

## **बी.ए. सेमेस्टर 5 (हिंदी साहित्य)**

### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा। इसमें चार प्रश्न पूछे जाएँगे, जिनमें से दो का उत्तर लिखना होगा.

**2 X 10 = 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

## **बी.ए. सेमेस्टर 6 (हिंदी साहित्य)**

### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा. इसमें चार प्रश्न पूछे जाएँगे, जिनमें से दो का उत्तर लिखना होगा.

**2 X 10 = 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**A Course of Choice Based Credit System**

**Bachelor of Arts**

**Under Graduate -Sanskrit**

**Semester Pattern**

**Compulsory Sanskrit**

for

**B.A. Sanskrit/B.COM. Sanskrit**



**(Faculty of Arts)**

**(From Session 2017-2018)**

**Bachelor of Arts -B.A.SANSKRIT**  
**A Course of Choice Based Credit System**  
**(From Session 2017-2018)**

**A) General**

1. Semesters I<sup>st</sup> (1T) and II<sup>nd</sup> (2T) will be compulsory for B.A. AND B.Com. Part I and Semesters III<sup>rd</sup>(3T) and IV<sup>th</sup> (4T) will be compulsory for B.A. AND B.Com. Part II, Semesters V<sup>th</sup>(5T) and VI<sup>th</sup> (6T) will be compulsory for only B.A. Part III
2. In optional Sanskrit Literature , Semesters I<sup>st</sup> (1T) and II<sup>nd</sup> (2T) will be for B.A. Part I and Semesters III<sup>rd</sup> (3T) and IV<sup>th</sup> (4T) will be for B.A. Part II and Semesters V<sup>th</sup> (5T) and VI<sup>th</sup>(6T) will be for B.A. Part III.
3. Each paper will be of 100 marks, out of which 80 marks will be for University ExaminationAnd 20 marks will be for Internal Assessment.
4. Minimum passing marks for each paper will be 40 and there will not be separate passing in theory and internal assessment.
5. There will be minimum 90 teaching days in each semester.
6. There will be 4 credits in each paper.
7. Credits will be calculated on marks obtained out of 100.
8. Answers will be written in the medium offered –Sanskrit Marathi, Hindi, English

**B) Pattern of Question Paper**

1. There will be 4 units in each paper and short and long questions will be asked from each unit.
2. Duration of examination for each paper will be 3 hours.

**C) Internal Assessment:**

**Total Mark = 100: Theory = 80 +Internal Assessment -20**

**❖ Details of Internal Assessment -20**

**○ Teaching Learning Activity-अध्ययन अध्यापन कार्य**

प्रकल्पकार्य, गृहपाठः, चर्चासत्रम्, संगणकद्वारा दृकशाव्यपाठांशप्रदर्शनम्(पीपीटी)  
घटकपरीक्षणम्, समूहचर्चा, अतिथी . व्याख्यानम्, सांस्कृतिककार्यक्रमसहभागः,  
कार्यशाला, शैक्षणिक—सहल, संस्कृत—संभाषणम्, आलेख— निर्मिति:

**❖ Question Paper Pattern will be given in Syllabus.**

**❖ Same Teaching Learning Activities will be for Compulsory and Optional  
Sanskrit subject.**

**D) Absorption Scheme:**

- As per Direction No. 13 /2017 or Relevant subject Direction

**RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY**

**A Course of Choice Based Credit System  
Bachelor of Arts  
Under Graduate -Sanskrit  
Semester Pattern  
Compulsory Sanskrit  
for  
B.A. Sanskrit/B.COM. Sanskrit**

# B.A. -I / B.Com. -I

## Compulsory Sanskrit (आवश्यक संस्कृतम् )

### Semester I- (1 T)

पूर्णाङ्गका: - १००

लिखितपरीक्षाङ्का: - ८०  
आन्तरिकमूल्यमापनाङ्का:-२०  
अड्डका:

घटक १) संस्कृत पुष्पहारः । रा.तु.म.नागपूर—विद्यापीठ—प्रकाशनम्।	५०
१ — ५ — गद्यपाठः	
१ — ५ — पद्यपाठः	
घटक २) संस्कृतकविपरिचयः- वाल्मिकिः, व्यासः, भासः, अश्वघोषः कालिदासः	१०
भवभूति, भारविः, माघ	
घटक ३) संस्कृतशास्त्रज्ञपरिचयः- चरकः, सुश्रुतः, वाग्भटः	१०
घटक ४) वस्तुनिष्ठप्रश्नाः । ( कवि-शास्त्रज्ञ-परिचयाधारिताः )	१०
आन्तरिकमूल्यमापनाङ्का:-	२०

### Semester II- (2 T)

पूर्णाङ्गका: - १००

लिखितपरीक्षाङ्का: - ८०  
आन्तरिकमूल्यमापनाङ्का:-२०  
अड्डका:

घटक १) संस्कृत पुष्पहारः । रा.तु.म.नागपूर—विद्यापीठ—प्रकाशनम्।	५०
६ — १० — गद्यपाठः	
६ — ११ — पद्यपाठः	
घटक २) संस्कृतकविपरिचयः- श्रीहर्षः, भर्तृहरिः, शूद्रकः, विशाखदत्तः, विष्णु शर्मा,	१०
जगन्नाथ पण्डितः, नीलकण्ठ दीक्षित, डॉ. श्री. भा. वर्णेकर	
घटक ३) संस्कृतशास्त्रज्ञपरिचयः- आर्यभट्टः, वराहमिहिरः भास्कराचार्य (द्वितीय)	१०
घटक ४) वस्तुनिष्ठप्रश्नाः । ( कवि-शास्त्रज्ञ-परिचयाधारिताः )	१०
आन्तरिकमूल्यमापनाङ्का:-	२०
संटर्भग्रन्थाः -	
१.संस्कृत कविदर्शनम्	
२.चौखम्बा सीरीज् वाराणसी	
३.संस्कृत साहित्याचा सोपपत्तिक इतिहास डॉ. कर्बेळकर	
४.संस्कृत शास्त्रों का इतिहास, चौखम्बा सीरीज वाराणसी	

## **B.A. -I / B.Com. -I**

# **Compulsory Sanskrit (आवश्यकं संस्कृतम् )**

## **Semester I- (1 T) & Semester II- (2 T)**

## प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

अड्डका: - 80

( संस्कृत-पुष्पहारः )

## प्रश्न १ अनुवाद कुरुत – अ) गद्यानुवादः

ब) पद्यानुवादः (१ – १)

प्रश्न २ ससन्दर्भ स्पष्टीकरण अ) गद्य वाक्यम् 5

ब) पद्य पंक्ति: (१ – १)

### प्रश्न ३ कथां लिखत अथवा दीर्घप्रश्ना:

10

ବ) ପଦ୍ୟ (୧ - ୧)

प्रश्न ४ अ) पठितगद्याधारितसंस्कृतप्रश्नाना॑ं उत्तराणि 5

ब) पठितपद्याधारितसंस्कृतप्रश्नाना॑ं उत्तराणि 5

प्रश्न ५ अ) संस्कृतकविना परिचयं लिखत। (२) 10

ब) शास्त्रज्ञपरिचयं लिखत ।(२) 10

क) वस्तुनिष्ठप्रश्नाः। 10

# B.A. -II / B.Com. -II

## Compulsory Sanskrit (आवश्यक संस्कृतम् )

### Semester III- (3 T)

**पूर्णाङ्गिकाः - १००**

लिखितपरीक्षाङ्गिकाः - ८०  
आन्तरिकमूल्यमापनाङ्गिकाः - २०

घटक १) श्रीमद्भगवद्गीता -अध्याय - २	४०
घटक २) दशोपनिषद् परिचयः (संक्षिप्त -टिप्पणी)	९०
घटक ३) संस्कृत शास्त्रपरिचयः-	९०
घटक ४) वस्तुनिष्ठसंस्कृतप्रश्नाः-	२०
आन्तरिकमूल्यमापनाङ्गिकाः-	२०
<b>संदर्भग्रन्थाः:</b>	
१) श्रीमद्भगवतगीता (स्वामी ब्रह्मस्थानन्द) श्रीरामकृष्णमठ, धन्तोली, नागपूर	
२) संस्कृत नाटके आणि नाटककरार — गो. के. भट, पुणे	
३) संस्कृत व्यवहारसाहस्री — संस्कृत भारती।	
४) पातञ्जल योगसूत्रम् — पतञ्जलीकृत — चौखम्बा सिरीज, वाराणसी.	
५) वास्तुशास्त्र का इतिहास, ईस्टर्न बुक, लिंकर्स, दिल्ली	
६) मयमतम् दानवराजकृत — डॉ. शैलजा पाण्डेय, चौखम्बा सुरभारती प्रकाशन, वाराणसी.	
७) बृहत्संहिता वराहमिहीर, कृषी पाराशार, चौखम्बा सिरीज, वाराणसी.	
८) कौटिल्य अर्थशास्त्र, र. प. कंगले	
९) ग्रामगीतामृतम्, डॉ. श्री. भा. वर्णेकर	

### Semester III- (3 T)

#### प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

<b>श्रीमद्भगवद्गीता</b>	<b>अङ्गिकाः - ८०</b>
प्रश्न १ श्लोकद्वयस्य अनुवादं कुरुत।	९०
प्रश्न २ पंक्तिद्वयस्य ससन्दर्भ स्पष्टीकरणं कुरुत ।	९०
प्रश्न ३ अ) संक्षिप्त टिप्पणी अथवा श्लोकपूर्तिः	९०
प्रश्न ४ दीर्घोत्तरप्रश्नाः (१)	९०
प्रश्न ५ दशोपनिषद् परिचयः।	
अ) संक्षिप्त टिप्पणी-(२)	९०
ब) शास्त्रपरिचयः - (२)	९०
क) वस्तुनिष्ठसंस्कृतप्रश्नाः।	२०

## B.A. -II / B.Com. -II

### Compulsory Sanskrit (आवश्यक संस्कृतम् ) Semester IV- (4 T)

पूर्णाङ्गिकाः - १००

लिखितपरीक्षाङ्गिकाः - ८०  
आन्तरिकमूल्यमापनाङ्गिकाः - २०

अड्डकाः

- घटक १) दूष्टघटोत्कचम् (भासरचितम्) ४०  
घटक २) ग्रामगीतामृतम् - डॉ. श्री. भा. वर्णेकर रचितम् (राष्ट्रसंत तुकडोजी महाराज रचित ग्रामगीतानुवादः) अध्याय-१० (संघटनशक्तिः), १२ (ग्रामशुद्धिः), २० (महिलोन्नतिः) १०  
घटक ३) संस्कृत शास्त्रपरिचयः १०  
१) कृषिशास्त्रम् २) कौटिलीय अर्थशास्त्रम् ३) वास्तुशास्त्रम्

घटक ४) वस्तुनिष्ठप्रश्नाः २०

आन्तरिकमूल्यमापनाङ्गिकाः - २०

### Semester IV- (4 T) प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

#### दूष्टघटोत्कचम् (भास विरचित )

अड्डकाः - ८०

प्रश्न १ श्लोकद्वयस्य अनुवादं कुरुत । १०

प्रश्न २ वाक्यद्वयस्य संस्कृतम् स्पष्टीकरणं कुरुत । १०

प्रश्न ३ संक्षिप्त टिप्पणीद्वयम् / अथवा चरित्रचित्रणम् । १०

प्रश्न ४ दीर्घोत्तरप्रश्नः (१) १०

प्रश्न ५ ग्रामगीतामृतम्— अ) दीर्घोत्तर प्रश्नः (१), १०

ब) शास्त्रपरिचयः (२), १०

क) वस्तुनिष्ठसंस्कृतप्रश्नाः २०

#### संदर्भग्रन्थाः

- 
- १) श्रीमद्भगवतगीता (स्वामी ब्रह्मस्थानन्द) श्रीरामकृष्णमठ, धन्तोली, नागपूर
  - २) संस्कृत नाटके आणि नाटककरार — गो. के. भट, पुणे
  - ३) संस्कृत व्यवहारसाहस्री — संस्कृत भारती।
  - ४) पातञ्जल योगसूत्रम् — पतञ्जलीकृत — चौखम्बा सिरीज, वाराणसी.
  - ५) वास्तुशास्त्र का इतिहास, ईस्टर्न बुक, लिंकर्स, दिल्ली
  - ६) मयमतम् दानवराजकृत — डॉ. शैलजा पाण्डेय, चौखम्बा सुरभारती प्रकाशन, वाराणसी.
  - ७) बृहतसंहिता वराहमिहीर, कृषी पाराशार, चौखम्बा सिरीज, वाराणसी.
  - ८) कौटिल्य अर्थशास्त्रं, र. प. कंगले ९) ग्रामगीतामृतम्, डॉ. श्री. भा. वर्णेकर

# **B.A. -III Compulsory Sanskrit (आवश्यकं संस्कृतम् ) Semester V- (5 T)**

पूर्णाङ्कः - १००

लिखितपरीक्षाङ्काः - ८०  
आन्तरिकमूल्यमापनाङ्काः-२०

अड्डका:-८०

80

घटक १) संस्कृतमञ्जरी (रा.तु.म. नागपूर विद्यापीठ प्रकाशनम्)

गद्यपाठः - १-५

पद्मपाठः - ९-५

घटक २) शुकनासोपदेशः (बाणभटुटकृत-कादम्बरी-कथांशः)

२०

घटक ३) प्राचीन भारतीय शास्त्रपरिचयः - द  
(निरुक्तः, अमरकोषः इ.), धर्मशास्त्रम्

90

घटक ४) वस्तुनिष्ठसंस्कृतप्रश्नाः।

90

आन्तरिकमूल्यमापनाङ्काः-

२०

**संटर्भग्रंथः** —

- १) संस्कृत शास्त्रों का इतिहास — बलदेव उपाध्याय, चौखम्बा सीरीज वाराणसी
  - २) नलदर्पणम् — चौखम्बा सीरीज, वाराणसी.
  - ३) संगीतरत्नाकरं, चौखम्बा सीरीज, वाराणसी.
  - ४) भारतीय संस्कृतीकोश, पं. महादेवशास्त्री जोशी, महाराष्ट्र संस्कृती मंडळ, पुणे (खण्ड १ ते १०)
  - ५) कौटिल्य अर्थशास्त्रं, र. प. कंगले
  - ६) विष्णुधर्मोत्तरपुराणः
  - ७) संस्कृत शास्त्रों का इतिहास, डॉ. बलदेव उपाध्याय

## Semester V- (5 T)

## प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

अड्डका: - 80

- |   |          |
|---|----------|
| प्रश्न १ अनुवादं कुरुत अ) गद्य (१) ब) पद्य (१)                  | १०       |
| प्रश्न २ ससन्दर्भ स्पष्टीकरणं - अ) गद्य (१) ब) पद्य (१)         | १०       |
| प्रश्न ३ दीर्घोत्तरप्रश्नाः अ) गद्य (१) ब) पद्य (१)             | २०       |
| प्रश्न ४ शुकनासोपदशः- अ) अनुवादं कुरुत<br>ब) दीर्घप्रश्नाः      | १०<br>१० |
| प्रश्न ५ अ) शास्त्रपरिचयं कुरुत<br>ब) वस्तुनिष्ठसंस्कृतप्रश्नाः | १०<br>१० |

## B.A. -III

### Compulsory Sanskrit (आवश्यक संस्कृतम् )

#### Semester VI- (6 T)

पूर्णाङ्कः - १००

लिखितपरीक्षाङ्कः - ८०  
आन्तरिकमूल्यमापनाङ्कः-२०

अंड़कः-८०

घटक १) संस्कृतमञ्जरी (रा.तु.म. नागपूर विद्यापीठ)	४०
गद्यपाठः - ६-१३	
पद्यपाठः - ६-१३	
घटक २) प्राचीन-भारतीय-कलापरिचयः	२०
१) पाकशास्त्रम् (नलदर्पणम्)                    २) संगीतकला (संगीतरत्नाकरः)	
३) चित्रकला (विष्णुधर्मोत्तरपुराण)          ४) शिल्पकला	
घटक ३) वस्तुनिष्ठसंस्कृतप्रश्नाः	२०
आन्तरिकमूल्यमापनाङ्कः:-	२०
संदर्भग्रन्थाः -	
१) संस्कृत शास्त्रों का इतिहास — बलदेव उपाध्याय, चौखम्बा सीरीज वाराणसी	
२) नलदर्पणम् — चौखम्बा सीरीज, वाराणसी.	
३) संगीतरत्नाकरं, चौखम्बा सिरीज, वाराणसी.	
४) भारतीय संस्कृतीकोश, पं. महादेवशास्त्री जोशी, महाराष्ट्र संस्कृती मंडळ, पुणे (खण्ड १ ते१०)	
५) कौटिल्य अर्थशास्त्रं, र. प. कंगले	
६) विष्णुधर्मोत्तरपुराणः	
७) संस्कृत शास्त्रों का इतिहास, डॉ. बलदेव उपाध्याय	

#### Semester VI- (6 T)

#### प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

	अंड़कः - ८०
प्रश्न १) अनुवादं कुरुत अ) गद्य (१) ब) पद्य (१)	१०
प्रश्न २) ससन्दर्भ स्पष्टीकरणम् - अ) गद्य (१) ब) पद्य (१)	१०
प्रश्न ३) दीर्घोत्तरप्रश्नाः अ) गद्य (१) ब) पद्य (१)	२०
प्रश्न ४) कलापरिचयं कुरुत। (२) अथवा टिप्पणी लिखत। (२)	२०
प्रश्न ५) वस्तुनिष्ठप्रश्नाः।	२०



# Supplementary English

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Supplementary English**  
**(To be implemented from the session 2020-21 and onwards)**

This course consists of English Prose, Poetry, Short Stories, Novel and Drama by eminent writers and literary scholars. The attempt has been made to draw literature with themes from different walks of life. Care has been taken to include variety of informative, interesting and thought provoking topics that would motivate the imaginative faculty and sharpen the creativity of students. The another aim of this course is to improve communication skills for the benefit of undergraduate students at large. We have planned the content to achieve certain specific objectives and to accomplish precise learning outcomes which are as under:

### **Course Objectives**

1. To introduce the concept of critical thinking among the students by analyzing and evaluating literature
2. To help students to understand the usage of English Language from competitive examinations point of view
3. To make students understanding that barriers are self-created and can be removed by becoming conscious of them
4. To create minds that are able to produce ideas, decisions, recollect memories and reasoning ability so as to be better decision makers, strategists and visionaries.
5. To engage learner in reflective and independent thinking while being an active learner rather than passive recipient of information.
6. To suggest ways of improving reading and writing skills to students
7. To train students to be job ready through Short stories with relevant activities on English language
8. To help Students learn eight interlinked soft skills through number of activities

### **Learning Outcomes**

#### **The Many worlds of Literature**

1. Students will be exposed to the values of life in the contemporary world because without a sense of values their education would of no use
2. Platform will be provided to young learners to acquaint themselves with literary language and theoretical dimension

#### **Macmillan selected short stories**

1. Students will develop the taste for reading through material which would acquaint them with a keen and subtle way in which the English language is used.
2. Students will be provided with moral visions which will act as a permanent resource of their behavior in society

*(Signature) N.C. Nag* *(Signature) Mohan* *(Signature) Mr. J. D. Joshi* *Date: 24/07/2020* *V.V. Bhagatkar, 02/08/2020* *(Signature) S.M. Patil* *(Signature) Dr. S. S. Shinde* *Date: 24/07/2020* *(Signature) D.N. W.*

## Basics of Academic English

1. The ability to read and understand the range of written texts including those central to academic studies will be developed in the students
  2. Students will be exposed to varied strategies for reading that are appropriate for given purposes and discourses types
  3. Students will be able to understand spoken English as encountered in classrooms, seminars, public lectures, social settings and in TV or WEB based programs
  4. Students will be able to express ideas in varied forms of speech and writing

## The Spectrum

1. Students will learn about the authors from the wide spectrum and different walks of life
  2. Students understand the relevance of literary aspects in grasping scope and intricacies of language

## Gulliver Travels

1. Students will come to know about the genre called Satire
  2. Students will realize how a piece of literature can be a source of social reform as well an interesting and entertaining document

Pygmalion

1. Students will realize the importance of clarity and accuracy in languages
  2. Students will come to know the entertaining characteristics of Shavian Drama

## **English and Soft Skills**

1. The soft skills of students at undergraduate level will be developed to equip them with essentialities for the work place
  2. Students will be helped to enrich their vocabulary along with adequate practice of use of phrasal verbs and idioms to achieve ease in conversational English

## Lights on

1. Students will be helped to make the transition to twenty first century through the plays written in the decades of 2000
  2. Students will be exposed to the spoken and colloquial uses of language in particular context through dialogues

## **General Outcome**

- Students will be able to enter the job market with confidence and the ability to work effectively in the professions of their choice.

Omkar Parashuram Mohit V.V.Bhadarkar  
Date: 15/01/2015  
Dinesh Divya Hema Divya

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part I Examination (First Semester)**  
**Supplementary English**  
**(To be implemented from the session 2020-21 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbooks:**

1. *The Many Worlds of Literature*, edited by Jasbir Jain (Macmillan Education)
2. *Macmillan Selected Short Stories*
3. *Basics of Academic Writing English 1* (Orient BlackSwan)

**SEMESTER I**

★ UNIT-I (40 marks)

***The Many Worlds of Literature*, edited by Jasbir Jain**

1. The Inspector of Schools- M. Athar Tahir
2. The Gentlemen of the Jungle- Jomo Kenyat
3. Indian Women and the Salt Satyagraha- Kamaladevi Chattopadhyaya
4. Mr Krishnan's Family and I – Ardesir Vakil

★ UNIT-II (20 marks)

***Macmillan Selected Short Stories*:**

- The Speckled Band- Arthur Conan Doyle
- The Stolen Bacillus- H.G. Well

★ UNIT-III (20 marks)

***Basics of Academic Writing English 1* (Orient BlackSwan)**

Only Chapter 1. Reading Skills

Suggested types of questions in examination:

- Comprehension Passage (10)
- Writing a summary of a passage (5)
- Converting notes into paragraphs (5)

**INTERNAL (20 marks) based on classroom activity**

- Power point/chart paper presentation on exercise topics from *Basics of Academic Writing English 1* (10 marks)
- Case studies and group discussion (10 marks)

Minal  
Minal  
Minal  
Minal  
Minal

16  
16

V.V.Bhagatkar  
V.V.Bhagatkar  
V.V.Bhagatkar  
V.V.Bhagatkar

16  
16

Chand  
Chand  
Chand  
Chand

Dinesh  
Dinesh  
Dinesh  
Dinesh

## **Pattern of Question Paper for the First Semester**

**Duration of Exam: 03 hours**

### Theory marks: 80

Q. 1 (A) One Long Answer Question based on the first two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(B) One Long Answer Question based on the last two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(C) Four Short Answer Questions out of six (at least one from each Chapter) based on chapters from Unit I to be attempted in about 75 words each. ( $5 \times 4 = 20$  marks)

**Q. 2 Four Short Answer Questions out of six to be attempted in about 75 words each based on Unit II. ( $5 \times 4 = 20$  marks)**

Q. 3 (A) Five questions based on the given unseen passage to be attempted. (5 X 2 = 10 marks)

(B) Précis Writing of a given unseen passage. (5 marks)

(C) Writing a paragraph from the points provided. (5 marks)

### **Workload and Slots for each prescribed section (for the first semester)**

3 lectures per week of 48 minutes each (2.4 hours per week)

15 weeks of teaching in each semester

## Unit I: 6 weeks (18 lectures)

## Unit II: 4 weeks (12 lectures)

### Unit III: 3 weeks (9 lectures)

Internal assessment activities: 1 week (3 lectures)

Revision/Test: 1 week (3 days)

*Omaji*  
*Dinesh* *Moharil*  
*Hanumanthayya*  
*Parashuram*

*Dulie* *Shivaji* <sup>17</sup>  
*Sankar*

*V.V.Bhagatkar*  
*W. S. M.*  
*Swami*

*G. R. P.*

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part I Examination (Second Semester)**  
**Supplementary English**  
**(To be implemented from the session 2020-21 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbooks:**

1. *The Many Worlds of Literature*, edited by Jasbir Jain (Macmillan Education)
2. *Macmillan Selected Short Stories*
3. *Basics of Academic Writing English 1* (Orient BlackSwan)

**UNIT-I (40 marks)**

***The Many Worlds of Literature*, edited by Jasbir Jain**

1. Unnikatha- M. Mukundan
2. Personal Friend- Neelam Saran Gaur
3. Women in the Food Chain- Vandana Shiva
4. Two Fables- Suniti Nam Joshi

**UNIT-II (20 marks)**

***Macmillan Selected Short Stories***

- The Castaway- Rabindranath Tagore
- The Flood- Kamala Markandaya

**UNIT-III (20 marks)**

***Basics of Academic Writing English 1*(Orient BlackSwan)**

Chapter 2, 3. Approaching Writing, Academic writing

Suggested type of questions in the examination:

- Rewrite sentences to make them clearer, correcting shifts in tense and person, making subject agree with verb, etc. (5 marks)
- Reorder sentences to form a meaningful paragraph (5 marks)
- Write any one- expository/episodic paragraph (10 marks)

**INTERNAL (20 marks) Assignment:**

- Write a flow chart on any one topic given by the teacher (10 marks)
- Write a 500 word article for the college magazine (10 marks)

## **Pattern of Question Paper for the Second Semester**

**Duration of Exam: 03 hours**

**Theory marks: 80**

Q. 1 (A) One Long Answer Question based on the first two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(B) One Long Answer Question based on the last two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(C) Four Short Answer Questions out of six (at least one from each Chapter) based on chapters from Unit I to be attempted in about 75 words each. ( $5 \times 4 = 20$  marks)

Q. 2 Four Short Answer Questions out of six to be attempted in about 75 words each based on Unit II. ( $5 \times 4 = 20$  marks)

Q. 3 (A) Rewrite sentences to make them clearer, correcting shifts in tense and person, making subject agree with verb, etc. (5 marks)

(B) Reorder sentences to form a meaningful paragraph (5 marks)

(C) Write a paragraph of about 75 words on the given topic. (10 marks)

### **Workload and Slots for each prescribed section (for the second semester):**

- 3 lectures per week of 48 minutes each (2.4 hours per week)
- 15 weeks of teaching in each semester
- Unit I: 6 weeks (18 lectures)
- Unit II: 4 weeks (12 lectures)
- Unit III: 3 weeks (9 lectures)
- Internal assessment activities: 1 week (3 lectures)
- Revision/Test: 1 week (3 days)

Dr. D. N. Mohan  
HOD

V. V. Bhagatkar  
HOD  
D. V. N.

**Rashtrasant Tukadoji Maharaj Nagpur University**

**Syllabus Prescribed for**

**Bachelor of Arts (B.A.) Part II Examination (Third Semester)**

**Supplementary English**

**(To be implemented from the session 2021-22 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbooks:**

1. *The Spectrum* (Macmillan Education)
2. *Gulliver's Travels*: Abridged classic reader (Orient BlackSwan)
3. *Basics of Academic Writing 2* (Orient BlackSwan)

**UNIT-I (40 marks)**

***The Spectrum* (Macmillan Education) Prescribed Lessons:**

**Prose**

1. The Secret of Work: Swami Vivekanand
2. On Saying Please: A.G.Gardiner
3. Go Kiss the World: Subroto Bagchi
4. The Night Train at Deoli: Ruskin Bond

**Poetry:**

1. The Schoolboy: William Blake
2. The Education of Nature: William Wordsworth

**UNIT-II (20 marks)**

***Gulliver's Travels*: Abridged classic reader (Orient BlackSwan)**

**UNIT- III (20 marks)**

***Basics of Academic Writing 2* (Orient BlackSwan)**

**Chapter 1 only: Approaches to Writing**

**Suggested types of questions in the examination:**

- There is an opinion that education should be job-oriented. Attempt a write-up in 250 words against the proposition. (10 marks)
- Writing dialogues, meeting and greeting people (10 marks)

**INTERNAL (20 marks) Writing assignment**

- Exercises from the Communication and Life Skills section of prescribed text (10 marks)
- Write a film review of cinematic adaptation of Gulliver's Travels/ any other classic novel (10 marks)

## **Pattern of Question Paper for the Third Semester**

**Duration of Exam: 03 hours**

**Theory marks: 80**

Q. 1 (A) One Long Answer Question based on the prescribed chapters from Prose Section of Unit I to be attempted out of two in about 200 words. (10 marks)

(B) Two Short Answer Questions out of four (at least one from each Chapter), based on Prose Section chapters from Unit I to be attempted in about 75 words each. ( $2 \times 5 = 10$  marks)

(C) Four Short Answer Questions out of six (three from each poem) from Unit I to be attempted in about 75 words each. ( $4 \times 5 = 20$  marks)

Q. 2 (A) One long answer question out of two based on text prescribed in Unit II to be attempted in about 200 words. (10 marks)

(B) Two Short Answer Questions out of three based on text prescribed in Unit II to be attempted in about 75 words each. ( $2 \times 5 = 10$  marks)

Q. 3 (A) Attempt a write up in about 200 words on any one topic out of three. (10 marks)

(B) Attempt a dialogue writing on the situation/topic given. (10 marks)

### **Workload and Slots for each prescribed section (for the Third Semester):**

- 3 lectures per week of 48 minutes each (2.4 hours per week)
- 15 weeks of teaching in each semester
- Unit I (Prose): 6 weeks (18 lectures)
- Unit I (Poetry): 2 weeks (06 lectures)
- Unit II: 3 weeks (9 lectures)
- Unit III: 2 weeks (6 lectures)
- Internal assessment activities: 1 week (3 lectures)
- Revision/Test: 1 week (3 days)

*Dilma Mohanty* *V.V. Bhagdhan*  
*Swaraj Mohanty* *Henry 21* *Gopal D.V.N.*  
*Honey*

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part II Examination (Fourth Semester)**  
**Supplementary English**

(To be implemented from the session 2021-22 and onwards)

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbooks:**

1. **The Spectrum** (Macmillan Education)
2. **Pygmalion**: Abridged Classic Reader (Orient BlackSwan)
3. **Basics of Academic Writing 2**(Orient BlackSwan)

**UNIT-I (40 marks)**

**The Spectrum** (Macmillan Education)

**Prescribed Lessons:**

**Prose:**

5. The Scientific Point of View: JBS Haldane
6. Father's Help: R.K. Narayan
7. Karma: Khushwant Singh
8. If You Are Wrong, Admit It: Dale Carnegie

**Poetry:**

4. All Things Will Die: Alfred Tennyson
6. My Grandmother: Elizabeth Jennings

**UNIT-II (20 marks)**

**Pygmalion**: Abridged classic reader (Orient BlackSwan)

**UNIT- III**

**Basics of Academic Writing English 2**(Orient BlackSwan)

Chapter 2 only- Revision of written draft

Suggested types of questions in the examination:

- Fill in the blanks in passages with transitional markers and synonyms
- Edit and revise the following paragraph by correcting errors of spelling/grammar/punctuation and by making the necessary additions/deletions of words/ sentences.

**INTERNALs (20 marks)**

Writing assignment

- Write a blog on your interpretation of Pygmalion as text or film (10 marks)
- Power point presentation on non-verbal communication (10 marks)

*Dua 1  
Mohsin  
M. S.  
H. L. G.*

*V.N. Bhagat  
A. S.  
K. W. S.  
S. M. S.*

*D. P. V. N.*

*D. P. V. N.*

## **Pattern of Question Paper for the Fourth Semester**

**Duration of Exam: 03 hours      Theory marks: 80**

Q. 1 (A) One Long Answer Question based on the prescribed **chapters from Prose Section** of Unit I to be attempted out of two in about 200 words. (10 marks)

(B) Two Short Answer Questions out of four (**at least one from each Chapter**), based on Prose Section chapters from Unit I to be attempted in about 75 words each. (2X5=10 marks)

(C) Four Short Answer Questions out of six (**three from each poem**) from Unit I to be attempted in about 75 words each. (4X5=20 marks)

Q. 2 (A) One long answer question out of two based **on the text prescribed in Unit II** to be attempted in about 200 words. (10 marks)

(B) Two Short Answer Questions out of three based **on the text prescribed in Unit II** to be attempted in about 75 words each. (2X5=10 marks)

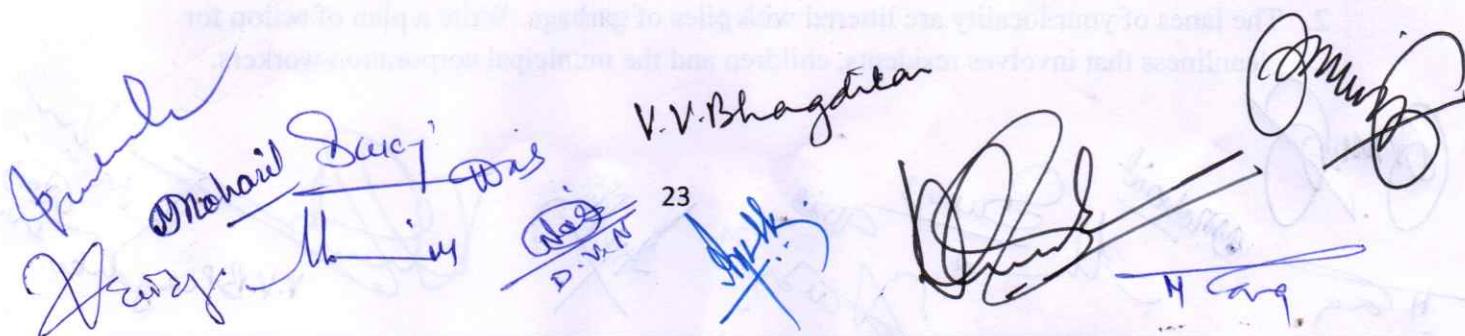
Q. 3 (A) Fill in the blanks in passages with transitional markers and synonyms. (10 marks)

(B) Edit and revise a given paragraph by correcting errors of spelling/grammar/punctuation and by making the necessary additions/deletions of words/ sentences. (10 marks)

### **Workload and Slots for each prescribed section (for the Fourth Semester):**

- 3 lectures per week of 48 minutes each (2.4 hours per week)
- 15 weeks of teaching in each semester
- Unit I (Prose): 6 weeks (18 lectures)
- Unit I (Poetry): 2 weeks (06 lectures)
- Unit II: 3 weeks (9 lectures)
- Unit III: 2 weeks (6 lectures)
- Internal assessment activities: 1 week (3 lectures)
- Revision/Test: 1 week (3 days)

V.V.Bhagatkar



**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Final Examination (Fifth Semester)**  
**Supplementary English**  
**(To be implemented from the session 2022-23 and onwards)**

**Theory marks: 80      Internal Assessment: 20**

**Prescribed Textbooks:**

1. **English and Soft Skills** S P Dhanvel (Orient BlackSwan)
2. **Lights on Vol. II** edited by Lakshmi Chandra (Orient BlackSwan)

**UNIT-I (40 marks)**

**The following lessons are prescribed from English and Soft Skills S P Dhanvel (Orient BlackSwan)**

1. The Boy who broke the Bank- Ruskin Bond
2. My Financial Career- Stephen Leacock
3. The Verger- Somerset Maugham
4. The Look-out Man- Nicolas Bentley

**UNIT-II (20 marks)**

**Lights On Vol. I, edited by Lakshmi Chandra (Orient BlackSwan)**

Dance like a Man by Mahesh Dattani

◆ **UNIT-III (20 marks)**

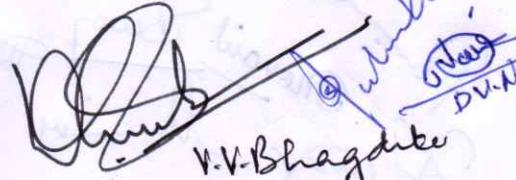
**English and Soft Skills S P Dhanvel (Orient BlackSwan)**

This unit will assess student's learning of different soft skills based on the exercises given in each chapter.

**SUGGESTED SOFT SKILLS QUESTIONS**

Attempt any one of the Case Study Questions (based on Emotional Intelligence/ Assertive skills/Problem Solving) 10 marks each

1. You have just finished your 12<sup>th</sup> board exam. Your parents want you to take up a course in MBA. A cousin of yours is studying for the Civil Services exam. However, you wish to do course in creative writing. Describe in 500 words how you will go about convincing your family and friends giving reasons why your career choice is the right one for you.
2. The lanes of your locality are littered with piles of garbage. Write a plan of action for cleanliness that involves residents, children and the municipal corporation workers.

  
V.V. Bhagatke  
Date: 20/01/2023

## **INTERNALs (20 marks)**

Assessment of students will be done based on classroom activity recommended in the prescribed prose texts on the following aspects:

- Listening Skills
- Emotional Intelligence Skills
- Assertive Skills
- Problem Solving Skills

### **Pattern of Question Paper for the fifth Semester**

**Duration of Exam: 03 hours**

**Theory marks: 80**

Q. 1 (A) One Long Answer Question based on the first two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(B) One Long Answer Question based on the last two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(C) Four Short Answer Questions out of six, (at least one from each Chapter) to be attempted based on chapters from Unit I in about 75 words each. ( $5 \times 4 = 20$  marks)

Q. 2 (A) One long answer question out of two based **on the play prescribed in Unit II** to be attempted in about 200 words. (10 marks)

(B) Two Short Answer Questions out of three based **on the play prescribed in Unit II** to be attempted in about 75 words each. ( $2 \times 5 = 10$  marks)

Q. 3 Attempt any two Case Study Questions (based on Emotional Intelligence/ Assertive skills/Problem Solving) in about 50 words each. ( $2 \times 10 = 20$  marks)

### **Workload and Slots for each prescribed section (for the Fifth Semester):**

- 3 lectures per week of 48 minutes each (2.4 hours per week)
- 15 weeks of teaching in each semester
- Unit I (Prose): 6 weeks (18 lectures)
- Unit II: 4 weeks (12 lectures)
- Unit III: 3 weeks (09 lectures)
- Internal assessment activities: 1 week (3 lectures)
- Revision/Test: 1 week (3 days)

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Final Examination**  
**Supplementary English**  
**Sixth Semester**

**(To be implemented from the session 2022-23 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbooks:**

1. **English and Soft Skills** S P Dhanvel (Orient BlackSwan)
2. **Lights on Vol. II** edited by Lakshmi Chandra (Orient BlackSwan)

**UNIT-I**

**The following chapters are prescribed from English and Soft Skills S P Dhanvel (Orient BlackSwan)**

1. The Lighthouse Keeper of Aspinwall- Henryk Sienkiewicz
2. Senor Payroll- W.E. Barrett
3. A Real Good Smile- Bill Naughton
4. Gateman's Gift- R.K. Narayan

**UNIT-II**

**Lights on Vol. II** edited by Lakshmi Chandra (Orient BlackSwan)

Lights Out- Manjula Padmanabhan

**UNIT-III (20 marks)**

**English and Soft Skills S P Dhanvel (Orient BlackSwan)**

This unit will assess student's learning of different soft skills based on the exercises given in each chapter.

**SOFT SKILLS**

Suggested types of questions in the examination:

- Imagine you have completed your degree course and you are applying for the post of manager for a tourist resort. Write a covering letter and a resume. (10 marks)
- Write an interview with a prominent alumnus of your college. The answers to your questions must reveal his memories of the campus, achievements, current position, secret of success, etc. (10 marks)

*(Handwritten signatures and initials follow)*

## **INTERNAL (20 marks)**

Assessment of students will be done based on classroom activity recommended in the prescribed prose texts on the following aspects:

- Interview skills
- Adaptability skills
- Non-verbal communication skills
- Written communication skills

### **Pattern of Question Paper for the Sixth Semester**

**Duration of Exam: 03 hours**

**Theory marks: 80**

Q. 1 (A) One Long Answer Question based on the first two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(B) One Long Answer Question based on the last two prescribed chapters from Unit I to be attempted out of two in about 200 words. (10 marks)

(C) Four Short Answer Questions (at least one from each Chapter) to be attempted out of six based on chapters from Unit I in about 75 words each. ( $5 \times 4 = 20$  marks)

Q. 2 (A) One long answer question out of two based **on the play prescribed in Unit II** to be attempted in about 200 words. (10 marks)

(B) Two Short Answer Questions out of three based **on the play prescribed in Unit II** to be attempted in about 75 words each. ( $2 \times 5 = 10$  marks)

Q. 3 Attempt any two Soft skill questions out of three based on the exercises given in each chapter in about 50 words each. ( $2 \times 10 = 20$  marks)

### **Workload and Slots for each prescribed section (for the Sixth Semester):**

- 3 lectures per week of 48 minutes each (2.4 hours per week)
- 15 weeks of teaching in each semester
- Unit I (Prose): 6 weeks (18 lectures)
- Unit II: 4 weeks (12 lectures)
- Unit III: 3 weeks (09 lectures)
- Internal assessment activities: 1 week (3 lectures)
- Revision/Test: 1 week (3 days)

V.V.Bhagdikan

Omaji

P.V.N.

Shankar Mohan  
Anuj Mehta  
27  
Swati Shukla

# **R.T.M. Nagpur University Nagpur**

## **SYLLABUS**

**For**

**URDU**

**B.A./ B.Com (Part I) Compulsory**

**I<sup>st</sup> & II<sup>nd</sup> Semester**

**B.A. Part-I Literature (Optional)**

**I<sup>st</sup> & II<sup>nd</sup> Semester**

**B.A./B.Com Part-II Compulsory**

**III<sup>rd</sup> & IV<sup>th</sup> Semester**

**B.A. Part-II Literature (Optional)**

**III<sup>rd</sup> & IV<sup>th</sup> Semester**

**B.A. Part-III<sup>rd</sup> Compulsory**

**V<sup>th</sup> & VI<sup>th</sup> Semester**

**B.A. Part-III Literature (Optional)**

**V<sup>th</sup> & VI<sup>th</sup> Semester**

**Semester Pattern implemented from the session 2017-18 onwards**

### **Distribution**

### **Table**

The following are distribution of marks for external and internal for University examination and continuous internal assessment and passing minimum for papers of UG Programmes.

Combine maximum passing marks 40

Faculty	Maximum marks	Minimum Passing marks	Continuous Internal Assessment	Minimum Passing marks	Total allotted marks	Minimum passing marks
U.G.B.A./B.Com	80	32	20	08	100	40

## **B.A./ B.Com ( part I )**

### **Urdu Compulsory**

**1T1      I<sup>st</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Essay- One out of Four**

##### **Unit II:- Prose:**

- (i) Duniya Pe Ummeed Qayam Hai – Sir Sayyed Ahmad Khan
- (ii) Khuttoot-E-Ghalib (Munshi Har Gopal-Tufta ke Naam)- Mirza Ghalib
- (iii) Sachchi Khushi – Maulvi Nazeer Ahmad
- (iv) Lakhnow Main Funoon-e-Adbiya Ki Taraqqi- Maulana Abdul Haleem Sharar
- (v) Insani Zindagi Main Mahol Ki Ahmiyat- Sayyed Asif Husain Abidi

##### **Unit III:- Poetry**

###### **Gazlein**

- (i) Meer Taqi Meer
  - (a) Ashk Aankhon Main Kab Nahi Aata
  - (b) Kahte ho Ittehad Hai Hum ko
- (ii) Mirza Ghalib
  - (a) Dil se Teri Nigah Jigar Tak Uter Gai
  - (b) Ibne Maryam Hua Kare Koi
- (iii) Hasrat Mohani
  - (a) Dil Ko Khayale yar Ne Makhmoor Kar Diya
  - (b) Main Hoon Kya Meri Mohabbat Ki Haqeeqat Kya Hai

##### **Unit IV:- Nazmein**

- (i) Allama Iqbal \_\_\_\_\_ Javed Ke Naam
- (ii) Jigar Muradabadi –Dil haseen hai to muhabbat bhi haseen paida kar
- (iii) Josh Malihabadi \_\_\_\_\_ Shahinshah Humayun Ka Maqbara

## **B.A./ B.Com ( part I )**

### **Urdu Compulsory**

**2T1      II<sup>nd</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Essay- One out of Four**

##### **Unit II:- Prose:**

- (i) Qazzaqi- Munshi Prem Chand
- (ii) Qeemti Moti – Dr. Sarosha Nasreen Quazi
- (iii) Adab Urdu Aur Chakbast – Maulvi Abdul Haq
- (iv) Urdu Shairy Main Tamseel – Masood Hasan Adeeb
- (v) Rustam Aur Sohrab (Darama) - Agha Hasher Kashmiri

##### **Unit III:- Poetry**

###### **Gazlein**

- (a) Faiz
  - (i) Hum per Tumhari Chah ka Ilzaam Hi to Hai
  - (ii) Gulon mein Rang Bhre, Bad-e-nau Bahar Chale
- (b) Midhatul Akhtar
  - (i) Achcha Agar Nahi to Bura Maan le Mujhe
  - (ii) Jahan Jaun Vahin Ka ho ke rah Jaun
- (c) Munawwar Rana
  - (i) Duniyan Main Muflison ka Thikana Nahi Raha
  - (ii) Talash Karte Hain unko Zururaton Wale

##### **Unit IV:- Nazmein**

- 1. Josh
  - (i) Sogwaran-e-Husain se Khitaab
- 2. Asrarul Haque Majaz
  - (i) Taj-e-Vatan Ka Lal-E-Darakshan Chala Gaya
- 3. Sahir Ludhyanvi
  - (i) Kal Aur Aaj

## **Special Instructions for Paper setter**

### **B.A./ B.Com (Part I)**

### **Urdu Compulsory**

**1T1 & 2T1**

**Semester I<sup>st</sup> & II<sup>nd</sup>**

**Time:3 Hours**

**For**

**B.A./B.Com 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No. 1 . Essay (One out of Four) 16

Q.No.2.(A) Life & works of Author 08

(B) Explanation with reference to context. 08

(Two out of Four ) (Nasr)

Q.No.3 (A) Explanation with reference to context 08

(Four out of Six) (Ghazal)

(B) Life & Works of Poet 08

(One out of three)

Q.No.4.(A) Gist of poems (One out of Three) 08

(B) Life & Works of poet 08

Q.No.5. Short Answer type questions based on all four units. 16

## **B.A. I.**

### **Urdu Literature (Optional)**

#### **1T1 I<sup>st</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Afsana**

1. Jihad (Munshi Prem Chand)
2. Manzoor (Sa'adat Hasan Manto)
3. Garm Koat (Rajendra Singh Bedi)
4. Tafreeh (Saleha Abid Husain)
5. Saharzada (Dr. Sarosha Nasreen Quazi)

##### **Unit II:- Gazlein**

1. Daagh Dahelvi
  - (i) Uzer Aaane Main Bhi Hai Aur Bulate Bhi nahi
  - (ii) Aarzoo-e-wafa Kare Koi
2. Allama Iqbal
  - (i) Jab Ishq Sikhata Hai Aadab-e-Khud Aagahi
  - (ii) Sitaron se Aage Jahan Aur Bhi Hain.
3. Firaaq Gorakhpuri
  - (i) Sar Mein Sauda Bhi Nahi Dil Main Tamanna Bhi Nahi
  - (ii) Sham-e-gum Kuchh us Nigh-E-Naz ki batein karo

##### **Unit III:- Marsiya**

1. Meer Anees
  - (i) Sibte Nabi se Manzil-e-Maqsad Qareeb Hai
2. Qasida
  - (i) Mirza Saoda:- hai Ishtehar Tujh se mera Aai Falak Janab

##### **Unit IV :- Masnavi**

1. Meer Hasan
  - (i) Shatabi Mujhe saqiya da sharab

2. Grammar

Ism aur uski Kismein

**B.A. I.**

**Urdu Literature (Optional)**

**2T1 II<sup>nd</sup> Semester**

**Prescribed syllabus:**

**Unit I :- Novel**

Firdouse-E-Bareen by Abdul Haleem Sharar

**Unit II:- Nazm**

1. Sarnavisht Aadam By Shad Azeem Abadi
2. Adle Jahangiri By Shibli Nomani
3. Abre Bahar By Munshi Navbat rai Nazar
4. Sham By Faiz Ahmad Faiz

**Unit III:- Rubai**

1. Maulana Hali
  - (i)      Hasti se Teri Rang-o-Boo sab ke liye
  - (ii)     Moosa Ne ki ye Arz Aye bar-e-Khuda
2. Amjad Haider Abadi
  - (i)      Zanjeer-e-Dar-e-Arsh Hilata hoon main
  - (ii)     Behud main Rahoon to wo Qarin Aata Hai
3. Firaque Gorakhpuri
  - (i)      Duniya jo sanwar jaye sanwar jane de
  - (ii)     Aaeena-e-Dil Goon se Phooti Hai Kiran
4. Natique Gulaothvi
  - (i)      Daolat ka Nasha ek Dastoor Nahi
  - (ii)     Kanoon Mein Awwam ke samana seekho

**Unit IV :-**

1. Qitaa

- (i) Faani Badayuni:
  - a) Ab wo Raaten Kahan Shabaab Khan
  - b) Auraton par Bartari Mardon ki Sabit hai ke wo
- (ii) Faiz Ahmad Faiz
  - a) Waqf-e-Hirmaan-o-yaas Rahta Hoon.
  - b) Faza-e-Dil pe udaasi Bikherti jati hai
- (iii) Sahir Ludhyanvi
  - a) Jahan- Jahan Teri Nazron Ki Oos Tapki Thi
  - b) Kis ko khabar thi, kis ko yaqin tha Aaise bhi Din  
Aayenge
- (iv) Khizar Nagpuri
  - a) Wo mere paas se gaye hain abhi
  - b) Kuchh Baharen Bhi Daag Deti Hain

## 2. Grammar

Jumle Aur uski Kismein

## **Special Instructions for Paper setter**

### **B.A. (Part I)**

### **Urdu Literature (Optional)**

**1T1 & 2T1**

**Semester I<sup>st</sup> & II<sup>nd</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No.1. (A) Life & works of Writer (One out of Three) 16

(B) Explanation with reference to context.

(Two out of Four)

Q.No.2.(A): Life & Works of Poet (One out of Three) 16

(B) Explanation with reference to context

(Four out of Six)

Q.No.3. (A) Explanation with reference to context 08

(Two out of Four) Marsiya/Qasida

(B) Life & Works of Poet

08

Q.No.4. (A) Explanation with reference to context 08

(Two out of Four) Masnavi

(B) Question based on Grammar

08

Q.No. 5. Short Answer type questions based on all Four Units. 16

## **B.A./Com. II.**

### **Urdu Compulsory**

### **3T1 III<sup>rd</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Novel**

Gaban by Munshi Prem Chand

(First Half Portion of the Novel are prescribed)

##### **Unit II:- Drama**

Teen Ungliyan by Sa'adat Hasan Manto

##### **Unit III:- Prescribed Mazameen**

- (i) Sahir, Hamare Mulk Ka Maqbool tareen Shair By Khwaja Ahmad Abbas
- (ii) Sahir ka Shairana Mizaj By Sardar Jafri
- (iii) Sahir Ki Infradiyat Aur Shiddat-e-Ahsas By Ahmad Nadeem Qasmi

##### **Unit IV:- Quami Nazmein: Following poems are prescribed;**

1. Naya Shivala by Allama Iqbal
2. Azan-E-Himaliya by Hasrat Mohani
3. Khak-E-Hind by Brij Narayan Chakbast

## **B.A./B.Com ( part II )**

### **Urdu Compulsory**

### **4T1 IV<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Novel**

Gaban by Munshi Prem Chand

(Second last portion of the Novel are Prescribed)

##### **Unit II:- Drama**

Mitti Ka Bulawa by Shameem Hanfi

##### **Unit III:- Prescribed Mazameen**

1. Munfarid lab-o-lahje ka shair- Midhatul Akhtar by Shahid Kabeer
2. Dr. Midhatul Akhtar by M.I. Sajid
3. Midhatul Akhtar Ki Shairana Kavishen By Dr. Sarosha Nasreen Quazi

##### **Unit IV: Quami Nazmein Following poem are prescribed**

1. Mather-e-Hind by surur Jahan Aabadi
2. Quami Geet by Syed Anwar Husain Aarzoo
3. Naveed-e-Azadi-e-Hind by Zafar Ali Khan

## **Special Instructions for Paper setter**

### **B.A./B.Com (Part II)**

### **Urdu Compulsory**

**3T1 & 4T1**

**Semester III<sup>rd</sup> & IV<sup>th</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No.1. Life & works on Author of Novel 16

Q.No.2. Short answer questions based on Drama 16

Q.No.3. (A) Explanation with reference to context from Mazameen 08

(B) Life & works of Author 08

Q.No.4.(A) Explanation with reference to context 08

From Quami Nazmein (Two out of Three)

(B) Gist of the poem (One out of Three) 08

Q.No.5. Short answer type questions on whole syllabus 16

(Four out of four)

## **B.A. II.**

### **Urdu Literature**

**3T1**

**III<sup>rd</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Urdu Adab Ki Tareekh (1800 to 1857)**

- i)      Urdu Adab ka Pasmanzar
- ii)     Urdu ka Mani-o-Mafhoom
- iii)    Urdu Aur Uski Aham Boliyan

##### **Unit II:- (i) Urdu Zuban ki Nash-O- Numa main Sufiya-e-Karam ka Hissa**

- (ii) Khwaja Banda Nawaz Gasudaraz

##### **Unit III :- Adab Ka Mutalla by Athar Parvez**

Following Titles are prescribed

- 1- Funoon-E-Latifa
- 2- Funoon-E- Latifa Ki Tareef
- 3- Adab Kya Hai
- 4- Adab Aur Zindagi
- 5- Adab Aur Haqeeqat Nigari

##### **Unit IV :- Sir Syed Aur Unke Kaarname by Noorul Hasan Naqvi**

(Page No. 7 to 62)

## **B.A. II.**

### **Urdu Literature**

**4T1      IV<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Urdu Adab Ki Tareekh (1800 to 1857)**

- (i)      Urdu ki saakht ke Buniyadi Anasir
- (ii)     Dakkan Main Urdu Ki Ibteda-O-Irteqa

##### **Unit II : -**

- (iii)    Urdu Zuban ki Ibteda se Mutalliq Mukhtalif Nazariyat
- (iv)    Maghrabi Hindi Aur Uski Bolian
- (v)     Urdu Zuban-O-Adab ka Irteqa

##### **Unit III:- Adab ka Mutala by Ather Parvez**

Following titles are Prescribed:

- (1) Shaery
- (2) Nasr
- (3) Daastaan
- (4) Novel
- (5) Mukhtasar Afsana

##### **Unit IV:- Sir Syed Aur Unke Karname by Noorul Hasan Naqvi**

(Page 63 to 96)

## **Special Instructions for Paper setter**

### **B.A. (Part II)**

#### **Urdu Literature**

**3T1 & 4T1**

**Semester III<sup>rd</sup> & IV<sup>th</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All Question shall carry equal marks.

Q.No.1. Shall be based on Urdu Adab Ki Tareekh 16

Q.No.2. Shall be based on prescribed titles. 16

Q.No.3. Long answer type questions on “Adab ka Mutalla” 16

(Two out of Four)

Q.No.4. Short answer type questions (at least 10 lines) 16

On “Sir Sayyed aur unke karnama” (Four out of Eight)

Q.No.5. Very short answer type questions based on Whole syllabus 16

(Four out of Four)

## **B.A. III.**

### **Urdu Compulsory**

**5T1**

**V<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Essay Writing**

##### **Unit II:- Yaadgaar-e-Hali by Dr. Saleha Aabid Hussain**

(First Half portion of Book are prescribed )

##### **Unit III:- Hamd**

- (i) Faani Badayuni : Aye Khuda-e-Jaleel Banda Nawaaz
- (ii) Quli Qutub shah: Munajaat Mera tu sun ya samee

##### **Naat**

- (i) Shah Sayyed gulaam Husain :  
Sada Zaat Allah Koon Hai Baqa
- (ii) Maulana Sayeed Ejaz :Ye Jaan kar Jaan De Raha Hun ke  
Jaan Dene Mein Zindagi Hai

##### **Unit IV:- Nazmein**

1. Mirza Salamat Ali Dabeer : Sub'h ka Manzar
2. Pandit Labbhu Ram Josh Malsiyani : Meraaj-e-Insani
3. Mohammad Daud Khan Akhtar Shirani : Aaj Ki Raat

## **B.A. III.**

### **Urdu Compulsory**

**6T1                  VI<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

**Unit I :- Essay Writing**

**Unit II :- Yaadgaar-e-Hali by Dr. Saleha Aaabid Hussain**

Second Last portion of Book are prescribed.

**Unit III:- Jadeed Gazal**

- 1) Makhdoom Mohiyuddin:
  - (i) Aap ki yaad Aati Rahi raat bhar
- 2) Shaher Yaar
  - (i) Justuju jiski thi usko to na paya hum ne
- 3) Nasir Kaazmi
  - (i) Dil Mein ek laher si utthi hai abhi

**Unit IV: Jadeed Nazmein:**

- (1) Jigar Muradabadi
  - (i) Zamane ka Aaqua Gulaam-e-Zamana
- (2) Akhtar-ul-Imaan
  - (i) Ek ahsaas
- (3) Sikandar Ali Wajd
  - (i) Ajanta

# **Special Instructions for Paper setter**

### **B.A. (Part III)**

## Urdu Compulsory

## **5T1 & 6T1      Semester V<sup>th</sup> & VI<sup>th</sup>**

**Time:3 Hours**

Full Marks: 80

1. The question Paper shall consist of Five Questions.
  2. All Five questions shall be Compulsory
  3. All question shall carry equal marks.

## **B.A. III.**

### **Urdu Literature**

**5T1      V<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Life & Work of Allama Iqbal**

##### **Unit II :- Nazmein**

1. Allama Iqbal
  - (i) Aaftab-e-Subha
  - (ii) Jugnoo
  - (iii) Subha Ka Sitara
  - (iv) Pyam-e-Subha
  - (v) Hindustani Bachchon ka Qaumi Geet
  - (vi) Trana-E-Hindi

##### **Unit III:- Mazameen-e-Shibli: (Ibtedai 05 Mazameen)**

##### **Unit IV:- (1) Ilm-e- Bayaan**

1. Tashbih
2. Isteaara
3. Majaz-e-Mursel
4. Kinaya

##### **(2) Taqtee**

- (i) Bahr-e-Mutaqarib

## **B.A. III.**

### **Urdu Literature**

**6T1**

**VI<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

**Unit I:- Life & Work of Josh Malihabadi**

**Unit II :- Nazmein**

**1. Josh Malihabadi**

- (i) Hamari Sair
- (ii) Gaati Hui Rahen
- (iii) Phool
- (iv) Bahaar Aane Lagi
- (v) Udaas Subh
- (vi) Mashgale ka asar

**Unit III:- Mazameen-e-Shibli (No. 06 Ta No. 10 Mazameen)**

**Unit IV:- (A) Sinatein**

- 1. Talmeeh
- 2. Tazaad
- 3. Mera'atun Nazeer
- 4. Husn-e-Taleel
- 5. Tajahul-e-Aarefana

**(B) Taqtee**

- 1. Bahr-E-Ramal
- 2. Bahr-E- Hazaj

## **Special Instructions for Paper setter**

### **B.A. (Part III)**

### **Urdu Literature**

**5T1 & 6T1**

**Semester V<sup>th</sup> & VI<sup>th</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No.1. Life & Works of Allama Iqbal	16
Q.No.2.(A) Gist of the Poems of Allama Iqbal	08
(B) Explanation with reference to context (Four out of Six)	08
Q.No.3.(A) Life & works of Author	08
(B) Explanation with reference to context from Mazameen-e-Shibli	08
Q.No.4.(A) Ilm-e-Bayaan	08
(B) Bahr ka Naam Aur Taqtee	08
Q.No.5. Short answer type questions on Whole Syllabus (Four out of Four)	16

# English

# Literature

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) English Literature**

**Objectives and Outcomes**

We aim to open new windows for students and teachers to broaden their minds through poetry, drama and classics. They will learn more about past in comparison with the present analysing the point of view of very important literary figures from the World Literature. This will further enhance their critical acumen and help develop new ideas

**Semester I & II**

Selections of Literature from Elizabethan to Restoration Ages

**Semester III & IV**

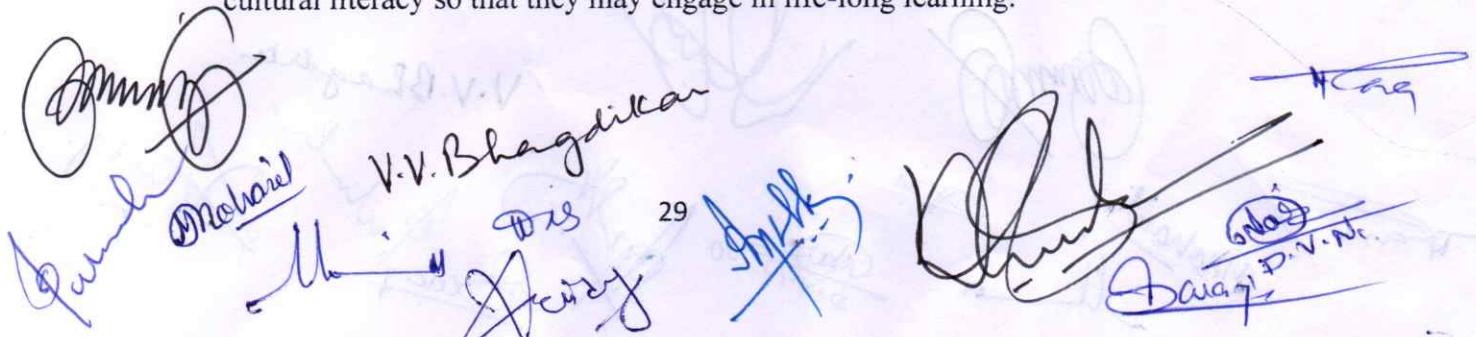
Selections of Literature from Romantic to Victorian Ages

**Semester V & VI**

Selections from Modern English Literature and Indian Writing in English

**Course Objectives:**

- To enhance the reading of poetry, drama and classics in all its contours
- To create awareness of poetry/drama and classics as a part of modern life
- To help students learn and practice critical thinking – develop problem solving/decision making
- To put forward innovative and creative ideas with trained activities
- To help realise cultural differences and accept them as they are
- To understand the importance of Intercultural learning
- To educate students in both the originality and efficacy of the English language through the study of literature and other contemporary forms of culture.
- To provide students with the critical faculties necessary in an academic environment, on the job, and in an increasingly complex, interdependent world.
- To assist students in the development of intellectual flexibility, creativity, and cultural literacy so that they may engage in life-long learning.



## **Learning Outcomes:**

- Students should be familiar with representative literary texts within a given historical, geographical, and cultural context.
  - Students should be able to apply critical and theoretical approaches to the reading and analysis of literary and cultural texts in multiple genres.
  - Students should be able to identify, analyse, interpret and describe the critical ideas, values, and themes.
  - Students should be able to put forth ideas, values, and themes which inform and impact culture and society, both now and in the past.
  - Students should be able to write analytically using language competencies
  - Students should be able to understand the different variety of literatures in all forms available
  - Students should be able to imbibe ethical, moral, national and cultural values in an academic context.

V.V.Bhagditar

Mohamed



21

~~Nat~~ 30  
D.V.N

100

V.V.Bh  
Scuci

~~103~~

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part I Examination (First Semester)**  
**English Literature**  
**(To be implemented from the session 2020-21 and onwards)**

**Theory marks: 80      Internal Assessment: 20**

**Prescribed Textbooks:**

1. *Selections of Literature from Elizabethan to Restoration Ages*, Edited by Kapil Singhel, Madhavi Moharil, Dhanraj Shete (Orient BlackSwan)
2. Shakespeare: *Interpreting a Play: The Merchant of Venice*, Edited by Deepti Dharmani, Pankaj Sharma and Umed Singh, Macmillan Education)

**Section 1 (Poetry)**

The following poems are prescribed from *Selections of Literature from Elizabethan to Restoration Ages*:

1. Easter: Edmund Spenser
2. Let Not Old Age Disgrace My High Desire: Philip Sidney
3. Sonnet to Sir Philip Sidney's Soul: Henry Constable
4. The Treasure of Our Tongue: Samuel Daniel
5. Taking My Pen: Michael Drayton
6. All the World's a Stage: Shakespeare
7. A Hymn to God the Father: Ben Jonson

**Section 2 (Prose)**

The following essays of Francis Bacon from *Selections of Literature from Elizabethan to Restoration Ages* are prescribed:

Of Friendship, Of Travel, Of Studies, Of Adversity

**Section 3 (Shakespearean Drama)**

Shakespeare: *Merchant of Venice*, Edited by Deepti Dharmani, Pankaj Sharma and Umed Singh, Macmillan Education

**Section 4 (Literary Forms and Terms)**

**Forms of Drama:** Tragedy, Comedy, Tragi-Comedy, Farce & Melodrama, Chronicle Play, Poetic Drama, Problem Play, Absurd Drama.

**Literary Terms:** Conceit, Decorum, Denouement, Dialect, Epigraph, Epiphany, Epitaph, Euphemism.

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part I Examination (Second Semester)**  
**English Literature**  
**(To be implemented from the session 2020-21 and onwards)**

Theory marks: 80

Internal Assessment: 20

**Prescribed Textbooks:**

1. **Selections of Literature from Elizabethan to Restoration Ages**, Edited by Kapil Singhel, Madhavi Moharil, Dhanraj Shete (Orient BlackSwan)
2. Daniel Defoe: **Robinson Crusoe** (Abridged Edition, Macmillan Education)

**Section 1 (Poetry)**

The following poems from **Selections of Literature from Elizabethan to Restoration Ages** are prescribed:

1. Go and Catch the Falling Star: John Donne
2. The Pulley: George Herbert
3. On his Being Arrived to the Age of Twenty-Three: John Milton
4. I Prithee Send Me Back My Heart: Sir John Suckling
5. The Grasshopper: Abraham Cowley
6. To the Memory of Mr Oldham: John Dryden
7. Ode on Solitude: Alexander Pope

**Section 2 (Prose)**

The following Essays of Joseph Addison from **Selections of Literature from Elizabethan to Restoration Ages**:

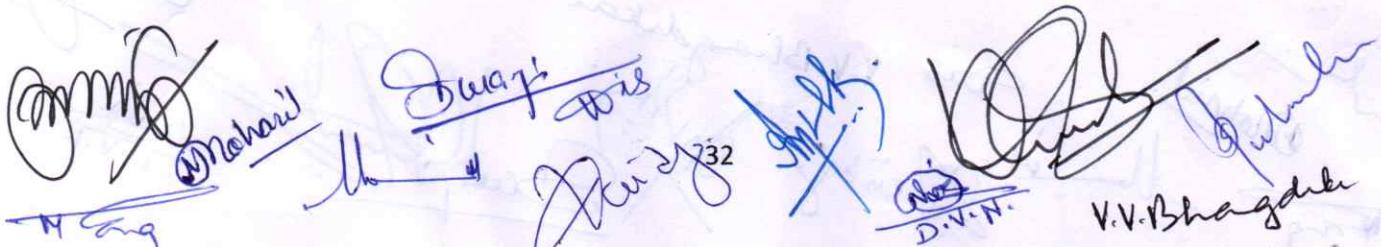
Sir Roger at the Club, Sir Roger at His Country House, Sir Roger at Church, Sir Roger in Town

**Section 3 (Novel)** Daniel Defoe: **Robinson Crusoe** (Abridged Edition, Macmillan Education)

**Section 4 (Literary Forms and Terms)**

**Stanza Forms:** Heroic Couplet, Blank Verse, Free Verse, Terza Rima, Chaucerian Stanza (Rhyme Royal), Ottava Rima, Spenserian Stanza, Burns Stanza (Scottish Stanza)

**Literary Terms:** Exposition, Hyperbole, Hyperbaton, Idiom, Imagery, Laureate, Lyric, Malapropism

  
Handwritten signatures of the university officials, including Prof. M. N. Moharil, Dr. D. V. N. Patil, and Prof. V. V. Bhagat.

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part II Examination (Third Semester)**  
**English Literature**  
**(To be implemented from the session 2021-22 and onwards)**

### Theory marks: 80

### **Internal Assessment: 20**

### **Prescribed Textbooks:**

1. *Selections of Literature from Romantic to Victorian Ages*, Edited by Vandana Bhagdikar, Prantik Banerjee, Abhay Mudgal (Orient BlackSwan)
  2. Jane Austen: *Pride and Prejudice* (Abridged Edition, Macmillan Education)

**Section 1 (Poetry) Selections of Literature from Romantic to Victorian Ages** are prescribed:

1. The Chimney Sweeper: William Blake
  2. The Solitary Reaper: William Wordsworth
  3. His Books: Robert Southey
  4. The Last Rose of Summer: Thomas Moore
  5. I Would I Were a Careless Child: Lord Byron
  6. Ode to the West Wind: P.B. Shelley
  7. Ode on a Grecian Urn: John Keats

## **Section 2 (Prose)**

The following *Selections of Literature from Romantic to Victorian Ages* are prescribed:

1. Dream Children – A Reverie: Charles Lamb
  2. A Bachelor’s Complaint of the Behaviour of Married People: Charles Lamb
  3. On Reading Old Books: William Hazlitt
  4. On the Feeling of Immortality in Youth: William Hazlitt

### **Section 3 (Novel)**

Jane Austen: *Pride and Prejudice* (Abridged Edition, Macmillan Education)

## **Section 4 (Literary Forms and Terms)**

**Novel Types:** Picaresque Novel, Epistolary Novel, Gothic Novel, Sentimental Novel, Historical Novel, Domestic Novel, Regency Novel, Black Comedy

**Literary Terms:** Maxim, Memoir, Metonymy, Mimesis, Mythology, Novella, Onomatopoeia, Oxymoron.

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part II Examination (Fourth Semester)**  
**English Literature**  
**(To be implemented from the session 2021-22 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbooks:**

1. *Selections of Literature from Romantic to Victorian Ages*, Edited by Vandana Bhagdikar, Prantik Banerjee, Abhay Mudgal (Orient BlackSwan)
2. Charles Dickens: *David Copperfield* (Abridged Edition, Orient BlackSwan)

**Section 1 (Poetry)**

The following poems from *Selections of Literature from Romantic to Victorian Ages*

1. Ulysses: Alfred Lord Tennyson
2. The Lost Leader: Robert Browning
3. Dover Beach: Matthew Arnold
4. Up-Hill: Christina Rossetti
5. Pied Beauty: G. M. Hopkins
6. Nightingales: Robert Bridges
7. If: Rudyard Kipling

**Section 2 (Prose)** The following essays from *Selections of Literature from Romantic to Victorian Ages* are prescribed:

1. El Dorado: R.L. Stevenson
2. Walking Tours: R.L Stevenson
3. Child's Play: R.L Stevenson
4. An Apology for Idlers: R.L Stevenson

**Section 3 (Novel)**

Charles Dickens: *David Copperfield* (Abridged Edition, Orient BlackSwan)

**Section 4 (Literary Forms and Terms)**

**Dramatic Devices:** Dramatic Irony, Soliloquy, Aside, Comic Relief, Expectation, Surprise, Three Unities, Chorus

**Literary Forms:** Parable, Paradox, Pathetic fallacy, Parody, Procatalepsis, Romance, Round-Robin Story, Sensibility

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Final Examination (Fifth Semester)**  
**English Literature**  
**(To be implemented from the session 2022-23 and onwards)**

**Theory marks: 80** including 10% for 25-30% exercise will affect final mark **Internal Assessment: 20**

### **Internal Assessment: 20**

## **Prescribed Textbooks:**

1. *Selections from Modern English Literature and Indian Writing in English* by Varsha Vaidya, Nitin Mathankar, Vinita Virgandham (Orient BlackSwan)
  2. Thomas Hardy: *The Mayor of Casterbridge*, Abridged Edition Macmillan Education)

## **Section 1 (Poetry)**

The following poems from *Selections from Modern English Literature and Indian Writing in English* prescribed:

1. During Wind and Rain: Thomas Hardy
  2. A Prayer for My Daughter: W.B. Yeats
  3. On Growing Old: John Masefield
  4. Anthem for Doomed Youth: Wilfred Owen
  5. The Listeners: Walter De La Mare
  6. Funeral Blues: W.H.Auden
  7. Light Breaks Where No Sun Shines: Dylan Thomas

**Section 2 (Prose)** The following essays from *Selections from Modern English Literature and Indian Writing in English* are prescribed:

1. Bores: E. V. Lucas
  2. On Saying 'Please': A.G. Gardiner
  3. The Pleasures of Ignorance: Robert Lynd
  4. On Travel by Train: J.B. Priestley

**Section 3 (Novel):** Thomas Hardy: *The Mayor of Casterbridge*, Abridged Edition, Macmillan Education)

**Section 4 (Literary Forms and Terms)** from *Selections from Modern English Literature and Indian Writing in English* are prescribed:

**Prose Forms:** Essay, Short Story, Biography, Autobiography, Fable, Allegory, Metafiction, Narrative.

**Literary Terms:** Sobriquet, Syntax, Tautology, Thesis (Dissertation), Tirade, Tragic Flaw, Volta, Wellerisms.

**Rashtrasant Tukadoji Maharaj Nagpur University**  
**Syllabus Prescribed for**  
**Bachelor of Arts (B.A.) Part III Examination (Sixth Semester)**  
**English Literature**  
**(To be implemented from the session 2022-23 and onwards)**

**Theory marks: 80**

**Internal Assessment: 20**

**Prescribed Textbooks:**

1. **Selections from Modern English Literature and Indian Writing in English** by Varsha Vaidya, Nitin Mathankar, Vinita Virgandham (Orient BlackSwan)
2. **Reading a Novel: Kanthapura & An Exercise in Language Use** (Edited by Umed Singh, Pankaj Sharma, Deepti Dharmani, Macmillian Education)

**Section 1 (Poetry)**

The following poems are prescribed from **Selections from Modern English Literature and Indian Writing in English** :

1. Endless Time: Rabindranath Tagore
2. The Soul's Prayer: Sarojini Naidu
3. Near Hastings: Toru Dutt
4. Father Returning Home: Dilip Chitre
5. The Bus: Arun Kolatkar
6. The Abandoned British Cemetery at Balasore: Jayanta Mahapatra
7. Voice of the Unwanted Girl: Sujata Bhatt

**Section 2 (Prose)**

The Following Short Stories from **Selections from Modern English Literature and Indian Writing in English** are prescribed:

1. Toasted English: R.K. Narayan
2. Lemon – Yellow and Fig – Manohar Malgonkar
3. The Lost Child: Mulk Raj Anand
4. The Death of a Hero: Jai Nimbkar

**Section 3 Reading a Novel: Kanthapura & An Exercise in Language Use (Macmillan Education)**

**Section 4 (Literary Forms and Terms)** from **Selections from Modern English Literature and Indian Writing in English** are prescribed:

**Poetic Types:** Ode, Sonnet, Elegy, Idyll, Epic, Ballad, Satire, Dramatic Monologue.

**Literary terms:** Allusion, Anecdote, Archaism, Alliteration, Bathos, Caesura, Caricature, Catastrophe.

## **Pattern of Question Paper (For all Semesters)**

### **Section 1 Poetry**

Q. 1 (A) One Long Answer Question to be attempted in about 200 words, out of two, based on two different poems from the poetry section. Marks 10 (10X1)

(B) Two Short Answer Questions to be attempted in about 100 words each out of four based on poems other than those asked in long answer question. Marks 10 (5X2)

### **Section 2 Prose (Short Story/Essay)**

Q. 2 Four Short Answer Questions based on Prose section out of six (one at least from each prescribed essay or short story) to be attempted in about 100 words each. Marks 20 (5X4)

### **Section 3 (Drama/Novel)**

Q. 3 (A) Two Long Answer Questions based on prescribed drama/novel out of three to be attempted in about 200 words each. Marks 20 (10X2)

### **Section 4 (Literary Forms and Terms)**

Q. 4 (A) Three Short answer questions out of five based on literary forms to be attempted in about 50 words each. Total Marks 15 (5X3)

(B) Five literary terms to be attempted out of seven. Marks 05 (5X1)

**Internal Assessment:** (a) Attendance (b) Participation in Departmental Activities like class room seminar (c) Home Assignment (d) Viva Voce based on assignment submitted by the student. Each activity will carry five marks. Marks 20 (5X4)

### **Workload and Slots for each prescribed section (for all semesters):**

6 lectures per week of 48 minutes each (4.8 hours per week)

15 weeks of teaching in each semester

Poetry Section: 4 weeks (24 days)

Prose Section: 4 weeks (24 days)

Drama/ Novel Section: 3 weeks (18 days)

Literary Forms and Terms: 1 weeks (6 days)

Student's Seminar, Viva Voce, Home Assignment: 2 weeks (12 days)

Revision/Test: 1 week (6 days)

V.V.Bhagatkar

# राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

## मानव्यशास्त्र विद्या शाखा (HUMAN FACULTY)

अभ्यासक्रम : बी.ए. : मराठी साहित्य / B.A. SYLLABUS MARATHI LIT. (OPT.)

### B. A. I Semester : Syllabus

बी. ए. प्रथम सत्र : अभ्यासक्रम

मराठी साहित्य (ऐच्छिक) : Marathi literature

---

---

अभ्यासग्रंथ १ : माझी जन्मठेप (आत्मचरित्र) वि.दा.सावरकर  
(परचुरे प्रकाशन मंदिर, मुंबई)

#### घटक एक

- I) आत्मचरित्र : एक वाङ्मयप्रकार : संकल्पना, स्वरूप, उगम आणि विकास
- II) आत्मचरित्र वाङ्मय प्रकाराची घटकतत्त्वे व वैशिष्ट्ये
- III) मराठीतील आत्मचरित्र वाङ्मय : ऐतिहासिक वाटचाल

#### घटक दोन

- I) माझी जन्मठेप : कथावस्तू , आणि विविध व्यक्तिरेखा
- II) माझी जन्मठेप : आशय, प्रतिपाद्य आणि जीवनदर्शन
- III) माझी जन्मठेप : निवेदनशैली, संवादशैली, भाषाशैली आणि अभिव्यक्ति वैशिष्ट्ये

अभ्यासग्रंथ २ : प्रतिभा साधन – ना. सी. फडके  
(देशमुख अँन्ड कंपनी पब्लिशर्स प्रा. लि. पुणे)  
या ग्रंथातील खालील दोन प्रकरणे अभ्यासक्रमात राहतील.

- I) विषयाचे औचित्य
- II) ललित वाङ्मयाचे स्वरूप व कार्य

संदर्भ ग्रंथ : (केवळ अतिरिक्त संदर्भासाठी)

१. आत्मचरित्र मीमांसा – डॉ. आनंद यादव
२. चरित्र आणि आत्मचरित्र – अ.म.जोशी
३. चरित्र आणि आत्मचरित्र : साहित्य स्वरूप – डॉ. सदा कन्हाडे
४. आत्मचरित्र : तंत्र आणि इतिहास – अ.म.जोशी.
५. प्रदक्षिणा खंड १ व खंड २ – कॉन्टिनेन्टल प्रकाशन

## **बी.ए. सत्र दोन (Semester II)**

### **अभ्यासक्रम : मराठी साहित्य (ऐच्छिक)**

**अभ्यासग्रंथ १.** नटसप्राट (नाटक) – वि. वा. शिरवाडकर  
(पॉप्युलर प्रकाशन, मुंबई)

**घटक एक :**

- I) नाटक : कलाप्रकार आणि वाङ्मयप्रकार : संकल्पना व स्वरूप
- II) नाटकाचे विविध घटक
- III) मराठी रंगभूमीचा स्थूल आढावा.

**घटक दोन :**

- I) नटसप्राट : कथावस्तू व इतर व्यक्तिरेखा
- II) नटसप्राट : प्रतिपाद्य, आशय आणि शोकात्मिका
- III) नटसप्राटची शैली वैशिष्ट्ये

**अभ्यासग्रंथ २.** प्रतिभा साधन – ना.सी.फडके

प्रस्तुत सत्रात या पुस्तकातील खालील दोन प्रकरणे अभ्यासात राहतील.

- I) समर प्रसंग
- II) व्यक्तिदर्शन

**संदर्भ ग्रंथ :** (केवळ अतिरिक्त संदर्भासाठी)

१. नाटक : एक चिंतन – वसंत कानेटकर
२. मराठीचे नाट्यतंत्र – मो.द.ब्रह्मे
३. शोकनाट्याचे साहित्यरूप – सदा कळ्हाडे
४. नाट्यविमर्श – के. नारायण काळे
५. मराठी नाटक आणि रंगभूमी (दोन्ही खंड) – वि.भा.देशपांडे

### **बी.ए. सत्र तीन (Semester III)**

#### **अभ्यासक्रम : मराठी साहित्य**

**अभ्यासग्रंथ १.** साठोत्तरी मराठी कविता (संपादन व प्रस्तावना डॉ. राजेंद्र नाईकवाडे, डॉ. राकेश कभे, डॉ. मिलिंद साठे) (१९६० ते २००० या कालखंडातील निवडक प्रातिनिधिक कवितांचा संपादित काव्यसंग्रह संपादन : रा. तु. म. नागपूर विद्यापीठ मराठी अभ्यास मंडळ)

#### **ना. धों. महानोर**

- I) ह्या नभाने ह्या भुईला
- II) रातझडीचा पाऊस
- III) हिव्या पानात पानात

#### **ग्रेस**

- I) पाऊस
- II) आई : १
- III) ओळख

#### **यशवंत मनोहर**

- I) काढिला खणुनि काळोख
- II) यापुढे
- III) माणसांसाठी आरती

#### **म. म. देशपांडे**

- I) अंतरिक्ष फिरलो पण
- II) तहान
- III) माझे मीपण दिसेना

#### **सुरेश भट**

- I) एवढे दे पांडुरंगा !
- II) उषःकाल होता होता
- III) रंग माझा वेगळा

#### **वसंत आबाजी डहाके**

- I) समुद्र कोऱून पडलाय
- II) कत्तल
- III) मुलं हसताहेत

## विट्ठल वाघ

- I) तिफन
- II) मेंढरं
- III) पञ्चाटी

## अरुणा ढेरे

- I) मंत्राक्षरे
- II) गाण्याच्या जन्मासाठी
- III) निरंजन

## प्रभा गणोरकर

- I) जुन्या घराच्या कविता
- II) तूही असे
- III) विवर्त

## इंद्रजित भालेराव

- I) माझ्या कवितेची चव
- II) आभाळ दऊत
- III) माझ्या गावाकडे चल माझ्या दोस्ता

घटक एक : कविता : व्याख्या, स्वरूप आणि वैशिष्ट्ये  
काव्याचे विविध घटक आणि काव्यप्रकार  
स्वातंत्र्योत्तर मराठी काव्याचा स्थूल इतिहास

घटक दोन : निवडक मराठी कविता : कवितांतील आशयसूत्रे  
निवडक मराठी कविता : कवितांची शैलीवैशिष्ट्ये  
(शब्दकळा, प्रतिमा, छंद-वृत्त, इत्यादी)  
(घटक दोन चा अभ्यास अभ्यासक्रमातील पुस्तकाच्या आधारे)

अभ्यासग्रंथ 2. अभिनव काव्यप्रकाश - रा. श्री. जोग  
(व्हिनस प्रकाशन, पुणे)

या ग्रंथातील पुढील दोन प्रकरणे अभ्यासक्रमात राहतील.

- I) काव्यलक्षण
- II) काव्याचे प्रयोजन

संदर्भ ग्रंथ : (केवळ अतिरिक्त संदर्भासाठी)

१. मराठी कविता : स्वरूप आणि विवेचन - डॉ. निशिकांत ठकार
२. कविता आणि प्रतिमा - डॉ. सुधीर रसाळ
३. रसग्रहण : कला आणि स्वरूप - गो.म. कुलकर्णी
४. अर्वाचीन मराठी काव्यदर्शन - डॉ. अक्षयकुमार काळे
५. कविता : संकल्पना, निर्मिती आणि समीक्षा - डॉ. वसंत पाटणकर

## बी.ए. सत्र चार (Semester IV)

### अभ्यासक्रम : मराठी साहित्य

अभ्यासग्रंथ १. साठोत्तरी मराठी कथा (संपादन व प्रस्तावना डॉ. सोपानदेव पिसे, डॉ. दत्तात्रय वाटमोडे, डॉ. व्यंकटेश पाठफोडे)

(१९६० ते २००० या कालखंडातील १० निवडक कथाकारांच्या प्रातिनिधिक १० कथांचा संग्रह)

- |                      |                      |
|----------------------|----------------------|
| १. ताटातूट           | - उद्घव शेळके        |
| २. धास्ती            | - मनोहर तल्हार       |
| ३. सत्य              | - रवींद्र शोभणे      |
| ४. मरी आईला केला नवस | - ना. रा. शेंडे      |
| ५. दावणीचा बैल       | - बाबाराव मुसळे      |
| ६. गोष्ट संध्याकाळची | - वासुदेव मुलाटे     |
| ७. मोर्चा            | - केशव मेश्राम       |
| ८. पिंटीची गोष्ट     | - नागनाथ कोत्तापल्ले |
| ९. अम्मा             | - प्रिया तेंडुलकर    |
| १०. घे गगनभरारी      | - लक्ष्मण टोपले      |

- घटक एक I) कथा वाड्मयप्रकार : व्याख्या, संकल्पना व स्वरूप  
II) 'कथा' या वाड्मयप्रकाराचे विविध घटक आणि वैशिष्ट्ये  
III) मराठी कथा : स्वातंत्र्यपूर्व आणि स्वातंत्र्योत्तर वाटचाल

- घटक दोन I) साठोत्तरी मराठी कथांतील विविध आशयसूत्रे  
II) साठोत्तरी मराठी कथा : व्यक्तिचित्रण व समाजदर्शन  
III) साठोत्तरी कथेची विविध शैलीवैशिष्ट्ये  
(घटक 'दोन' चा अभ्यास अभ्यासक्रमातील पुस्तकाच्या आधारे)

अभ्यासग्रंथ २. अभिनव काव्यप्रकाश - रा. श्री. जोग

(व्हिनस प्रकाशन, पुणे)

या ग्रंथातील पुढील दोन प्रकरणे अभ्यासक्रमात राहतील.

- I) अर्थविचार आणि शब्दशक्ती  
II) अलंकार विचार

संदर्भ ग्रंथ : (केवळ अतिरिक्त संदर्भासाठी)

१. मराठी कथा : स्वरूप व आस्वाद - दा.वि.कुलकर्णी
२. मराठी कथा : उद्गम आणि विकास - इंदुमती शेयडे
३. कथा : संकल्पना आणि समीक्षा - सुधा जोशी
४. लघुकथालेखन : मंत्र आणि तंत्र - ना.सी.फडके
५. प्रदक्षिणा खंड २ - कॉन्टिनेन्टल प्रकाशन

## बी.ए. सत्र पाच (Semester V)

### अभ्यासक्रम : मराठी साहित्य

अभ्यासग्रंथ १. पूर्णामायची लेकरं (कादंबरी) – गोपाल नीलकंठ दांडेकर  
(मृण्ययी प्रकाशन, पुणे)

घटक एक :

- I) कादंबरी : व्याख्या, संकल्पना आणि स्वरूप
- II) ‘कादंबरी’ या वाङ्मयप्रकाराचे विविध घटक आणि वैशिष्ट्ये
- III) मराठी कादंबरीची ऐतिहासिक बाटचाल : स्थूल आढावा

घटक दोन :

- I) पूर्णामायची लेकरं : कथानक आणि व्यक्तिचित्रण
- II) पूर्णामायची लेकरं : आशय, समाजचित्रण व जीवनदर्शन
- III) पूर्णामायची लेकरं : भाषा, निवेदन, संवाद, शैलीवैशिष्ट्ये

अभ्यासग्रंथ २. दलित साहित्य : एक आकलन – डॉ. बाळकृष्ण कवठेकर  
(मेहता प्रकाशन, पुणे)

या ग्रंथातील पुढील तीन प्रकरणे अभ्यासक्रमात राहतील.

- I) तत्त्वचर्चा
- II) दलित कथा
- III) दलित आत्मकथा

संदर्भ ग्रंथ : (केवळ अतिरिक्त संदर्भासाठी)

- १. कादंबरी आणि मराठी कादंबरी – उषा हस्तक
- २. मराठी कादंबरी : तंत्र आणि विकास – बापट, गोडबोले
- ३. कादंबरी : एक साहित्यप्रकार – हरिश्चंद्र थोरात
- ४. कादंबरी – ल. ग. जोग
- ५. मराठी कादंबरीचे पहिले शतक – कुसुमावती देशपांडे
- ६. प्रदक्षिणा खंड १ व खंड २ – कॉन्टिनेन्टल प्रकाशन

## **बी.ए. सत्र सहा (Semester VI)**

### **अभ्यासक्रम : मराठी साहित्य (ऐच्छिक)**

**अभ्यासग्रंथ १.** एक होता कार्वर (चरित्र) – वीणा गव्हाणकर  
(राजहंस प्रकाशन, पुणे)

**घटक एक :**

- I) चरित्र : एक वाड्मयप्रकार : स्वरूप आणि संकल्पना
- II) ‘चरित्र’ या वाड्मयप्रकाराचे घटक आणि वैशिष्ट्ये
- III) मराठीतील चरित्र वाड्मयाचा इतिहास : प्राचीन ते अर्वाचीन

**घटक दोन :**

- I) एक होता कार्वर : कथावस्तु आणि व्यक्तिचित्रण
- II) एक होता कार्वर : समाजदर्शन आणि जीवनदर्शन
- III) एक होता कार्वर : चरित्राची शैलीवैशिष्ट्ये

**अभ्यासग्रंथ २.** प्राचीन मराठी वाड्मयाचा इतिहास – ल.रा.नसिराबादकर  
(फडके प्रकाशन, कोल्हापूर)

या ग्रंथातील पुढील चार प्रकरणे अभ्यासक्रमात आहेत.

- १) ज्ञानदेवे रचिला पाया
- २) नामयाची वाणी अमृताची खाणी
- ३) कलाकवी मुक्तेश्वर
- ४) तुका झालासे कळस

**अभ्यासग्रंथ ३.** भाषाविज्ञान परिचय – डॉ. स.ग.मालशे, डॉ. द.दि.पुंडे, डॉ. अंजली सोमण  
(पद्मगंधा प्रकाशन, पुणे)

या ग्रंथातील पुढील दोन प्रकरणे अभ्यासक्रमात राहतील.

- I) वाक्यविचार
- II) प्रमाण भाषा आणि बोली

**संदर्भ ग्रंथ :** (केवळ अतिरिक्त संदर्भासाठी)

- १) चरित्र आणि आत्मचरित्र – अ.म.जोशी
- २) चरित्र आणि आत्मचरित्र : साहित्य स्वरूप – सदा कन्हाडे
- ३) मराठी चरित्र : रूप आणि इतिहास – डॉ. जयंत वष्ट
- ४) प्राचीन मराठीतील चरित्रलेखन – डॉ. वसंत बोरगावकर
- ५) प्रदक्षिणा खंड १ व खंड २ – कॉन्टिनेन्टल प्रकाशन

**बी.ए. सत्र १**

**विषय : मराठी साहित्य (ऐच्छिक)**

**प्रश्नपत्रिकेचे स्वरूप**

**वेळ ३ तास)**

**(एकूण गुण ८०**

<b>प्रश्न क्र. १ -</b>	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ वर (माझी जन्मठेप) आधारित दीर्घोत्तरी प्रश्न.	(गुण १६)
<b>प्रश्न क्र. २ -</b>	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ वर (माझी जन्मठेप) आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
<b>प्रश्न क्र. ३ -</b>	‘माझी जन्मठेप’ या आत्मचरित्रावर आधारित संदर्भासह स्पष्टीकरण (चार वाक्यांचा एक गट किंवा चार वाक्यांचा दुसरा गट)	(गुण १६)
<b>प्रश्न क्र. ४ -</b>	लघुत्तरी चार उपप्रश्नांचा गट. (‘प्रतिभा साधन : विषयाचे औचित्य – दोन प्रश्न आणि प्रतिभा साधन : ललित वाङ्मयाचे स्वरूप व कार्य – दोन प्रश्न. अशाप्रकारे एकूण चार प्रश्नांचा एक गट किंवा दुसरा गट)	(गुण १६)
<b>प्रश्न क्र. ५ -</b>	अतिलघुत्तरी आठ प्रश्न. (सर्व प्रश्न अनिवार्य) (माझी जन्मठेप – ४ प्रश्न प्रतिभा साधन : विषयाचे औचित्य – २ प्रश्न प्रतिभा साधन : ललित वाङ्मयाचे स्वरूप व कार्य – २ प्रश्न)	(गुण १६)

**विषयवार गुण – विभाजन**

१) ‘आत्मचरित्र संकल्पना’ व ‘माझी जन्मठेप’ –	५६ गुण
२) प्रतिभा साधन (दोन प्रकरणे) –	२४ गुण

**एकूण –** **८० गुण**

परीक्षा गुणविभाजन –	विद्यापीठ लेखी परीक्षा –	८० गुण
	अंतर्गत मूल्यमापन –	२० गुण

**एकूण –** **१०० गुण**

## बी.ए. सत्र २ : मराठी साहित्य (ऐच्छिक)

### प्रश्नपत्रिकेचे स्वरूप

वेळ ३ तास)

(एकूण गुण ८०

प्रश्न क्र. १ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ आधारित (नटसप्राट) दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. २ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ आधारित (नटसप्राट) दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. ३ -	'नटसप्राट' वर आधारित संदर्भासह स्पष्टीकरण (चार वाक्यांचा एक गट किंवा चार वाक्यांचा दुसरा गट)	(गुण १६)
प्रश्न क्र. ४ -	लघुत्तरी चार उपप्रश्नांचा गट. (‘प्रतिभा साधन – समरप्रसंग – दोन प्रश्न आणि – व्यक्तिदर्शन – दोन प्रश्न चार प्रश्नांचा एक गट किंवा चार प्रश्नांचा दुसरा गट)	(गुण १६)
प्रश्न क्र. ५ -	अतिलघुत्तरी आठ प्रश्न. (सर्व प्रश्न अनिवार्य) (नटसप्राट – ४ प्रश्न, प्रतिभा साधन : समरप्रसंग – २ प्रश्न, प्रतिभा साधन : व्यक्तिदर्शन – २ प्रश्न)	(गुण १६)

### विषयवार गुण – विभाजन (लेखी परीक्षा)

१) नाटक : संकल्पना व 'नटसप्राट' -	५६ गुण
२) प्रतिभा साधन (दोन प्रकरणे) -	२४ गुण
<b>एकूण -</b>	
	<b>८० गुण</b>
परीक्षा गुणविभाजन -	विद्यापीठ लेखी परीक्षा -
	८० गुण
	अंतर्गत मूल्यमापन -
	२० गुण
<b>एकूण -</b>	
	<b>१०० गुण</b>

## बी.ए. सत्र ३ : मराठी साहित्य (ऐच्छिक)

### प्रश्नपत्रिकेचे स्वरूप

वेळ ३ तास)

(एकूण गुण ८०

प्रश्न क्र. १ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (साठोत्तरी मराठी कविता) आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. २ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (साठोत्तरी मराठी कविता) आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. ३ -	‘निवडक मराठी कविता’ वर आधारित संदर्भासह स्पष्टीकरण (चार कवींच्या चार कडव्यांचा एक गट किंवा दुसरा गट)	(गुण १६)
प्रश्न क्र. ४ -	लघुत्तरी चार उपप्रश्नांचा गट. (अभिनव काव्यप्रकाश - काव्यलक्षण - २ प्रश्न, काव्याचे प्रयोजन - २ प्रश्न चार प्रश्न एक गट किंवा दुसरा गट)	(गुण १६)
प्रश्न क्र. ५ -	अतिलघुत्तरी आठ प्रश्न. (सर्व प्रश्न अनिवार्य) (‘साठोत्तरी मराठी कविता’ या पुस्तकावर - ४ प्रश्न अभिनव काव्यप्रकार - काव्यलक्षण - प्रश्न अभिनव काव्यप्रकार - काव्य प्रयोग २ प्रश्न)	(गुण १६)

#### विषयवार गुण -

१) कविता : संकल्पना आणि ‘साठोत्तरी मराठी कविता’	५६ गुण
२) अभिनव काव्य प्रकाश (दोन प्रकरणे) -	२४ गुण

**एकूण -** **८० गुण**

परीक्षा गुणविभाजन -	विद्यापीठ लेखी परीक्षा -	८० गुण
	अंतर्गत मूल्यमापन -	२० गुण

**एकूण -** **१०० गुण**

## बी.ए. सत्र ४ : मराठी साहित्य (ऐच्छिक)

### प्रश्नपत्रिकेचे स्वरूप

वेळ ३ तास)

(एकूण गुण ८०

<b>प्रश्न क्र. १ -</b>	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (साठोत्तरी मराठी कथा) वर आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
<b>प्रश्न क्र. २ -</b>	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (साठोत्तरी मराठी कथा) वर आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
<b>प्रश्न क्र. ३ -</b>	‘साठोत्तरी मराठी कथा’ वर आधारित संदर्भासह स्पष्टीकरण (चार कथांतील चार अवतरणांचा एक गट किंवा दुसरा गट)	(गुण १६)
<b>प्रश्न क्र. ४ -</b>	लघुत्तरी चार उपप्रश्नांचा एक गट किंवा दुसरा गट (अभिनव काव्यप्रकाश – अर्थविचार आणि शब्दशक्ती – २ प्रश्न, अलंकार विचार – २ प्रश्न)	(गुण १६)
<b>प्रश्न क्र. ५ -</b>	अतिलघुत्तरी आठ प्रश्न. (सर्व प्रश्न अनिवार्य) (‘साठोत्तरी मराठी कविता’ – ४ प्रश्न, अभिनव काव्यप्रकार – अर्थविचार व शब्दशक्ती – २ प्रश्न अलंकार विचार २ प्रश्न)	(गुण १६)

#### विषयवार गुण –

१) मराठी कथा : संकल्पना आणि ‘साठोत्तरी मराठी कविता’	५६ गुण
२) अभिनव काव्य प्रकाश (दोन प्रकरणे) –	२४ गुण
<b>एकूण –</b>	
	<b>८० गुण</b>
परीक्षा गुणविभाजन –	विद्यापीठ लेखी परीक्षा –
	८० गुण
	अंतर्गत मूल्यमापन –
	२० गुण
<b>एकूण –</b>	
	<b>१०० गुण</b>

## बी.ए. सत्र ५ : मराठी साहित्य (ऐच्छिक)

### प्रश्नपत्रिकेचे स्वरूप

वेळ ३ तास)

(एकूण गुण ८०

प्रश्न क्र. १ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (पूर्णामायची लेकरं) वर आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. २ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (पूर्णामायची लेकरं) वर आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. ३ -	‘पूर्णामायची लेकर’ वर आधारित संदर्भासह स्पष्टीकरण (चार अवतरणांचा एक गट किंवा दुसरा गट)	(गुण १६)
प्रश्न क्र. ४ -	लघुत्तरी चार उपप्रश्नांचा एक गट किंवा दुसरा गट (दलित साहित्य : एक आकलन - तत्त्वचर्चा - १ प्रश्न - दलित कथा - १ प्रश्न - दलित आत्मकथा - २ प्रश्न)	(गुण १६)
प्रश्न क्र. ५ -	अतिलघुत्तरी आठ प्रश्न. (सर्व प्रश्न अनिवार्य) पूर्णामायची लेकरं (काढंबरी) ४ प्रश्न (दलित साहित्य : एक आकलन - तत्त्वचर्चा - १ प्रश्न - दलित कथा - १ प्रश्न - दलित आत्मकथा - २ प्रश्न)	(गुण १६)

#### विषयवार गुण -

१) काढंबरी : संकल्पना आणि ‘पूर्णा मायची लेकरं’	५६ गुण
२) दलित साहित्य : एक आकलन (तीन प्रकरण)	२४ गुण

**एकूण -**

परीक्षा गुणविभाजन -	विद्यापीठ लेखी परीक्षा -
---------------------	--------------------------

८० गुण

अंतर्गत मूल्यमापन -	
---------------------	--

२० गुण

एकूण -	
--------	--

**१०० गुण**

## बी.ए. सत्र ६ : मराठी साहित्य (ऐच्छिक)

### प्रश्नपत्रिकेचे स्वरूप

वेळ ३ तास)

(एकूण गुण ८०

प्रश्न क्र. १ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (एक होता कार्बर) वर आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. २ -	घटक क्र. १ वर आधारित दीर्घोत्तरी प्रश्न किंवा घटक क्र. २ (एक होता कार्बर) वर आधारित दीर्घोत्तरी प्रश्न	(गुण १६)
प्रश्न क्र. ३ -	‘एक होता कार्बर’ वर आधारित संदर्भासह स्पष्टीकरण (‘एक होता कार्बर’ मधील चार अवतरणांचा एक गट किंवा दुसरा गट)	(गुण १६)
प्रश्न क्र. ४ -	लघुत्तरी चार उपप्रश्नांचा एक गट (प्राचीन मराठी वाड्मयाचा इतिहास - ज्ञानदेव रचिला पाया - १ प्रश्न - नामयाची वाणी अमृताची रवाणी - १ प्रश्न - कलाकवी मुक्तेश्वर - १ प्रश्न - तुका झालासे कळस - १ प्रश्न चार प्रश्नांचा एक गट किंवा दुसरा गट)	(गुण १६)
प्रश्न क्र. ५ -	अतिलघुत्तरी आठ प्रश्न. (सर्व प्रश्न अनिवार्य) एक होता कार्बर - ४ प्रश्न (प्राचीन मराठी वाड्मयाचा इतिहास - ज्ञानदेव रचिला पाया - १ प्रश्न - नामयाची वाणी अमृताची रवाणी - १ प्रश्न - कलाकवी मुक्तेश्वर - १ प्रश्न - तुका झालासे कळस - १ प्रश्न)	(गुण १६)

#### विषयवार गुण -

१) चरित्र : संकल्पना आणि ‘एक होता कार्बर’	५६ गुण
२) प्राचीन मराठी वाड्मयाचा इतिहास	२४ गुण

**एकूण -** **८० गुण**

परीक्षा गुणविभाजन -	विद्यापीठ लेखी परीक्षा -	८० गुण
	अंतर्गत मूल्यमापन -	२० गुण

**एकूण -** **१०० गुण**

## अंतर्गत मूल्यमापन

बी. ए. – मराठी साहित्य

२० गुण : कृती विभाजन

१.	गृहपाठ	-	५ गुण
२.	लघू प्रकल्प	-	५ गुण
३.	गटचर्चा / परिसंवाद	-	५ गुण
४.	मौखिकी	-	५ गुण
एकूण			२० गुण

## **बी. ए. सेमेस्टर -I**

### **अनिवार्य हिंदी**

**पाठ्य पुस्तक - साहित्य वाटिका**

**इकाई - I**

**गद्य विभाग**

- |                                   |                  |
|-----------------------------------|------------------|
| 1. बातचीत में शिष्टाचार (निबंध) - | कामताप्रसाद गुरु |
| 2. पुरस्कार (कहानी) -             | जयशंकर प्रसाद    |
| 3. भोलाराम का जीव (व्यंग्य) -     | हरिशंकर परसाई    |
| 4. सरहद के उस पार (रिपोर्टाज) -   | फणीश्वरनाथ रेणु  |

**इकाई - II**

**पद्य विभाग**

- |                           |                  |
|---------------------------|------------------|
| 1. वे मुस्काते फूल नहीं - | महादेवी वर्मा    |
| 2. प्रथम रश्मि -          | सुमित्रानंदन पंत |
| 3. मैं वह धनु हूँ -       | अज्ञेय           |
| 4. बसंती हवा -            | केदारनाथ अग्रवाल |

**इकाई - III      अन्य पाठ्य सामग्री**

1. पारिभाषिक शब्दावली – पाठ्यपुस्तक में संलग्न सूची से ही अंग्रेजी से हिंदी तथा हिंदी से अंग्रेजी पारिभाषिक शब्दावली का अध्ययन
2. पत्र-लेखन - अर्थ, महत्व एवं विशेषताएँ।  
कार्यालयीन पत्र, व्यावहारिक पत्र, व्यावसायिक पत्र, आवेदन पत्र

**इकाई - IV      द्रुतवाचन –**

- अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय  
बालकृष्ण भट्ट, प्रेमचंद, राजकमल चौधरी, रामेश्वर शुक्ल 'अंचल',
- ब निम्नलिखित रचनाओं का संक्षिप्त परिचय  
हार की जीत (कहानी - सुदर्शन), अफसर (व्यंग्य-शरद जोशी), बाजार दर्शन (निबंध - जैनेंद्र कुमार), सखि, वे मुझसे कहकर जाते (कविता- मैथिलीशरण गुप्त)

## बी. ए. सेमेस्टर – II

### अनिवार्य हिन्दी

#### पाठ्य पुस्तक – साहित्य वाटिका

#### इकाई I गद्य विभाग

1.	जहाँ आकाश नहीं दिखाई देता (रिपोर्टाज)	-	विष्णु प्रभाकर
2.	फैसला (कहानी)	-	भीष्म साहनी
3.	जिंदगी और जोंक (कहानी)	-	अमरकांत
4.	सौंदर्य की नदी नर्मदा (यात्रा-वृतांत)	-	अमृतलाल वेगङ

#### इकाई II पद्य विभाग

1.	फसल	-	सर्वश्वरदयाल सक्सेना
2.	रत्न और पाषाण	-	रत्नाम्बर दत्त चंदोला
3.	छोटी दुनिया	-	अरुण कमल
4.	रंग खतरे में है	-	कुमार विकल

#### इकाई III कल्पना विस्तार, मुहावरे एवं लोकोक्तियाँ

#### इकाई - IV द्रुत वाचन

##### अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय

नामवर सिंह, स्वदेश भारती, ममता कालिया, राजेश जोशी

##### ब. निम्नलिखित रचनाओं का संक्षिप्त परिचय

दूसरी कहानी (कहानी - अलका सरावगी), सिक्के (कविता - लीलाधर जगौड़ी), नया साल मुबारक (ललित निबंध - अमृत राय), चश्मदीद शहादत (व्यंग्य - विभूति नारायण राय)

## **बी.ए. सेमेस्टर III**

### **अनिवार्य हिंदी**

#### **पाठ्य पुस्तक – साहित्य क्षितिज**

#### **इकाई – I गद्‌य विभाग**

- |                                      |                   |
|--------------------------------------|-------------------|
| 1. आंगन का पंछी (निबंध) -            | विद्यानिवास मिश्र |
| 2. गेहूँ और गुलाब (निबंध) -          | रामवृक्ष बेनीपुरी |
| 3. आत्मशिक्षण (कहानी) -              | जैनेंद्र कुमार    |
| 4. ज़िंदगी और गुलाब के फूल (कहानी) - | उषा प्रियंवदा     |

#### **इकाई – II पद्‌य विभाग**

- |                     |                   |
|---------------------|-------------------|
| 1. जीवन सरिता -     | सुमित्रानन्दन पंत |
| 2. पथिक से -        | उदयशंकर भट्ट      |
| 3. जो बीत गई -      | हरिवंशराय बच्चन   |
| 4. सत्य और स्वप्न - | अन्जेय            |

#### **इकाई – III अन्य पाठ सामग्री**

- |                     |   |  |
|---------------------|---|--|
| 1. फीचर लेखन (रूपक) | - | अर्थ, स्वरूप, तत्व, विशेषताएँ                            |
| 2. प्रूफ शोधन       | - | स्वरूप, प्रूफ शोधन के नियम, प्रूफ शोधक के गुण, विशेषताएँ |

#### **इकाई - IV द्रुत वाचन**

##### **अ. निम्नलिखित रचनाकारों का सामान्य परिचय**

शिवमंगल सिंह सुमन, मनोहर श्याम जोशी, रवीन्द्र कालिया, वित्ता मुद्गल

##### **ब. निम्नलिखित रचनाओं का सामान्य परिचय**

ठेले पर हिमालय (संस्मरण – धर्मवीर भारती), पतझड़ (कविता – रामकुमार वर्मा), दोपहर का भोजन (कहानी – अमरकांत), भोर का तारा (एकांकी – जगदीशचंद्र माथुर)

## **बी.ए. सेमेस्टर IV**

### **अनिवार्य हिंदी**

**पाठ्य पुस्तक - साहित्य क्षितिज**

#### **इकाई I गद्‌य विभाग**

- |  |                            |
|--|----------------------------|
| 1. प्राप्त का सुख : अप्राप्त का दुःख (निबंध) - | कन्हैयालाल मिश्र 'प्रभाकर' |
| 2. बिंदा (रेखाचित्र) -                         | महादेवी वर्मा              |
| 3. न खड़े होने का दर्द (व्यंग्य) -             | शरद जोशी                   |
| 4. अग्नि की उड़ान (आत्मकथा) -                  | ए.पी.जे. अब्दुल कलाम       |

#### **इकाई II पद्‌य विभाग**

- |                       |                    |
|-----------------------|--------------------|
| 1. अभिनव मनुष्य -     | रामधारी सिंह दिनकर |
| 2. छाया मत छूना -     | गिरिजाकुमार माथुर  |
| 3. कैकेयी का परिताप - | मैथिलीशरण गुप्त    |
| 4. पत्थर की बैंच -    | चंद्रकांत देवताले  |

#### **इकाई – III अन्य पाठ सामग्री**

- |                              |   |
|------------------------------|---|
| 1. विज्ञापन -                | अर्थ, परिभाषा, विज्ञापन का शीर्षक, उपशीर्षक, प्रकार, गुण, प्रयोजन, तत्व, लक्ष्य, भाषा |
| 2. हिंदी में संक्षिप्तीकरण - | स्वरूप, विशेषताएँ, निर्माण के सिद्धांत  |

#### **इकाई IV**

- |           |  |
|-----------|--|
| <b>अ.</b> | <b>निम्नलिखित रचनाकारों का सामान्य परिचय</b><br>रामनरेश त्रिपाठी, राहुल सांकृत्यायन, ओमप्रकाश वाल्मीकि, संजीव  |
| <b>ब.</b> | <b>निम्नलिखित रचनाओं का सामान्य परिचय</b><br>मधुर भाषण (निबंध – गुलाबराय), आशा (कविता – जयशंकर प्रसाद), अपराध (कहानी – उदय प्रकाश), ऊँचा कोट (व्यंग्य - शंकर पुणतांबेकर) |

## **बी.ए. सेमेस्टर V**

### **अनिवार्य हिंदी**

**पाठ्य पुस्तक – साहित्य मंजिरी**

**इकाई I - किसी भी एक विषय पर निबंध (लगभग 400 शब्दों में)**

**इकाई II -**

- |    |   |                        |
|----|---|------------------------|
| 1. | मानव सभ्यता (निबंध) -                               | पदुमलाल पुन्नालाल बछशी |
| 2. | कष्टों से भागना कायरता है -<br>(सुखदेव के नाम पत्र) | भगतसिंह                |
| 3. | दुर्मुख (रेखाचित्र) -                               | महादेवी वर्मा          |
| 4. | बबूल और कैकटस (ललित निबंध) -                        | रामदरश मिश्र           |

**इकाई III -**

- |    |                        |                |
|----|------------------------|----------------|
| 1. | दीपदान (एकांकी) -      | रामकुमार वर्मा |
| 2. | भाषा और समाज (निबंध) - | अजेय           |
| 3. | प्रायशिचित (कहानी) -   | भगवतीचरण वर्मा |
| 4. | पगला बाबा (कहानी) -    | गोविन्द मिश्र  |

**इकाई IV -**

#### **द्रुतवाचन**

**अ. निम्नलिखित रचनाकारों का सामान्य परिचय**

बद्रीनारायण चौधरी 'प्रेमघन', उपेन्द्रनाथ अश्क, गुणाकर मुले, रामविलास शर्मा

**ब.**

#### **निम्नलिखित रचनाओं का सामान्य परिचय**

चंपा काले अच्छर नहीं चीन्हती (कविता – त्रिलोचन), अतीतग्रस्तता और इतिहास बोध (लेख – लालबहादुर वर्मा), राखी का मूल्य (एकांकी - हरिकृष्ण प्रेमी), अखबार में नाम (कहानी – यशपाल)

## **बी.ए. सेमेस्टर VI**

### **अनिवार्य हिंदी**

**इकाई I एवं II**

- सूरज का सातवाँ घोड़ा (उपन्यास) – धर्मवीर भारती

**इकाई III -**

#### **अनुवाद**

अर्थ, परिभाषा एवं प्रकार

अनुवाद का महत्व, अनुवादक की योग्यताएँ

#### **कंप्यूटर**

परिचय, प्रमुख अवयव, उपयोगिता

इंटरनेट का सामान्य परिचय एवं उपयोगिता

**इकाई IV -**

#### **द्रुतवाचन**

**अ.** **निम्नलिखित रचनाकारों का सामान्य परिचय**

भुवनेश्वर, नरेश मेहता, गोपालदास ‘नीरज’, श्रीराम परिहार

**ब.** **निम्नलिखित रचनाओं का सामान्य परिचय**

अकाल और उसके बाद (कविता – नागार्जुन), सुख (कहानी – काशीनाथ सिंह), चोरी और प्रायशिचित (आत्मकथा – महात्मा गांधी), सीमारेखा (एकांकी – विष्णु प्रभाकर)

## **बी. ए. सेमेस्टर - I**

### **हिंदी साहित्य**

**पाठ्य पुस्तक - साहित्य किरण**

**इकाई - I पाठ्य पुस्तक के निम्नलिखित पाठ**

- |    |                             |                    |
|----|-----------------------------|--------------------|
| 1. | हिम्मत और ज़िंदगी (निबंध) - | रामधारी सिंह दिनकर |
| 2. | पर्यावरण और हम (निबंध) -    | डॉ राजीव गर्ग      |
| 3. | मकड़ी का जाला (एकांकी) -    | जगदीशचन्द्र माथुर  |
| 4. | सज्जनता का दंड (कहानी) -    | प्रेमचंद           |

**इकाई - II पाठ्य पुस्तक के निम्नलिखित पाठ**

- |    |                               |               |
|----|-------------------------------|---------------|
| 1. | उमस (कहानी) -                 | ममता कालिया   |
| 2. | रवीन्द्रनाथ ठाकुर (संस्मरण) - | महादेवी वर्मा |
| 3. | नाम-चर्चा (व्यंग्य-लेख) -     | नरेंद्र कोहली |
| 4. | सिनेमा (सिनेमा विधा) -        | मनमोहन चड्ढा  |

**इकाई - III हिंदी साहित्य का इतिहास**

आदिकाल का काल निर्धारण, पृष्ठभूमि एवं नामकरण  
 प्रमुख प्रवृत्तियाँ (सिद्ध साहित्य, नाथ साहित्य, जैन साहित्य, रासो साहित्य, लौकिक साहित्य),  
 आदिकाल की विशेषताएँ, प्रमुख कवि

**इकाई - IV द्रुत वाचन -**

**अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय**

भारतेन्दु हरिश्चंद्र, सियारामशरण गुप्त, प्रभा खेतान, राजी सेठ

**ब. निम्नलिखित रचनाओं का संक्षिप्त परिचय**

झाँसी की रानी की समाधि पर (कविता - सुभद्रा कुमारी चौहान), ग्रामलक्ष्मी की उपासना (निबंध - विनोबा भावे), मैं भी मानव हूँ (एकांकी - विष्णु प्रभाकर), अकेली (कहानी - मन्नू भंडारी),

## **बी. ए. सेमेस्टर – II**

### **हिंदी साहित्य**

#### **इकाई - I एवं II**

कबिरा खड़ा बजार में (नाटक) -

भीष्म साहनी

#### **इकाई – III साहित्य की विधाएँ**

महाकाव्य, खंडकाव्य, उपन्यास, कहानी, नाटक, एकांकी, संस्मरण, साक्षात्कार, आत्मकथा

#### **इकाई – IV द्रुत वाचन**

**अ. निम्नलिखित रचनाकारों का संक्षिप्त परिचय**

महावीर प्रसाद द्विवेदी, माखनलाल चतुर्वेदी, श्रीलाल शुक्ल, अशोक बाजपेयी

**ब. निम्नलिखित रचनाओं का संक्षिप्त परिचय**

स्नेह निझर बह गया है (कविता - निराला), रीढ़ की हड्डी (एकांकी - जगदीशचंद्र माथुर),

परमात्मा का कुता (कहानी – मोहन राकेश), हाथी के दाँत (ललित निबंध – अनंत गोपाल शेवडे)

## **बी. ए. सेमेस्टर – III**

### **हिंदी साहित्य**

**पाठ्य पुस्तक - साहित्य चंद्रिका**

**इकाई - I** कबीर

सूरदास

**इकाई - II** तुलसीदास

मीराबाई

**इकाई - III** रहीम

बिहारी

**इकाई - IV** द्रुतवाचन – इसके अंतर्गत निम्नलिखित रचनाकारों का संक्षिप्त परिचय -

रैदास, रसखान, नानकदेव, केशवदास, संत नामदेव, संत ज्ञानेश्वर, भूषण, सहजोबाई,

## **बी. ए. सेमेस्टर – IV**

## हिंदी साहित्य

### इकाई I एवं II

मृगनयनी (उपन्यास) - वृद्धावनलाल वर्मा

### इकाई – III

- |                |  |
|----------------|--|
| 1. रस -        | अर्थ, परिभाषा, प्रकार अवयव   |
| 2. अलंकार -    | शब्दालंकार – अनुप्रास, यमक, श्लेष, वक्रोक्ति<br>अर्थालंकार - उपमा, रूपक, उत्प्रेक्षा, अतिशयोक्ति |
| 3. शब्दशक्ति - | अभिधा, लक्षणा, व्यंजना   |
| 4. काव्य गुण - | माधुर्य, ओज, प्रसाद  |
| 5. काव्यदोष -  | अक्रमत्व, अप्रतीतत्व, ग्राम्यत्व   |

### इकाई - IV हिंदी साहित्य का इतिहास

- भक्तिकाल -** नामकरण एवं वर्गीकरण, हिंदी साहित्य में भक्ति का उदय और विकास, संत साहित्य की प्रवृत्तियाँ एवं प्रमुख कवि  
सूफी साहित्य का उद्भव, विकास एवं सामान्य प्रवृत्तियाँ  
रामभक्ति शाखा का उद्भव, विकास, विशेषताएँ एवं प्रमुख कवि  
कृष्णभक्ति शाखा का उद्भव, विकास, विशेषताएँ एवं प्रमुख कवि
- रीतिकाल -** पृष्ठभूमि, नामकरण  
सामान्य प्रवृत्तियाँ एवं प्रमुख कवि

## बी. ए. सेमेस्टर – V

## हिंदी साहित्य

### पाठ्य पुस्तक – साहित्य वैभव

#### इकाई I

- |    |                             |   |
|----|-----------------------------|---|
| 1. | जयशंकर प्रसाद -             | 'इडा' सर्ग (कामायनी)                                  |
| 2. | सूर्यकांत त्रिपाठी निराला - | 1. जुहो की कली, 2. विधवा, 3. भिक्षुक, 4. रानी की कानी |

#### इकाई II

- |    |  |
|----|--|
| 1. | गजानन माधव मुक्तिबोध - ब्रह्मराक्षस                            |
| 2. | भवानी प्रसाद मिश्र - 1. कवि, 2. सतपुड़ा के जंगल, 3. हवा ऐसी थी |

#### इकाई III

#### हिंदी साहित्य का इतिहास

आधुनिक काल - भारतेंदु युग, द्विवेदी युग, छायावाद, प्रगतिवाद, प्रयोगवाद, नई कविता, साठोतरी कविता

#### इकाई IV

- |    |  |
|----|--|
| अ. | निम्नलिखित रचनाकारों का संक्षिप्त परिचय<br>हरिऔथ, मैथिलीशरण गुप्त, शमशेर बहादुर सिंह, श्रीकांत वर्मा   |
| ब. | निम्नलिखित रचनाओं का संक्षिप्त परिचय<br>बावरा अहेरी (कविता – अजेय), मुझे कुछ और करना था (कविता – रघुवीर सहाय), कवि कुंभनदास के प्रति (कविता – केदारनाथ सिंह), छायाएँ (कविता – नरेश सक्सेना), |

## बी. ए. सेमेस्टर – VI

## हिंदी साहित्य

### पाठ्य पुस्तक – साहित्य वैभव

#### इकाई I

- |     |  |                      |
|-----|--|----------------------|
| 1.  | क्रोध (निबंध) -                          | रामचंद्र शुक्ल       |
| 2.. | अशोक के फूल (निबंध) -                    | हजारीप्रसाद द्विवेदी |
| 3.  | समष्टि और व्यक्ति (निबंध) -              | नरेन्द्र देव         |
| 4.  | अंधी जनता और लँगड़ा जनतंत्र -<br>(निबंध) | विद्यानिवास मिश्र    |

#### इकाई II

- |    |   |                      |
|----|---|----------------------|
| 1. | लंगूर का बच्चा (कहानी) -                    | अमृतलाल नागर         |
| 2. | भरेपूरे-अधूरे (कहानी) -                     | कमलेश्वर             |
| 3. | जेल जीवन की झालक (संस्मरण) -                | गणेश शंकर विद्यार्थी |
| 4. | ईफेल टावर की छाया में -<br>(यात्रा-संस्मरण) | रामवृक्ष बेनीपुरी    |

#### इकाई III हिंदी साहित्य का इतिहास - आधुनिक काल

हिंदी की साहित्यिक विधाओं का क्रमिक विकास - उपन्यास, कहानी, निबंध, नाटक, एकांकी, आलोचना

#### इकाई IV

- |    |   |
|----|---|
| अ. | निम्नलिखित रचनाकारों का संक्षिप्त परिचय<br>महीप सिंह, जानरंजन, रमेश बख्शी, उषा प्रियंवदा  |
| ब. | निम्नलिखित रचनाओं का संक्षिप्त परिचय<br>एक बेचारा भला आदमी ( व्यंग्य – हरिशंकर परसाई), हींगवाला (कहानी – सुभद्रा कुमारी चौहान), कछुआ-धर्म( चंद्रधर शर्मा गुलेरी), नैन नैनीताल की छवि में पगे (यात्रा-वृतांत - विष्णुकांत शास्त्री |

## **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,

प्रथम खंड से पाँच प्रश्न पूछे जाएँगे, सभी का उत्तर लिखना होगा.

**5 X 02 = 10**

द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

**बी.ए. सेमेस्टर 2 (अनिवार्य हिंदी)**

**प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1.	प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	$1 \times 20$
प्रश्न 2.	द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	$1 \times 20$
प्रश्न 3.	यह प्रश्न तीसरी इकाई से दो खंडों में होगा, प्रथम खंड से कल्पना विस्तार के अंतर्गत दो विषय दिए जाएँगे जिनमें से एक का कल्पना विस्तार करना होगा. द्वितीय खंड में मुहावरे एवं लोकोक्तियों के अंतर्गत सात मुहावरे एवं लोकोक्तियाँ दी जाएँगी जिनमें से पांच हल करना होगा	$1 \times 10$
प्रश्न 4.	इकाई चार से अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा. ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.	$5 \times 02 = 10$ $2 \times 05 = 10$ $2 \times 05 = 10$

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### बी.ए. सेमेस्टर 3 (अनिवार्य हिंदी)

#### प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

$1 \times 20$

प्रश्न 2.	द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	<b>1 X 20</b>
प्रश्न 3.	यह प्रश्न तीसरी इकाई से दो खंडों में होगा, प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.	<b>1 X 10</b>
	द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.	<b>1 X 10</b>
प्रश्न 4.	इकाई चार से	
	अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.	<b>2 X 05 = 10</b>
	ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.	<b>2 X 05 = 10</b>

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### बी.ए. सेमेस्टर 4 (अनिवार्य हिंदी)

#### प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न 1.	प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	<b>1 X 20</b>
प्रश्न 2.	द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.	

**1 X 20**

- प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,  
प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

- द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

- प्रश्न 4. इकाई चार से  
 अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.  
 ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बी.ए. सेमेस्टर 5 (अनिवार्य हिंदी)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

- प्रश्न 1. प्रथम इकाई के अंतर्गत चार विषय दिए जाएँगे, जिनमें से किसी एक पर निबंध लिखना होगा.

**1 X 20**

- प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

- प्रश्न 3. तृतीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बी.ए. सेमेस्टर 6 (अनिवार्य हिंदी)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. उपन्यास ‘सूरज का सातवाँ घोड़ा’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. उपन्यास ‘सूरज का सातवाँ घोड़ा’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,

प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बा.ए. सेमेस्टर 1 (हिंदी साहित्य)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से दो खंडों में होगा,

प्रथम खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

द्वितीय खंड से दो प्रश्न पूछे जाएँगे जिनमें से एक का उत्तर लिखना होगा.

**1 X 10**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बी.ए. सेमेस्टर 2 (हिंदी साहित्य)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. नाटक 'कबिरा खड़ा बजार में' से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. नाटक 'कबिरा खड़ा बजार में' से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा. इसमें कुल छः प्रश्न पूछे जाएँगे, जिनमें से चार का उत्तर लिखना होगा.

**4 X 05 = 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### बी.ए. सेमेस्टर 3 (हिंदी साहित्य)

#### प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

1 X 20

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

1 X 20

प्रश्न 3. तृतीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

1 X 20

प्रश्न 4. इकाई चार के अंतर्गत 4 प्रश्न पूछे जाएँगे जिनमें से चार का उत्तर लिखना होगा.

4 X 05 = 20

आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)

### **बी.ए. सेमेस्टर 4 (हिंदी साहित्य)**

#### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. उपन्यास ‘मृगनयनी’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. उपन्यास ‘मृगनयनी’ से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा. इसमें छः प्रश्न पूछे जाएँगे जिनमें से चार का उत्तर लिखना होगा

**4 X 05 = 20**

प्रश्न 4. यह प्रश्न चौथी इकाई से होगा. इसमें छः प्रश्न पूछे जाएँगे जिनमें से चार का उत्तर लिखना होगा

**4 X 05 = 20**

**आंतरिक मूल्यांकन के अंतर्गत 20 अंक होंगे, (उपस्थिति, गृह-कार्य, मौखिकी एवं समग्र व्यवहार के आधार पर)**

## **बी.ए. सेमेस्टर 5 (हिंदी साहित्य)**

### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा। इसमें चार प्रश्न पूछे जाएँगे, जिनमें से दो का उत्तर लिखना होगा.

**2 X 10 = 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

## **बी.ए. सेमेस्टर 6 (हिंदी साहित्य)**

### **प्रश्नपत्र का प्रारूप एवं अंक विभाजन**

प्रश्न 1. प्रथम इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 2. द्वितीय इकाई से दो प्रश्न पूछे जाएँगे, जिसमें से एक का उत्तर लिखना होगा.

**1 X 20**

प्रश्न 3. यह प्रश्न तीसरी इकाई से होगा. इसमें चार प्रश्न पूछे जाएँगे, जिनमें से दो का उत्तर लिखना होगा.

**2 X 10 = 20**

प्रश्न 4. इकाई चार से

अ. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

ब. इसके अंतर्गत तीन प्रश्न पूछे जाएँगे जिनमें से दो का उत्तर लिखना होगा.

**2 X 05 = 10**

# **R.T.M. Nagpur University Nagpur**

## **SYLLABUS**

**For**

**URDU**

**B.A./ B.Com (Part I) Compulsory**

**I<sup>st</sup> & II<sup>nd</sup> Semester**

**B.A. Part-I Literature (Optional)**

**I<sup>st</sup> & II<sup>nd</sup> Semester**

**B.A./B.Com Part-II Compulsory**

**III<sup>rd</sup> & IV<sup>th</sup> Semester**

**B.A. Part-II Literature (Optional)**

**III<sup>rd</sup> & IV<sup>th</sup> Semester**

**B.A. Part-III<sup>rd</sup> Compulsory**

**V<sup>th</sup> & VI<sup>th</sup> Semester**

**B.A. Part-III Literature (Optional)**

**V<sup>th</sup> & VI<sup>th</sup> Semester**

**Semester Pattern implemented from the session 2017-18 onwards**

### **Distribution**

### **Table**

The following are distribution of marks for external and internal for University examination and continuous internal assessment and passing minimum for papers of UG Programmes.

Combine maximum passing marks 40

Faculty	Maximum marks	Minimum Passing marks	Continuous Internal Assessment	Minimum Passing marks	Total allotted marks	Minimum passing marks
U.G.B.A./B.Com	80	32	20	08	100	40

## **B.A./ B.Com ( part I )**

### **Urdu Compulsory**

**1T1      I<sup>st</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Essay- One out of Four**

##### **Unit II:- Prose:**

- (i) Duniya Pe Ummeed Qayam Hai – Sir Sayyed Ahmad Khan
- (ii) Khuttoot-E-Ghalib (Munshi Har Gopal-Tufta ke Naam)- Mirza Ghalib
- (iii) Sachchi Khushi – Maulvi Nazeer Ahmad
- (iv) Lakhnow Main Funoon-e-Adbiya Ki Taraqqi- Maulana Abdul Haleem Sharar
- (v) Insani Zindagi Main Mahol Ki Ahmiyat- Sayyed Asif Husain Abidi

##### **Unit III:- Poetry**

###### **Gazlein**

- (i) Meer Taqi Meer
  - (a) Ashk Aankhon Main Kab Nahi Aata
  - (b) Kahte ho Ittehad Hai Hum ko
- (ii) Mirza Ghalib
  - (a) Dil se Teri Nigah Jigar Tak Uter Gai
  - (b) Ibne Maryam Hua Kare Koi
- (iii) Hasrat Mohani
  - (a) Dil Ko Khayale yar Ne Makhmoor Kar Diya
  - (b) Main Hoon Kya Meri Mohabbat Ki Haqeeqat Kya Hai

##### **Unit IV:- Nazmein**

- (i) Allama Iqbal \_\_\_\_\_ Javed Ke Naam
- (ii) Jigar Muradabadi –Dil haseen hai to muhabbat bhi haseen paida kar
- (iii) Josh Malihabadi \_\_\_\_\_ Shahinshah Humayun Ka Maqbara

## **B.A./ B.Com ( part I )**

### **Urdu Compulsory**

**2T1      II<sup>nd</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Essay- One out of Four**

##### **Unit II:- Prose:**

- (i) Qazzaqi- Munshi Prem Chand
- (ii) Qeemti Moti – Dr. Sarosha Nasreen Quazi
- (iii) Adab Urdu Aur Chakbast – Maulvi Abdul Haq
- (iv) Urdu Shairy Main Tamseel – Masood Hasan Adeeb
- (v) Rustam Aur Sohrab (Darama) - Agha Hasher Kashmiri

##### **Unit III:- Poetry**

###### **Gazlein**

- (a) Faiz
  - (i) Hum per Tumhari Chah ka Ilzaam Hi to Hai
  - (ii) Gulon mein Rang Bhre, Bad-e-nau Bahar Chale
- (b) Midhatul Akhtar
  - (i) Achcha Agar Nahi to Bura Maan le Mujhe
  - (ii) Jahan Jaun Vahin Ka ho ke rah Jaun
- (c) Munawwar Rana
  - (i) Duniyan Main Muflison ka Thikana Nahi Raha
  - (ii) Talash Karte Hain unko Zururaton Wale

##### **Unit IV:- Nazmein**

- 1. Josh
  - (i) Sogwaran-e-Husain se Khitaab
- 2. Asrarul Haque Majaz
  - (i) Taj-e-Vatan Ka Lal-E-Darakshan Chala Gaya
- 3. Sahir Ludhyanvi
  - (i) Kal Aur Aaj

## **Special Instructions for Paper setter**

### **B.A./ B.Com (Part I)**

### **Urdu Compulsory**

**1T1 & 2T1**

**Semester I<sup>st</sup> & II<sup>nd</sup>**

**Time:3 Hours**

**For**

**B.A./B.Com 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No. 1 . Essay (One out of Four) 16

Q.No.2.(A) Life & works of Author 08

(B) Explanation with reference to context. 08

(Two out of Four ) (Nasr)

Q.No.3 (A) Explanation with reference to context 08

(Four out of Six) (Ghazal)

(B) Life & Works of Poet 08

(One out of three)

Q.No.4.(A) Gist of poems (One out of Three) 08

(B) Life & Works of poet 08

Q.No.5. Short Answer type questions based on all four units. 16

## **B.A. I.**

### **Urdu Literature (Optional)**

#### **1T1 I<sup>st</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Afsana**

1. Jihad (Munshi Prem Chand)
2. Manzoor (Sa'adat Hasan Manto)
3. Garm Koat (Rajendra Singh Bedi)
4. Tafreeh (Saleha Abid Husain)
5. Saharzada (Dr. Sarosha Nasreen Quazi)

##### **Unit II:- Gazlein**

1. Daagh Dahelvi
  - (i) Uzer Aaane Main Bhi Hai Aur Bulate Bhi nahi
  - (ii) Aarzoo-e-wafa Kare Koi
2. Allama Iqbal
  - (i) Jab Ishq Sikhata Hai Aadab-e-Khud Aagahi
  - (ii) Sitaron se Aage Jahan Aur Bhi Hain.
3. Firaaq Gorakhpuri
  - (i) Sar Mein Sauda Bhi Nahi Dil Main Tamanna Bhi Nahi
  - (ii) Sham-e-gum Kuchh us Nigh-E-Naz ki batein karo

##### **Unit III:- Marsiya**

1. Meer Anees
  - (i) Sibte Nabi se Manzil-e-Maqsad Qareeb Hai
2. Qasida
  - (i) Mirza Saoda:- hai Ishtehar Tujh se mera Aai Falak Janab

##### **Unit IV :- Masnavi**

1. Meer Hasan
  - (i) Shatabi Mujhe saqiya da sharab

2. Grammar

Ism aur uski Kismein

**B.A. I.**

**Urdu Literature (Optional)**

**2T1 II<sup>nd</sup> Semester**

**Prescribed syllabus:**

**Unit I :- Novel**

Firdouse-E-Bareen by Abdul Haleem Sharar

**Unit II:- Nazm**

1. Sarnavisht Aadam By Shad Azeem Abadi
2. Adle Jahangiri By Shibli Nomani
3. Abre Bahar By Munshi Navbat rai Nazar
4. Sham By Faiz Ahmad Faiz

**Unit III:- Rubai**

1. Maulana Hali
  - (i)      Hasti se Teri Rang-o-Boo sab ke liye
  - (ii)     Moosa Ne ki ye Arz Aye bar-e-Khuda
2. Amjad Haider Abadi
  - (i)      Zanjeer-e-Dar-e-Arsh Hilata hoon main
  - (ii)     Behud main Rahoon to wo Qarin Aata Hai
3. Firaque Gorakhpuri
  - (i)      Duniya jo sanwar jaye sanwar jane de
  - (ii)     Aaeena-e-Dil Goon se Phooti Hai Kiran
4. Natique Gulaothvi
  - (i)      Daolat ka Nasha ek Dastoor Nahi
  - (ii)     Kanoon Mein Awwam ke samana seekho

**Unit IV :-**

1. Qitaa

- (i) Faani Badayuni:
  - a) Ab wo Raaten Kahan Shabaab Khan
  - b) Auraton par Bartari Mardon ki Sabit hai ke wo
- (ii) Faiz Ahmad Faiz
  - a) Waqf-e-Hirmaan-o-yaas Rahta Hoon.
  - b) Faza-e-Dil pe udaasi Bikherti jati hai
- (iii) Sahir Ludhyanvi
  - a) Jahan- Jahan Teri Nazron Ki Oos Tapki Thi
  - b) Kis ko khabar thi, kis ko yaqin tha Aaise bhi Din  
Aayenge
- (iv) Khizar Nagpuri
  - a) Wo mere paas se gaye hain abhi
  - b) Kuchh Baharen Bhi Daag Deti Hain

## 2. Grammar

Jumle Aur uski Kismein

## **Special Instructions for Paper setter**

### **B.A. (Part I)**

#### **Urdu Literature (Optional)**

**1T1 & 2T1**

**Semester I<sup>st</sup> & II<sup>nd</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No.1. (A) Life & works of Writer (One out of Three) 16

(B) Explanation with reference to context.

(Two out of Four)

Q.No.2.(A): Life & Works of Poet (One out of Three) 16

(B) Explanation with reference to context

(Four out of Six)

Q.No.3. (A) Explanation with reference to context 08

(Two out of Four) Marsiya/Qasida

(B) Life & Works of Poet 08

Q.No.4. (A) Explanation with reference to context 08

(Two out of Four) Masnavi

(B) Question based on Grammar 08

Q.No. 5. Short Answer type questions based on all Four Units. 16

## **B.A./Com. II.**

### **Urdu Compulsory**

### **3T1 III<sup>rd</sup> Semester**

#### **Prescribed syllabus:**

##### **Unit I :- Novel**

Gaban by Munshi Prem Chand

(First Half Portion of the Novel are prescribed)

##### **Unit II:- Drama**

Teen Ungliyan by Sa'adat Hasan Manto

##### **Unit III:- Prescribed Mazameen**

- (i) Sahir, Hamare Mulk Ka Maqbool tareen Shair By Khwaja Ahmad Abbas
- (ii) Sahir ka Shairana Mizaj By Sardar Jafri
- (iii) Sahir Ki Infradiyat Aur Shiddat-e-Ahsas By Ahmad Nadeem Qasmi

##### **Unit IV:- Quami Nazmein: Following poems are prescribed;**

1. Naya Shivala by Allama Iqbal
2. Azan-E-Himaliya by Hasrat Mohani
3. Khak-E-Hind by Brij Narayan Chakbast

## **B.A./B.Com ( part II )**

### **Urdu Compulsory**

### **4T1 IV<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Novel**

Gaban by Munshi Prem Chand

(Second last portion of the Novel are Prescribed)

##### **Unit II:- Drama**

Mitti Ka Bulawa by Shameem Hanfi

##### **Unit III:- Prescribed Mazameen**

1. Munfarid lab-o-lahje ka shair- Midhatul Akhtar by Shahid Kabeer
2. Dr. Midhatul Akhtar by M.I. Sajid
3. Midhatul Akhtar Ki Shairana Kavishen By Dr. Sarosha Nasreen Quazi

##### **Unit IV: Quami Nazmein Following poem are prescribed**

1. Mather-e-Hind by surur Jahan Aabadi
2. Quami Geet by Syed Anwar Husain Aarzoo
3. Naveed-e-Azadi-e-Hind by Zafar Ali Khan

## **Special Instructions for Paper setter**

### **B.A./B.Com (Part II)**

### **Urdu Compulsory**

**3T1 & 4T1**

**Semester III<sup>rd</sup> & IV<sup>th</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No.1. Life & works on Author of Novel 16

Q.No.2. Short answer questions based on Drama 16

Q.No.3. (A) Explanation with reference to context from Mazameen 08

(B) Life & works of Author 08

Q.No.4.(A) Explanation with reference to context 08

From Quami Nazmein (Two out of Three)

(B) Gist of the poem (One out of Three) 08

Q.No.5. Short answer type questions on whole syllabus 16

(Four out of four)

## **B.A. II.**

### **Urdu Literature**

**3T1**

**III<sup>rd</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Urdu Adab Ki Tareekh (1800 to 1857)**

- i)      Urdu Adab ka Pasmanzar
- ii)     Urdu ka Mani-o-Mafhoom
- iii)    Urdu Aur Uski Aham Boliyan

##### **Unit II:- (i) Urdu Zuban ki Nash-O- Numa main Sufiya-e-Karam ka Hissa**

- (ii) Khwaja Banda Nawaz Gasudaraz

##### **Unit III :- Adab Ka Mutalla by Athar Parvez**

Following Titles are prescribed

- 1- Funoon-E-Latifa
- 2- Funoon-E- Latifa Ki Tareef
- 3- Adab Kya Hai
- 4- Adab Aur Zindagi
- 5- Adab Aur Haqeeqat Nigari

##### **Unit IV :- Sir Syed Aur Unke Kaarname by Noorul Hasan Naqvi**

(Page No. 7 to 62)

## **B.A. II.**

### **Urdu Literature**

**4T1      IV<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Urdu Adab Ki Tareekh (1800 to 1857)**

- (i)      Urdu ki saakht ke Buniyadi Anasir
- (ii)     Dakkan Main Urdu Ki Ibteda-O-Irteqa

##### **Unit II : -**

- (iii)    Urdu Zuban ki Ibteda se Mutalliq Mukhtalif Nazariyat
- (iv)    Maghrabi Hindi Aur Uski Bolian
- (v)     Urdu Zuban-O-Adab ka Irteqa

##### **Unit III:- Adab ka Mutala by Ather Parvez**

Following titles are Prescribed:

- (1) Shaery
- (2) Nasr
- (3) Daastaan
- (4) Novel
- (5) Mukhtasar Afsana

##### **Unit IV:- Sir Syed Aur Unke Karname by Noorul Hasan Naqvi**

(Page 63 to 96)

## **Special Instructions for Paper setter**

### **B.A. (Part II)**

#### **Urdu Literature**

**3T1 & 4T1**

**Semester III<sup>rd</sup> & IV<sup>th</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All Question shall carry equal marks.

Q.No.1. Shall be based on Urdu Adab Ki Tareekh 16

Q.No.2. Shall be based on prescribed titles. 16

Q.No.3. Long answer type questions on “Adab ka Mutalla” 16

(Two out of Four)

Q.No.4. Short answer type questions (at least 10 lines) 16

On “Sir Sayyed aur unke karnama” (Four out of Eight)

Q.No.5. Very short answer type questions based on Whole syllabus 16

(Four out of Four)

## **B.A. III.**

### **Urdu Compulsory**

**5T1**

**V<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Essay Writing**

##### **Unit II:- Yaadgaar-e-Hali by Dr. Saleha Aabid Hussain**

(First Half portion of Book are prescribed )

##### **Unit III:- Hamd**

- (i) Faani Badayuni : Aye Khuda-e-Jaleel Banda Nawaaz
- (ii) Quli Qutub shah: Munajaat Mera tu sun ya samee

##### **Naat**

- (i) Shah Sayyed gulaam Husain :  
Sada Zaat Allah Koon Hai Baqa
- (ii) Maulana Sayeed Ejaz :Ye Jaan kar Jaan De Raha Hun ke  
Jaan Dene Mein Zindagi Hai

##### **Unit IV:- Nazmein**

1. Mirza Salamat Ali Dabeer : Sub'h ka Manzar
2. Pandit Labbhu Ram Josh Malsiyani : Meraaj-e-Insani
3. Mohammad Daud Khan Akhtar Shirani : Aaj Ki Raat

## **B.A. III.**

### **Urdu Compulsory**

**6T1                  VI<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

**Unit I :- Essay Writing**

**Unit II :- Yaadgaar-e-Hali by Dr. Saleha Aaabid Hussain**

Second Last portion of Book are prescribed.

**Unit III:- Jadeed Gazal**

- 1) Makhdoom Mohiyuddin:
  - (i) Aap ki yaad Aati Rahi raat bhar
- 2) Shaher Yaar
  - (i) Justuju jiski thi usko to na paya hum ne
- 3) Nasir Kaazmi
  - (i) Dil Mein ek laher si utthi hai abhi

**Unit IV: Jadeed Nazmein:**

- (1) Jigar Muradabadi
  - (i) Zamane ka Aaqua Gulaam-e-Zamana
- (2) Akhtar-ul-Imaan
  - (i) Ek ahsaas
- (3) Sikandar Ali Wajd
  - (i) Ajanta

## **Special Instructions for Paper setter**

### **B.A. (Part III)**

## Urdu Compulsory

**5T1 & 6T1      Semester V<sup>th</sup> & VI<sup>th</sup>**

**Time:3 Hours**

Full Marks: 80

1. The question Paper shall consist of Five Questions.
  2. All Five questions shall be Compulsory
  3. All question shall carry equal marks.

Q.No.1. Essay One out of Four on different topics.	16
Q.No.2. Shall be based on the life & works of Author	16
Q.No.3. (A) Shall be based on the life & works of Poet  (One out of Two)	08
(B) Explanation with reference to context  (Two couplets out of Four)	08
Q.No.4. (A) Shall be based on the Life & works of poet  (One out of three)	08
(B) Explanation with reference to context  (Two couplet out of Four)	08
Q.No.5. Short answer type questions on Whole Syllabus  (Four out of Four)	16

## **B.A. III.**

### **Urdu Literature**

**5T1      V<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

##### **Unit I :- Life & Work of Allama Iqbal**

##### **Unit II :- Nazmein**

1. Allama Iqbal
  - (i) Aaftab-e-Subha
  - (ii) Jugnoo
  - (iii) Subha Ka Sitara
  - (iv) Pyam-e-Subha
  - (v) Hindustani Bachchon ka Qaumi Geet
  - (vi) Trana-E-Hindi

##### **Unit III:- Mazameen-e-Shibli: (Ibtedai 05 Mazameen)**

##### **Unit IV:- (1) Ilm-e- Bayaan**

1. Tashbih
2. Isteaara
3. Majaz-e-Mursel
4. Kinaya

##### **(2) Taqtee**

- (i) Bahr-e-Mutaqarib

## **B.A. III.**

### **Urdu Literature**

**6T1**

**VI<sup>th</sup> Semester**

#### **Prescribed Syllabus:**

**Unit I:- Life & Work of Josh Malihabadi**

**Unit II :- Nazmein**

**1. Josh Malihabadi**

- (i) Hamari Sair
- (ii) Gaati Hui Rahen
- (iii) Phool
- (iv) Bahaar Aane Lagi
- (v) Udaas Subh
- (vi) Mashgale ka asar

**Unit III:- Mazameen-e-Shibli (No. 06 Ta No. 10 Mazameen)**

**Unit IV:- (A) Sinatein**

- 1. Talmeeh
- 2. Tazaad
- 3. Mera'atun Nazeer
- 4. Husn-e-Taleel
- 5. Tajahul-e-Aarefana

**(B) Taqtee**

- 1. Bahr-E-Ramal
- 2. Bahr-E- Hazaj

## **Special Instructions for Paper setter**

### **B.A. (Part III)**

#### **Urdu Literature**

**5T1 & 6T1**

**Semester V<sup>th</sup> & VI<sup>th</sup>**

**Time:3 Hours**

**Full Marks: 80**

1. The question Paper shall consist of Five Questions.
2. All Five questions shall be Compulsory
3. All question shall carry equal marks.

Q.No.1. Life & Works of Allama Iqbal	16
Q.No.2.(A) Gist of the Poems of Allama Iqbal	08
(B) Explanation with reference to context (Four out of Six)	08
Q.No.3.(A) Life & works of Author	08
(B) Explanation with reference to context from Mazameen-e-Shibli	08
Q.No.4.(A) Ilm-e-Bayaan	08
(B) Bahr ka Naam Aur Taqtee	08
Q.No.5. Short answer type questions on Whole Syllabus (Four out of Four)	16

RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY, NAGPUR  
SYLLABUS  
FOR

1T1 B.A. Part-I, 1st Semester Examination  
Persian Literature (Optional)  
From 2020-2021 onwards

Time: Three Hours

Full Marks: 80

The following selections from the Book:

(آثار فارسی احصاء اول) Aasar-e-Farsi, Part-I

By B.O.S., Persian, R.T M.Nagpur University, Nagpur

1. Prose:

۱ - حصة نثر

ز-انتخاب از حبیب السیر - غیاث الدین ابن بمام الدین  
ذکر سلطان شمس الدین التمش - تا- ذکر سلطان علاء الدین مسعود شاه بن رکن الدین فیروز شاه

ii- مهاتما گاندھی - اسدالله مبشری

2. Rapid Reading: سید الدین محمد عوفی \* اسرات ملکشاه و تدبیر نظام الملک (Page No. 129 to 132)

۲ - حصة نظم

انتخاب از آثار فارسی (جنبه اول)

نقصيدة قائلی - در مدح امیر کبیر مرز انتقی خان

iii- رباعیات : شیخ ابوسعید ابوالخیر (رباعی نمیر ۱۵۰)

iii- غزلیات : فرخی بزدی

4. Rhetoric's: تلمیح 'تضاد' حسن تعلیل' مراعات النظیر 'بالغه'

5. Translation from English or Urdu into Persian.

6. Lives and works of prescribed authors and poets.

Unitization and Distribution of Marks:

Unit-I	: Life and works of authors and poets.	16
Unit-II	: Rapid Reading	16
Unit-III	: (A) Prose (B) Translation from English or Urdu into Persian	12 04
Unit-IV	: (A) Poetry (B) Rhetoric's	12 04
Question No. 5 will be based on the above four units (One question shall be asked from each unit which shall carry equal Marks)		16

Internal Assessment:

In the Internal Assessment of 20 marks, 10 marks will be for assignment and 10 marks for Oral test.

RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY, NAGPUR  
SYLLABUS  
FOR

2T1      B.A. Part-I, IIInd Semester Examination  
Persian Literature(Optional)  
From 2020-2021 onwards

Time: Three Hours

Full Marks: 80

1. Prose: Following Selection from the Book Nasra نشرہ

Published by :Kitabistan, Allahabad

1- انتخاب از تاریخ طبری - ابو علی محمد بن محمد بلعمنی

حیث پادشاهی بہرام بن یزد چردکه بہرام گور خوانند

(Page No.1 to 12)

Selection from the book Nisab-e-Jadeede Farsi

By : Ahmad Khan Pub : Jaiyyad Press, Delhi

2- انتخاب از زندگی من - مترجم محمود تقاضی

(Page No.7 to 19) کوکی

2. Rapid Reading: Selection from “ FarsiShakkari ” By M. Siddique

Pub :MotilalBanarsi Das, Patna

1- سعدی

(Page No.92 to 100) 2- شجاعت

3- Poetry: 3- حصہ نظم

(A) Selection from the book “ Nisab-e-Jadeede Farsi ” 1- قصیدہ قاؤنی

By : Ahmad Khan Pub : Jaiyyad Press, Delhi \* ماه رمضان آمد ای ترک سمن بر

(Page No.102 to 105)

(B) Selection from the book “ Shera ” Pub : Kitabistan, Allahabad

(Page No.168 to 173): 2- غزلیات نظیری

----- (ii) نظر به ظاہرو صیاد ----- (i) پروانہ ایم -----

----- (iii) چہ خوش است -----

Selection from Barguzidah-e-Sher-e-Farsie, Ma'asir, Vol-I, By Muneebur Rahman

Pub :Edara-e-Uloom-i- Islamiya, Aligarh

(Page No.217 to 220): 3- قطعات ایرج میرزا

----- (ii) دل مادر ----- (i) در مذمت شراب می فرماید -----

----- (iii) گفتگو کار گرو کار فرما -----

4. Rhetoric's: لف و نثر (مرتب و غیر مرتب) 'تشبیه' 'استعارہ' 'تجنیس تام' 'تجنیس زاید'

5. Translation from English or Urdu into Persian.

6. Lives and works of prescribed authors and poets.

Unitization and Distribution of Marks:

Unit-I	: Life and works of authors and poets.	16
Unit-II	: Rapid Reading	16
Unit-III	: (A) Prose (B) Translation from English or Urdu into Persian	12 04
Unit-IV	: (A) Poetry (B) Rhetoric's	12 04
Question No. 5 will be based on the above four units (One question shall be asked from each unit which shall carry equal Marks)		16

---

Internal Assessment:

In the Internal Assessment of 20 marks, 10 marks will be for assignment and 10 marks for Oral test.

**RASHTRASANT TUKADOJI MAHARAJ  
 NAGPUR UNIVERSITY, NAGPUR  
 SYLLABUS  
 FOR**

**3T1      B.A. Part-II, IIIrd Semester Examination  
 Persian Literature (Optional)  
 From 2020-2021 onwards**

Time: Three Hours

\* Full Marks: 80

The following selections from the Book:

(آثار فارسی (حصة دوم) (Aasar-e- Farsi, Part-II)

By B.O.S., Persian, R.T.M.Nagpur University, Nagpur

1. Prose: ١- حصہ نظر: ١- انتخاب از سیاست نامہ۔ نظام الملک طوسي فصل چہارم

Short stories, selection from the book Dastanhaye Kotah

By: Wasif Ahmad: Pub. Nice Books, Delhi-51

\* صادق هدایت - گرداب

2. Rapid Reading ٢- انتخاب از بیانیون نامہ (Page No. 58 to 66)

3. Poetry: ٣- حصہ نظم قصیدہ: ابوالفیض فیضی غزلیات: صائب تبریزی منظومات جدید: پروین اعتصامی يا ازلی الظہور بالبدی الخفا

4. Translation from English or Urdu into Persian

5. Rhetoric's: تجنیس قلب' تجنیس مرکب' اشتراق شبہ اشتراق' ادماج

6. Lives and works of prescribed authors and poets.

**Unitization and Distribution of Marks:**

Unit-I	: Life and works of authors and poets.	16
Unit-II	: Rapid Reading	16
Unit-III	: (A) Prose (B) Translation from English or Urdu into Persian	12 04
Unit -IV	: (A) Poetry (B) Rhetoric's	12 04

Question No. 5 will be based on the above four units

(One question shall be asked from each unit which will carry equal Marks)

16

**Internal Assessment:**

In the Internal Assessment of 20 marks, 10 marks will be for assignment and 10 marks for Oral test.

**RASHTRASANT TUKADOJI MAHARAJ**

NAGPUR UNIVERSITY, NAGPUR  
SYLLABUS  
FOR

4TI B.A. Part-II, IVth Semester Examination  
Persian Literature (Optional)  
From 2020-2021 onwards

Time: Three Hours

Full Marks: 80

1. (i) Prose: Following Selection from the Book Siyasat Nama  
By :Nizam-ul-MulkTusi, Pub : Ram Narayan Lal, Allahabad

نظام الملک طوسي - انتخاب از سیاست نامه - ۱

فصل پنجم

\* چنین گویند که چون قباد-ولایت آبدان (Page No.26 to 36)

(ii) Modern Prose: Following selection from the book

DastanhayeKotah, By: Wasif Ahmad

Pub. Nice Books, Delhi-51

۲- داستانهای کوتاه

(Page No.228 to 236) \* نقاش - محمد حجازی \*

2. Rapid Reading :

انتخاب از بیانیون نامه - گلین بیگم

بعد از قفتح رعناسنگا تا بمیرابندال عنایت فرمود. (Page No.17 to 25)

3. Poetry : The following selections from the book Shera

Printed By :MohdZahir-ul-Hasan

Pub :Kitabistan, Allahabad

(Page No.56 to 57) ۱- قصیده: ابوالفيض فیضی

\* ای نقد عقل فرع ! ندام چه گویری

۲- غزلیات: مولانا عبدالرحمن جامی (Page No.160 to 163)

۱- زان بمنی ریزم سرشک لامرنگ خویش را

۲- لب کشودی تا سخن گویی! در سیراب ریخت

۳- زنجوغ غلیمه بارنیگر خومه بر گلزارگل

۴- ای بی تو زدیده خواب رفته

Mathnavi : Selection from مثنوی ۳

Barguzidah-eSher-e-Farsi-e, Ma'asir, Vol-I,

By Muneebur Rahman

Pub :Edara-e-Uloom-i- Islamiya, Aligarh Muslim University, Aligarh

(Page No.170 to 173) ۱- بهار شم انگیز بو شنگ ایتھاج سنه

4. Translation from English or Urdu into Persian.
5. Rhetoric's: تنسيق الصفات' سياقہ الاعداد' ایہام' تبلیغ' اغراق' غلو
6. Lives and works of prescribed authors and poets.

**Unitization and Distribution of Marks:**

Unit-I	: Life and works of authors and poets.	16
Unit-II	: Rapid Reading	16
Unit-III	: (A) Prose (B) Translation from English or Urdu into Persian	12
Unit-IV	: (A) Poetry (B) Rhetoric's	04
	Question No. 5 will be based on the above four units (One question shall be asked from each unit which will carry equal Marks)	16

**Internal Assessment:**

In the Internal Assessment of 20 marks, 10 marks will be for assignment and 10 marks for Oral test.

RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY, NAGPUR

**RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY, NAGPUR  
SYLLABUS  
FOR**

**5T1**    B.A. Part-III, Vth Semester Examination  
Persian Literature (Optional)  
From 2018-2019 onwards

Time: Three Hours

Full Marks: 80

The following selections from the Book:  
**آثار فارسی (حصہ سوم) (Aasar-e-Farsi, Part-III)**  
 By B.O.S., Persian, R.T.M.Nagpur University, Nagpur

1. Prose:

١- حصہ نثر

- ١- زبان فارسی در عهد صفوی - ڈاکٹر دبیح اللہ صفا
- ٢- داستانهای کوتاه
- ٣- ادھم پینه دوز - ڈاکٹر شیراز پور پرتو (شپرتو)
- ٤- مرگ مادر - علی دشتی

2. Poetry:

٢- حصہ نظم

- ١- قصیدہ: انتخاب از کلیات عرفی  
درستایش حضرت رسول(ص) اقبال کرم می گزد ارباب بمم را

- ٢- مثنوی: انتخاب از مثنوی منطق الطیر - شیخ فردالدین عطار  
حکایت ۱: خریداری پیرزن حضرت یوسف را
- حکایت ۲: آمدن برادران یوسف بمصر در سال قحطی در خدمت انحضرت

- ٣- غزلیات: ربی معیری  
(۱) غم شیرین (۲) کیستی (۳) سینہ سوز (۴) آتش خاموش (۵) بار زندگی

3. Letter writing in Persian

بحر متقارب 'بحربزج' بحر رمل 'سالم محنوب/مکسور'

5. Lives and works of prescribed authors and poets.

6. Translation from English or Urdu into Persian.

Unitization and Distribution of Marks:

Unit-I	: Letter writing in Persian	16
Unit-II	: Life and works of authors and poets.	16
Unit-III	: (A) Prose (B) Translation from English or Urdu into Persian	12
Unit-IV	: (A) Poetry (B) Prosody	04
		12
		04

Question No. 5 will be based on the above four units

One question shall be asked from each unit which shall carry equal Marks

16

Internal Assessment:

In the Internal Assessment of 20 marks, 10 marks will be for assignment and 10 marks for Oral test.

**RASHTRASANT TUKADOJI MAHARAJ**  
**NAGPUR UNIVERSITY, NAGPUR**  
**SYLLABUS**  
**FOR**

**6T1      B.A. Part-III, VIth Semester Examination**  
**Persian Literature (Optional)**  
**From 2018-2019 onwards**

Time: Three Hours

Full Marks: 80

1. Prose: Following Selection from the Book *Nisab-e- Jadid-e Farsi* ١ - حصہ نثر

By M. Ahmad Khan Pub :Jaiyyad Press, Delhi

۱- انتخاب از سر زمین بند علی اصغر حکمت

زبان فارسی در بند

Selection from the book *Dastanhae Kotah-e Farsi* ۲ - داستانهای کوتاه

By :WasifAhmad Pub :Nice Books, Delhi

۱- رجل سیاسی - محمد علی جمالزاده

۲- سه قطره خون - صادق بدایت

2. Poetry: ٢ - حصہ نظم

Selection from Shera ۱ - قصیدہ : عرفی شیرازی

Pub :Kitabistan, Allahabad(P.No. 47 to 48) در موعظت اخوان و فخر خود

Selection from MathnaviMantiqutTair ۲ - مثنوی

Edited by : Dr. M. JawwadMashkoor شیخ فریدالدین عطار

Pub :KitabFaroshi Iran

۱- حکایت : شکایت کردن درویش از فقر پیش حضرت ابراءیم ادهم

۲- حکایت : خواجه غلام پاکباز (Page No.212)

Ghazliyat :Selection from *Nisab-e- Jadide Farsi* ۳ - غزلیات : شهریار

By M. Ahmad Khan, Pub :Jaiyyad Press, Delhi

۴- بروانه در آتش

۱- مکتب حافظ

۳- بیهار توبه شکن

۵- بر سنگ مزارم

3. Essay in Persian

4. Phrases

5. Lives and works of prescribed authors and poets.

6. Translation from English or Urdu into Persian.

Unitization and Distribution of Marks:

Unit-I	: Essay in Persian	16
Unit-II	: Life and works of authors and poets.	16
Unit-III	: (A) Prose	12
	(B) Translation from English or Urdu into Persian	04
Unit-IV	: (A) Poetry	12
	(B) Phrases	04

Question No. 5 will be based on the above four units

One question shall be asked from each unit which shall carry equal Marks

16

Internal Assessment:

In the Internal Assessment of 20 marks, 10 marks will be for assignment and 10 marks for Oral test.

**RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY**

**A Course of Choice Based Credit System  
Bachelor of Arts  
Under Graduate -Sanskrit  
Semester Pattern  
B.A. -Sanskrit Literature  
  
(Faculty of Arts)  
(From Session 2017-2018)**

# **Bachelor of Arts -B.A.SANSKRIT**

## **A Course of Choice Based Credit System**

### **(From Session 2017-2018)**

#### **A) General**

1. Semesters I<sup>st</sup> (1T) and II<sup>nd</sup> (2T) will be compulsory for B.A. AND B.Com. Part I and Semesters III<sup>rd</sup>(3T) and IV<sup>th</sup> (4T) will be compulsory for B.A. AND B.Com. Part II, Semesters V<sup>th</sup>(5T) and VI<sup>th</sup> (6T) will be compulsory for only B.A. Part III
2. In optional Sanskrit Literature , Semesters I<sup>st</sup> (1T) and II<sup>nd</sup> (2T) will be for B.A. Part I and Semesters II<sup>rd</sup> (3T) and IV<sup>th</sup> (4T) will be for B.A. Part II and Semesters V<sup>th</sup> (5T) and VI<sup>th</sup>(6T) will be for B.A. Part III.
3. Each paper will be of 100 marks, out of which 80 marks will be for University Examination And 20 marks will be for Internal Assessment.
4. Minimum passing marks for each paper will be 40 and there will not be separate passing in theory and internal assessment.
5. There will be minimum 90 teaching days in each semester.
6. There will be 4 credits in each paper.
7. Credits will be calculated on marks obtained out of 100.
8. Answers will be written in the medium offered –Sanskrit Marathi, Hindi, English

#### **B) Pattern of Question Paper**

1. There will be 4 units in each paper and short and long questions will be asked from each unit.
2. Duration of examination for each paper will be 3 hours.

#### **C) Internal Assessment:**

**Total Mark = 100: Theory = 80 +Internal Assessment -20**

- ❖ **Details of Internal Assessment -20**
  - **Teaching Learning Activity-अध्ययन अध्यापन कार्य**

प्रकल्पकार्य, गृहपाठः, चर्चासत्रम्, संगणकद्वारा दृकश्राव्यपाठांशप्रदर्शनम्(पीपीटी)  
घटकपरीक्षणम्, समूहचर्चा, अतिथी . व्याख्यानम्, सांस्कृतिककार्यक्रमसहभागः,  
कार्यशाळा, शैक्षणिक—सहल, संस्कृत—संभाषणम्, आलेख— निर्मिति:
- ❖ **Question Paper Pattern will be given in Syllabus.**
- ❖ **Same Teaching Learning Activities will be for Compulsory and Optional Sanskrit subject.**

#### **D) Absorption Scheme:**

- **As per Direction No. 13 /2017 or Relevant subject Direction**

# **A Course of Choice Based Credit System**

**Bachelor of Arts**

**B.A. -Sanskrit Literature (Optional)**

**Under Graduate - Sanskrit**

**(2017-2018)**

# **A Course of Choice Based Credit System**

## **Bachelor of Arts Under Graduate - Sanskrit B.A. I-Sanskrit Literature Semester I-(1T)**

**पूर्णाङ्कः - १००**

**लिखितपरीक्षाङ्कः - ८०**

**आन्तरिकमूल्यमापनाङ्कः-२०**

**अंडकः**

**धटक-१ नीतिशतकम्-भर्तृहरिकृत(अज्ञपद्धति, विद्वत्पद्धतिः, दुर्जनपद्धतिः, सुजनपद्धति, परोपकार पद्धतिः) ३०**

**धटक २) नीतिशतकाधारित- वृत्तप्रकाराः- पृथ्वी, आर्या, उपजातिः, वसन्ततिलका, भुजंगप्रयात, ९०**

**शार्दूलविक्रीडित, मन्दाक्रान्ता, मालिनी, वंशाश्च, शिखरिणी**

**धटक ३) आर्षमहाकाव्यरामायणस्य महत्वम् ९०**

**(साहित्यिकम्, सामाजिकम्, सांस्कृतिकम्, राजकीयम्, धार्मिकम्**

**धटक ४) रामायणाधारित-वस्तुनिष्ठप्रश्नाः ९०**

**धटक ५) पुष्टमाला - भाग १ (व्याकरणम्) रा.तु.म. नागपूर विद्यापीठ प्रकाशनम् २०**

**रिक्तस्थानपूरणं, वाक्यपरिवर्तनं, सन्धिविग्रह, समासविग्रह, अपठित परिच्छेदः (कर्तरि व.का.धा.वि. कर्तरि भूतकाळ, त्वान्त, त्व्यबन्त, क.भु.धा.वि., द्वितीय भविष्य काळ, परोक्ष भूतकाळ, कर्मणी- प्रयोग, कर्तरि- प्रयोग - वर्तमानकाळ, भूतकाळ, सतिसप्तमीइत्यादयः)**

**आन्तरिकमूल्यमापनाङ्कः-२०**

**संदर्भग्रंथाः -**

**१) धनञ्जयकृत दशरूपकम् अध्याय १, २**

**२) साहित्यदर्पणम् – अध्याय ६ विश्वनाथकृत्**

**३) संस्कृत नाट्यसौन्दर्य – गो. के. भट, पुणे**

**४) भर्तृहरिकृत नीतिशतकम् – सुजन, दुर्जनपद्धतिः, अज्ञपद्धतिः, विद्वत्पद्धतिः, परोपकार पद्धतिः**

**५) भारतीय संस्कृतीकोश खंड १ ते १०, पंडित महादेवशास्त्री जोशी, महाराष्ट्र संस्कृती मंडळ, पुणे**

**६) संस्कृत साहित्याचा इतिहास, डॉ. वि. वा. करंबेळकर**

**७) संस्कृत नाटके आणि नाटककार – गो. के. भट, पुणे**

**प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)**

**अंडकः - ८०**

**नीतिशतकम् : प्रश्न १ अ) दीर्घोत्तरग्रन्थ प्रश्नाः**

**१०**

**ब) वाक्यद्वयस्य संसंदर्भ स्पष्टीकरणं**

**१०**

**क) श्लोकद्वयस्य अनुवाद**

**१०**

**वृत्तपरिचयः— प्रश्न २ —अ) कस्यापि एकस्य छन्दपरिचयं सलक्षणं लिखत।**

**०५**

**ब) निम्नलिखितस्य एकस्य छन्दलक्षणानि सोदाहरणं**

**लिखत। ०५**

आर्षमहाकाव्यरामायणम्—प्रश्न ३—अ)	दीर्घेतररूपं प्रश्नाः	१०
प्रश्न ४	— अथोनिर्दिष्टेषु पर्यायेषु वस्तुनिष्ठ प्रश्नानां उत्तराणि लिखत।	१०
पुष्पमाला १— प्रश्न ५	— व्याकरणम् अ) सुयोगं प्रयायं दत्ता रिक्तस्थानपुरणम्	५
ब)	सूचनाणुसारेण वाक्यपरिवर्तनम् (रूपकद्वयपरिचयः)५	०५
क)	समास विग्रहं कृत्वा नामनिर्देशनम्	०३
ड)	सन्धी— विग्रह	०३
ई)	अपठित परिच्छेदं पठित्वा प्रश्नानां उत्तराणि लिखत।	०४

## A Course of Choice Based Credit System

**Bachelor of Arts  
Under Graduate - Sanskrit  
B.A. I-Sanskrit Literature  
Semester II-(2T)  
संस्कृत-साहित्यम्**

**पूर्णाङ्गकाः - १००**

लिखितपरीक्षाङ्गकाः - ८०

आन्तरिकमूल्यमापनाङ्गकाः-२०

अङ्गकाः

**धटक—१ स्वप्नवासवदत्तम् (भासकृत)** ४०

लोकानुवादः अंकस्यमहत्वं / स्वभावरेखाटनं, ससन्दर्भ स्पष्टीकरणं, टिप्पणिद्वयं

**धटक २) नाट्यशास्त्रीय परिभाषा (नाट्यशास्त्रीय परिभाषा नान्दी, सूत्रधारः, प्रवेशक, विष्कंभकः, विदुषक, काञ्चुकीयः भरतवाक्यं)** १०

**धटक ३) रूपकप्रकाराः** १०

**धटक ४) संस्कृतनाट्यवैशिष्ट्यानि** १०

**धटक ५) वस्तुनिष्ठसंस्कृतप्रश्नाः** १०

आन्तरिकमूल्यमापनाङ्गकाः:- २०

**संदर्भग्रन्थाः —**

१) धनञ्जयकृत दशरूपकम् अध्याय १, २

२) साहित्यदर्पणम् — अध्याय ६, विश्वनाथकृत्

३) संस्कृत नाट्यसौन्दर्य — गो. के. भट, पुणे

४) भर्तृहरिकृत नीतिशतकम् — सुजन, दुर्जनपद्धतिः, अज्ञपद्धतिः, विद्वत्पद्धतिः, परोपकार पद्धतिः

५) भारतीय संस्कृतीकोश खंड १ ते १०, पंडित महादेवशास्त्री जोशी, महाराष्ट्र संस्कृती मंडळ, पुणे

६) संस्कृत साहित्याचा इतिहास, डॉ. वि. वा. करंबेळकर

७) संस्कृत नाटके आणि नाटककार — गो. के. भट, पुणे

**प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)**

अड्डका: - 80

प्रश्न १— स्वज्ञवासवदत्तम् (भासकृत)	१०
शलोकद्वयस्यानुवाद	
प्रश्न २ अ) अंकस्यमहत्वम् —	१०
ब) स्वभावेरेखाटन	१०
प्रश्न ३ अ) वाक्यस्य ससन्दर्भ स्पष्टीकरण	०५
ब) टिप्पणीद्वयं	०५
प्रश्न ४ नाट्यपरिभाषा— टिप्पणीद्वयम्	१०
प्रश्न ५ दीर्घोत्तररूपप्रश्नाः— अ) संस्कृत—नाट्य—विशेषाः—	१०
ब) संक्षिप्त टिप्पणी —	१०
क) वस्तुनिष्ठसंस्कृतप्रश्नाः—	१०

## A Course of Choice Based Credit System

Bachelor of Arts  
Under Graduate - Sanskrit  
B.A. II-Sanskrit Literature  
Semester III-(3T)  
संस्कृत-साहित्यम्

पूर्णाङ्गका: - ९००

लिखितपरीक्षाङ्गका: - ८०  
आन्तरिकमूल्यमापनाङ्गका:-२०

अड्डका:

घटक - १) ममटकृत काव्यप्रकाशः प्रथमः उल्हासः

२०

दशमः उल्हासः -अलंकारः - उपमा, रूपक, उत्प्रेक्षा, ससन्देह,

विशेषोक्ति, विभावना, समासोक्ति, अर्थान्तरन्यास, निर्दर्शना, अपहृनुति, अनन्चय, ग्रान्तिमान, श्लेष, दीपक, यथासंख्य, समाधी, तद्गुण, अतिशयोक्ति, दृष्टान्त, व्यतिरेक.

२०

घटक २) नवरसवर्णनम् (परिचयमात्रम्)

१०

घटक ३) आर्षमहाकाव्य-महाभारतस्य-महत्त्वम् (राजकीयं, सामाजिकं, साहित्यिकं, सांस्कृतिकं, धार्मिकम्, इ.) १० घटक ४) वस्तुनिष्ठप्रश्नाः

२०

आन्तरिकमूल्यमापनाङ्काः-

२०

संदर्भग्रंथाः -

- १) संस्कृतमहाकाव्याचे पंचप्राण - के. ना. वाटवे
- २) मम्मटकृत काव्यप्रकाश - झळकीकर, अर्जुनवाडकर
- ३) साहित्यदर्पणम् - विश्वनाथकृत तृतीय अध्याय
- ४) भारतीय संस्कृतीकोश, पं. महादेवशास्त्री जोशी, खंड १ ते १०,
- ५) संस्कृत साहित्याचा सोपपत्तिक इतिहास - डॉ. करंबेळकर
- ६) महाभारत दर्शन, अमरेन्द्र गाडगे.

प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

अङ्काः - ८०

प्रश्न १ काव्यप्रकाशः

अ) मम्मटकृत कारिकाम् उद्धृत्य विवरणं कुरुत।	१०
ब) संक्षिप्त-टिप्पणी	१०
प्रश्न २ अलंकारस्य सोदाहरणं विवरणं कुरुत।	१०
प्रश्न ३ अलंकारस्य नामनिर्देशनं कृत्वा स्पष्टीकरणम्।	१०
प्रश्न ४ रसद्वयस्य वर्णनं कुरुत।	१०
प्रश्न ५ अ) आर्षमहाकाव्यस्य महत्त्वम्-दीर्घोत्तरप्रश्नाः	१०
ब) वस्तुनिष्ठप्रश्नाः	२०

## A Course of Choice Based Credit System

Bachelor of Arts  
Under Graduate - Sanskrit  
B.A. II-Sanskrit Literature  
Semester IV-(4T)

संस्कृत-साहित्यम्

पूर्णाङ्काः - १००

लिखितपरीक्षाङ्काः - ८०

आन्तरिकमूल्यमापनाङ्काः - २०

अङ्गकाः		
घटक १) रघुवंशम् - सर्ग २	३०	
घटक २) संस्कृत -कथा -रचना	९०	
घटक ३) महाकाव्य-लक्षणानि, खण्डकाव्यपरिचयः; महाकवि-कालिदास-परिचयः		२०
घटक ४) वस्तुनिष्ठप्रश्नाः	२०	
आन्तरिकमूल्यमापनाङ्गकाः-		२०

## संदर्भग्रन्थाः -

- १) संस्कृतमहाकाव्याचे पंचप्राण - के. ना. वाटवे
  - २) मम्मटकृत काव्यप्रकाश - झळकीकर, अर्जुनवाडकर
  - ३) साहित्यदर्पणम् - विश्वनाथकृत तृतीय अध्याय
  - ४) भारतीय संस्कृतीकोश, पं. महादेवशास्त्री जोशी, खंड १ ते १०,
  - ५) संस्कृत साहित्याचा सोपपत्तिक इतिहास - डॉ. करंबेळकर
  - ६) महाभारत दर्शन, अमरेन्द्र गाडगे.

## (Question Paper Pattern)

अड्का: - 80

प्रश्न १ ख्युवंशम्—श्लोकद्वयस्य अनुवादं कुरुत।	१०
प्रश्न २ पंक्तिद्वयस्य ससन्दर्भं स्पष्टीकरणं कुरुत।	१०
प्रश्न ३ दीर्घोत्तरप्रश्नाः।	१०
प्रश्न ४ अ) महाकाव्यपरिचयः/ महाकविपरिचयः	१०
ब) संक्षिप्त—टिप्पणी	१०
१० प्रश्न ५ अ) संस्कृत —कथारचना	१०
ब) वस्तुनिष्ठसंस्कृतप्रश्नाः।	२०

# A Course of Choice Based Credit System

**Bachelor of Arts**  
**Under Graduate - Sanskrit**  
**B.A. III-Sanskrit Literature**

**Semester V-(5T)**

**संस्कृत-साहित्यम्**

**पूर्णाङ्काः - १००**

लिखितपरीक्षाङ्काः - ८०  
आन्तरिकमूल्यमापनाङ्काः-२०

अङ्काः

घटक १) लघुसिद्धान्तकौमुदी - संज्ञासंधिप्रकरणम्

४०

घटक २) संस्कृतसाहित्येतिहासः-

१०

पुराणसाहित्यं, गद्यसाहित्यं, कथासाहित्यम्

घटक ३) संस्कृत-निबन्ध-लेखनम्

१०

घटक ४) वस्तुनिष्ठप्रश्नाः।

२०

आन्तरिकमूल्यमापनाङ्काः-

२०

संदर्भग्रन्थाः -

- १) संस्कृत नाटके आणि नाटककार — गो. के. भट, पुणे
- २) नाट्यसौन्दर्य — के. ना. वाटवे, पुणे
- ३) संस्कृत साहित्याचा सोपपत्तिक इतिहास, डॉ. करंबेळकर, पुणे
- ४) विश्वनाथकृत साहित्यदर्पणं — तृतीय परिच्छेद ३० ते ३८, ५२ ते ८७
- ५) संस्कृत शास्त्रों का इतिहास, डॉ. बलदेव उपाध्याय, चौखम्बा सीरीज
- ६) वास्तुशास्त्र का इतिहास, चौखम्बा सीरीज, वाराणसी
- ७) कौठिल्य अर्थशास्त्र, र. प. कंगले, पुणे

**प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)**

अङ्काः - ८०

१) लघुसिद्धान्तकौमुदी - संज्ञासंधिप्रकरणम्

१०

प्रश्न १ अ) संज्ञाद्वयं ससूत्रं स्पष्टीकुरुत ।

१०

ब) सूत्रद्वयं सोदाहरणं स्पष्टीकुरुत ।

१०

प्रश्न २ अ) संज्ञाद्वयं ससूत्रं स्पष्टीकुरुत ।

१०

ब) सूत्रद्वयं सोदाहरणं स्पष्टीकुरुत ।

१०

प्रश्न ३ संस्कृतेन निबंधं लिखत ।

१०

प्रश्न ४ संस्कृत साहित्येतिहासः	
अ) दीर्घोत्तररूप—प्रश्नः (१)	१०
अथवा संक्षिप्त टिप्पणी (२)	
प्रश्न ५ वस्तुनिष्ठसंस्कृतप्रश्नाः	२०

# A Course of Choice Based Credit System

Bachelor of Arts  
Under Graduate - Sanskrit  
B.A. III-Sanskrit Literature

Semester VI-(6T)  
संस्कृत-साहित्यम्

पूर्णाङ्गकाः - १००

लिखितपरीक्षाङ्गकाः - ८०  
आन्तरिकमूल्यमापनाङ्गकाः:-२०

अड्डकाः

अभिज्ञानशाकुन्तलम्	
घटक १) अभिज्ञानशाकुन्तलम् (अंक ४, ५ सूक्ष्माध्ययनम्)	४०
घटक २) नायकनायिकाप्रकाराः (परिचयमात्रम्)	९०
घटक ३) सारांशलेखनम्	५
संवादलेखनम्	५
घटक ४) वस्तुनिष्ठप्रश्नाः	२०
आन्तरिकमूल्यमापनाङ्गकाः:-	२०

## प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

अड्डकाः

- 80

प्रश्न १ श्लोकानुवादं कुरुत ।	१०
प्रश्न २ वाक्यद्वयस्य ससन्दर्भं स्पष्टीकरणं कुरुत ।	१०
प्रश्न ३ अ) दीर्घोत्तरप्रश्नाः (१)	१०
ब) टिप्पणी (२)	१०
प्रश्न ४ नायक—नायिका—प्रकार—वर्णनं कुरुत ।	१०

प्रश्न ५ सारांश लेखनं कुरुत ।  
संवादलेखनं कुरुत ।  
प्रश्न ५ वस्तुनिष्ठसंस्कृतप्रश्नाः ।

५  
५  
२०

---

**RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY NAGPUR**

**SEMESTER SYSTEM SYLLABUS**

**FOR**

**PSYCHOLOGY**

**B. A.**

**(Semester I, II, III, IV, V & VI)**

WITH EFFECT FROM 2016-17

RASHTRASANTTUKADOJIMAHARAJ

NAGPUR UNIVERSITY NAGPUR

**SEMESTER SYSTEM SYLLABUS FOR**

**B. A.**

**PSYCHOLOGY**

**Semester wise Distribution of Marks**

<b>Class</b>	<b>Marks for Theory Paper</b>	<b>Marks for Internal Assessment In Theory</b>	<b>Marks for Practical Marks</b>	<b>Marks for Internal Assessment In Practical</b>	<b>Total Mark</b>
<b>B.A. SEM I</b> <b>Code:FP1T1</b>	40	10	40	10	100
<b>B.A. SEM II</b> <b>Code:SP2T1</b>	40	10	40	10	100
<b>B.A. SEM III</b> <b>Code:PP3T1</b>	40	10	40	10	100
<b>B.A. SEM IV</b> <b>Code:SMPT4T1</b>	40	10	40	10	100
<b>B.A. SEM V</b> <b>Code:OP5T1</b>	40	10	40	10	100
<b>B.A. SEM VI</b> <b>Code:COU&amp;POS6T1</b>	40	10	40	10	100
<b>TOTAL</b>	240	60	240	60	600

## **Rules and Regulations**

1. There will be four periods for theory and two periods for practical per week.
2. One batch of Practical will consist 16 students.
3. Minimum passing marks in each theory, practical and internal assessment will be 40%.(Combined passing))
- 4.. Student will not be allowed to appear in the practical examination without duly signed Practical record by teacher & Head of the Department.

## **CERTIFICATE**

### **Department of Psychology**

Name of College .....

This is to certify that this practical record is Original work done by  
Shri/ Kumari/ Smt.. .....

Class..... Semester..... During the Academic year.....

He/ She has attended/ not attained the field work/ Study tour prescribed by the RTM Nagpur University Nagpur.

Signature of the teacher

1) .....

2) .....

Head of Department

## **Question Paper Pattern**

### **Examination UG level**

### **PSYCHOLOGY**

### **B.A. Semester- I, II, III, IV, V & VI**

**Time – Two Hours**

**Full Marks- 40**

**Instructions-**

- 1) All Questions are compulsory.**
- 2) All Questions carry equal marks.**

Que.No.1. One Long answer questions with Internal Choice from any Unit of 08 Marks.

Que.No.2. One Long answer questions with Internal Choice from any Unit of 08 Marks.

Que.No.3. Two Short answer questions with Internal Choice from any Unit of 8 Marks (4 x 2).

Que.No.4. Two Short answers question with Internal Choice from any Unit of 8 Marks (4 x 2).

Que.No.5. Eight Very Short Answer Questions without internal choice from Unit 1 to Unit 4. Minimum one Question from each Unit and each question will carry 01 mark i.e.  $1 \times 8 = 08$  Marks.

**Note: 1) One question from each unit.**

**2) Question No.5 should be asked from all 4 units.**

## **PATTERN OF EXAMINATION**

### **Theory:**

One theory paper of 40 marks and Examination duration will be two hours for all six semesters

### **Practicals:**

- 1) One Practical examination of 50(External 40+ Internal 10) marks and Examination duration will be three hours for all six semesters
- 2) Practical examination in each semester will be conducted by Internal and External examiners appointed by the University.

### **Internal Assessment:**

- 1) Head of the department will carry out internal assessment of the students on the basis of evaluation report from the concerned teacher/teachers, under the supervision of the principal of the college and will be done at the end of each semester.
- 2) Distribution of 10 marks of internal assessment is as under-
  - i) Class Attendance 03 marks
  - ii) Home Assignment 05 marks
  - iii) Group Discussion / Seminar 02 marks

# Rashtrasant Tukdoji Maharaj Nagpur University

## Syllabus for B. A. Semester- **I to VI (Psychology)**

To be implemented progressively from 2016-2017 onwards

---

---

<b>Semester</b>	<b>Title of Paper</b>
<b>I</b>	<b>FUNDAMENTALS OF PSYCHOLOGY</b>
<b>II</b>	<b>SOCIAL PSYCHOLOGY</b>
<b>III</b>	<b>PSYCHOPATHOLOGY</b>
<b>IV</b>	<b>STATISTICAL METHODS AND PSYCHOLOGICAL TESTING</b>
<b>V</b>	<b>ORGANIZATIONAL PSYCHOLOGY</b>
<b>VI</b>	<b>COUNSELLING AND POSITIVE PSYCHOLOGY</b>

# Rashtrasant Tukdoji Maharaj Nagpur University

## Syllabus for B. A. Semester - I (Psychology)

### FUNDAMENTALS OF PSYCHOLOGY

To be implemented progressively from 2016-2017 onwards

Objectives: To provide solid foundation to understand basic Psychological processes and their applications in everyday life.

(Marks: Theory: **40**, Internal Assessment: **10=50**). (Marks: Practical: **40**, Internal Ass: **10=50**) Total marks= **100**

---

CODE: **FP1T1**

#### Unit I - **Introduction:**

Definition and goals of psychology, Approaches to psychology.

Fields of Psychology- Theoretical and Applied. Methods of Psychology- Introspection, Experimental and Observation.

Application: Understanding behaviour through methods of psychology.

#### Unit II - **Cognitive Processes**

Perception: Definition, Gestalt principles: Figure and ground.

Laws of perceptual organization.

Application: Laws of perceptual organization in daily life.

Learning: Definition, Types of learning, Methods of learning: Conditioning, Trial and Error, Insight learning.

Thorndike's laws of learning.

Memory: Definition, Stages of memory- sensory memory, short term memory, long term memory. Techniques of Memory development.

Application: Memory Improvement.

#### Unit III – **Motivation and Emotion**

Motivation: Definition, Concept of homeostasis

Types of motives: Physiological, Psychological, Social

Maslow's theory of Hierarchy of Motives

Application: Enhancing self motivation.

Emotion: Definition and nature. Correlates: Internal and external Changes.

Application of emotion- Understanding Emotion.

#### Unit IV: **Intelligence and Personality**

Intelligence: definition, Concept of C. A., M. A., I. Q. Distribution of IQ in population. Measurement of

Intelligence: Types of intelligence test.

Theories of Intelligence- Gardner's theory, Guilford's SOI model.

Application: Improving intelligence in childhood.

Personality: Nature, Definition  
Theories of personality- Freud's Psychoanalytic theory,  
Type theory and trait theory.  
Application- Personality Enhancement.

- Note:**
- 1) 2 periods per week per batch of 16 students and 04 periods for theory per Week shall be allotted.
  - 2) Student has to submit duly certified record book at the time of examination.
  - 3) Every student has to submit one assignment and also participate in group discussion.
  - 4) In Group Discussion, applications of Unit I, II, III & IV should be discussed.
  - 5) Students will have to perform any **Four** of the following.

### **Practicum**

CODE:1P1

- 1) Substitution learning
- 2) Knowledge of results
- 3) Judgment of emotion from Photographs
- 4) Achievement Motivation
- 5) Habit Interference
- 6) Personality Test
- 7) Alexander's Pass Along Test
- 8) Maze Learning

Distribution of Marks for practical:

Record Book .....	10
Conduct of Test.....	10
Viva Voice .....	10
Report of the Test.....	10
Internal Assessment.....	10
<hr/>	
<b>Total Marks</b>	<b>50</b>

### **REFERENCES:**

- Baran, R. A. (1995): Psychology: The Essential Science, New Delhi, Allyn and Bacon.
- Benjamin, L. T. (1997): History Of Psychology: Original Sources and Contemporary Research. New Delhi: McGraw-Hill Companies.
- Chadha, N. K. Seth, S. (2014): The Psychological Realm: An introduction. Pinnacle learning, New Delhi.

- Ciccarelli, S. & Meyer, G. E. (2008). Psychology. Pearson, New Delhi: Coon, D. & Mitterer, J. O. (2007): Introduction to Psychology: Gateways to Mind and Behaviour. Singapore, Thomson Wadsworth.
- Feldman, S. R. (2009): Essentials of Understanding Psychology. (7th ed.), Tata McGraw Hill, New Delhi.
- Glassman, W. E. (2000): Approaches to Psychology (3<sup>rd</sup> Ed.) Buckingham: open University Press.
- Golman, D. (1995): Emotional Intelligence, Bloombury, Londan.
- Kalpan, R. M. and Saccuzzo, D. P. (2005): Psychological Testing: Principles, Application and Issues, 6<sup>th</sup> Edition, Cengage Learning India Private Limited, New Delhi.
- Lahye, B. B. (2003): Psychology: An Introduction. New Delhi: Tata McGraw-Hill.
- Morgan, C. T., King, R. A., Weisz, J. R. & Schopler, J. (1986). Introduction to Psychology. McGraw-Hill Book Co.
- Nimbalkar, K. P. (2016): Psychology Experiments and Tests (in Marathi), Psychoscan, Wardha.
- Pandit, Kulkarni and Gore (1999). Samanya Manasashastra. Nagpur: Pimpalapure Pub.
- Passer, M. W. & Smith, R. E. (2007): Psychology: The Science of Mind and Behaviour. New Delhi: Tata McGraw-Hill
- Rathus, S. A. (1986): Essentials of Psychology. CBS College Publishing, Holt, Rinehart and Winston, New York.
- Smith, D. B. (1908): Psychology: Science and Understanding. Boston: McGraw-Hill.
- Smith, E. E., Hocksema, S. N., Fredrickson, B. & Loftus, G. R. (2003). Atkinson and Hilgard's Introduction to Psychology. Singapore: Thompson Wadsworth.
- Zimbardo, P.G. and Weber, A. L. (1997): Psychology. Harper Collins College publisher, New York.

# Rashtrasant Tukdoji Maharaj Nagpur University

## Syllabus for B. A. Semester- II (Psychology)

### Social Psychology

To be implemented progressively from 2016-2017 onwards

Objectives: To understand the basics of Social Psychology and the individual in the social world.

(Marks: Theory: **40**, Internal Assessment: **10=50**). (Marks: Practical: **40**, Internal Ass: **10=50**) Total marks= **100**

---

Code:SP1T2

#### **Unit 1: Introduction**

Brief history of Social Psychology (special emphasis on Indian context), Scope of Social Psychology, Levels of social behaviour.

Approaches towards understanding social behaviour.

Application: Behaviour in social situation.

#### **Unit 2: Attitude and Prejudice**

Attitude: Definition and formation of attitude. Theories: Balance theory, Cognitive dissonance theory. Prejudice: Nature and components of prejudice. Acquisition and reduction of prejudice.

Application: Attitude change.

#### **Unit 3: Pro-social behaviour and Aggression**

Pro-social behaviour: Nature, Determinants, Bystander Effect.

Aggression: Nature, types, determinants, prevention and control of aggression.

Application: Acquiring Pro-social behavior.

#### **Unit 4: Communication**

Communication: Definition, types, process, barriers and inter-personal communication.

Application: Effective communication.

- Note:**
- 1) 2 periods per week per batch of 16 students and 04 periods for theory per Week shall be allotted.
  - 2) Student has to submit duly certified record book at the time of examination.
  - 3) Every student has to submit one assignment and also participate in group discussion.
  - 4) In Group Discussion, applications of Unit I, II, III & IV should be discussed.

5) Students will have to perform any **Four** of the following.

### **Practicum**

CODE:1P2

1. Test of Attitude Measurement
2. Aggression Scale
3. Prejudice Scale
4. Immediate Memory span for digits
5. Social Maturity Scale
6. Bilateral Transfer of Training
7. Koh's Block Design Test
8. Concept Formation

Distribution of Marks for practical:

Record Book .....	10
Conduct of Test.....	10
Viva Voice .....	10
Report of the Test.....	10
Internal Assessment.....	10

=====

**Total Marks..... 50**

### **References**

- Baron, R. A., Byrne, D. & Bhardwaj, G. (2010): *Social Psychology* (12<sup>th</sup> Ed). New Delhi, Pearson
- Chadha, N.K. (2012): *Social Psychology*, McMillan, New Delhi
- Misra, G. (1990): *Applied Social Psychology*, New Delhi, Sage
- Misra. G. (2009): *Psychology in India, Volume 4: Theoretical and Methodological Developments (ICSSR survey of advances in research)*. New Delhi, Pearson
- Myers, D. G.(2008): *Social Psychology*. New Delhi: Tata McGraw-Hill
- Natu, S., Vaidya, A. (2010): Samajik Manasshastra, Manasi Rajhansa, Pune
- Nimbalkar, K. P. (2016): Psychology Experiments and Tests (in Marathi), Psychoscan, Wardha
- Perlman, D. and Cozby, P. C. (1983): *Social Psychology*. New York: CBS College Publishing.
- Taylor, S. E., Peplau, L. A. & Sears, D. O. (2006): *Social Psychology* (12<sup>th</sup> Ed). New Delhi, Pearson.

**Rashtrasant Tukdoji Maharaj Nagpur University**

## Syllabus for B. A. Semester- III (Psychology)

### **PSYCHOPATHOLOGY**

To be implemented progressively from 2016-2017 onwards

**Objective:** To develop an understanding of the various psychological disorders and treatment.

(Marks: Theory: **40**, Internal Assessment: **10=50**). (Marks: Practical: **40**, Internal Ass: **10=50**) Total marks= **100**

---

**Code:**PP1T3

#### **Unit I: Introduction**

Concept of Normality & Abnormality, Historical Background  
Approaches to abnormality– Statistical, Evaluative, and  
Psychodynamic Orientation to Classificatory system (DSM-V, ICD-10).  
Diathesis Stress Model.  
Application: Maintaining Mental Health.

#### **Unit II: Psychological Disorders**

Anxiety disorders: Generalized, Hypochondriasis, Conversion Reaction, Phobias, Obsessive Compulsive Disorder. Childhood Disorders: ADHD (Attention Deficit Hyperactivity Disorder), Learning Disability: (Dyslexia, Dyscalculia, Dysgraphia), Slow learner  
Application: Managing Anxiety.

#### **Unit III: Psychological Disorders**

Mood Disorders: Mania, Depression, Bipolar affective disorder.  
Schizophrenia: Symptoms, types: Simple, Paranoid, Catatonic, Hebephrenic, Residual.  
Application: Managing Moods.

#### **Unit IV: Treatment of Disorders**

Orientation to Biological treatment: Pharmacotherapy (Anti-anxiety, Antipsychotic, Anti depressants and mood stabilizers) and Electroconvulsive therapy  
Psychological treatment: Psychoanalytic therapy, Behavior therapy and Cognitive- therapy, Indian perspective – Patanjali's Ashtang yoga.  
Application: Relaxation techniques.

- Note:**
- 1) 2 periods per week per batch of 16 students and 04 periods for theory per Week shall be allotted.
  - 2) Student has to submit duly certified record book at the time of examination.
  - 3) Every student has to submit one assignment and also participate in group discussion.

- 4) In Group Discussion, applications of Unit I, II, III & IV should be discussed.
- 5) Students will have to perform any **Four** of the following.

### **Practicum**

**CODE:1P3**

- 1) Positive Mental health
- 2) Depression scale
- 3) Muller Lyer Illusion
- 4) Anxiety test
- 5) Rational learning
- 6) Narcissism
- 7) Test of Locus of Control
- 8) Life Event Scale

Distribution of Marks for practical:

Record Book .....	10
Conduct of Test.....	10
Viva Voice .....	10
Report of the Test.....	10
Internal Assessment.....	10
<hr/>	
<b>Total Marks.....</b>	<b>50</b>

### **Reference**

- Anastasi, A. (1997): Psychological Testing, New York: Mac Millan Co.
- Coleman, J. C. (1998): Abnormal Psychology and Modern Life, D.B.Taraporevala sons & Co. Pvt Ltd. Mumbai.
- Barlow, D. H. and Durand V. M. (2005): Abnormal Psychology: An Integrated Approach (4th Ed.).Wadsworth: New York.
- Carson, R. C., Butcher, J. N., Mineka, S. & Hooley, J. M. (2008): Abnormal Psychology. New Delhi: Pearson.
- Frude, N. (1998): Understanding abnormal psychology. Oxford: Blackwell Publishers. DSM- V (2013): American Psychiatric Publishing, Washington, (5<sup>th</sup> Ed) DC London, England
- Garret, H. E. (2006): Statistics in Psychology and Education, Surjeet Publications, Delhi.
- Nimbalkar, K. P. (2016): Psychology Experiments and Tests (in Marathi), Psychoscan, Wardha

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus for B. A. Semester- IV (Psychology)**

## **STATISTICAL METHODS AND PSYCHOLOGICAL TESTING**

To be implemented progressively from 2016-2017 onwards

Objective: To introduce basic statistical methods, psychological testing and qualitative methods and their uses.

(Marks: Theory: **40**, Internal Assessment: **10=50**). (Marks: Practical: **40**, Internal Ass: **10=50**) Total marks= **100**

---

Code:SMPT1T4

### **Unit I: Introduction**

Data: Ungrouped and grouped, frequency distribution. Graphical representation of data: Histogram and Frequency Polygon.

Application: Graphical representation.

### **Unit II: Data analysis**

Measures of central tendency: Mean, Median, Mode

(Properties and Computation of grouped & ungrouped data)

Deviation: Standard Deviation, it's properties and computation

Correlation: Meaning & types: Spearman's Rank difference Correlation, Pearson's Product Moment method, Normal Probability Curve (NPC): Properties.

Application: computation of statistical problems.

### **Unit III: Test of Significance**

Test of Significance: Chi Square (Equal probability), 't' test.

### **Unit IV: Psychological Testing**

Psychological Testing: Introduction to psychological testing, characteristics Psychological test, Reliability, Validity, Norms and standardization. Types of tests. Qualitative methods: Interview, observation, case study.

Application: Use of psychological test in day to day life.

- Note:**
- 1) 2 periods per week per batch of 16 students and 04 periods for theory per week shall be allotted.
  - 2) Student has to submit duly certified record book at the time of examination.

- 3) Every student has to submit one assignment and also participate in group discussion.
- 4) In Group Discussion, applications of Unit I, II, III & IV should be discussed.
- 5 ) Students will have to perform any **Four** of the following.

**Practicum**

**CODE:1P4**

1. Occupational Stress Index
2. Standard Progressive Matrices
3. Adjustment Inventory
4. Stress Scale
5. Goal Setting Behaviour
6. Reaction Time
7. DAT / DBDA
8. Multiple Choice

Distribution of Marks for practical:

Record Book .....	10
Conduct of Test.....	10
Viva Voice .....	10
Report of the Test.....	10
Internal Assessment.....	10
<hr/>	
<b>Total Marks.....</b>	<b>50</b>

Chadha, N. K. (1991): Statistics for Behavioral and Social Sciences. Reliance Pub. House: New Delhi.

Garrett, H. E. & Woodworth, R. S. (1987): Statistics in Psychology and Education. Mumbai, Vakils, Feffer & Simons Pvt. Ltd.

Gregory, R. J. (2006): Psychological Testing: History, Principles, and Applications (4th Ed.) New Delhi: Pearson Education.

King, B. M. & Minium, E. W, (2007): Statistical Reasoning in the behavioral Sciences USA: John Wiley & Sons.

Nimbalkar, K. P. (2016): Psychology Experiments and Tests (in Marathi), Psychoscan, Wardha

**Rashtrasant Tukdoji Maharaj Nagpur University**

Syllabus for B. A. **Semester- V** (Psychology)

## **Organizational Psychology**

To be implemented progressively from 2016-2017 onwards

Objective: To introduce the basic concepts of Industrial and Organizational psychology and to understand the application of psychology at the workplace.

(Marks: Theory: **40**, Internal Assessment: **10=50**). (Marks: Practical: **40**, Internal Ass: **10=50**) Total marks= **100**

---

Code:OP1T5

Unit I:

**Understanding Organizational behaviour:** Meaning, nature and goals of Organizational behaviour.

Application: Nature of organizational Behaviour

Unit II:

**Work related Attitudes:** Job satisfaction; factors affecting Job satisfaction. Enhancing Job satisfaction.

Application: Importance of Job Satisfaction in human life

Unit III:

**Work Motivation:** Theories – Maslow's Theory, Herzberg's Two factor theory, application; Indian Perspective.

Application: Role of Work Motivation in Organization

Unit IV:

**Organizational Stress:** Meaning and Causes, Consequences and managing stress.

Application: Effects of stress in work - life.

**Note:**

- 1) 2 periods per week per batch of 16 students and 04 periods for theory per Week shall be allotted.
- 2) Student has to submit duly certified record book at the time of examination.
- 3) Every student has to submit one assignment and also participate in group discussion.
- 4) In Group Discussion, applications of Unit I, II, III & IV should be discussed.

- 5) Students will have to perform any **Four** of the following. Visit to any organization is compulsory.

**Practical:**  
**CODE:1P5**

- 1) Case Study
- 2) Mental Work and fatigue
- 3) Work Motivation Questionnaire
- 4) Organizational Climate Inventory
- 5) Job Satisfaction
- 6) Occupational Self Efficacy Scale
- 7) Depth Perception
- 8) Visit to any Organization

Distribution of Marks for practical:

Record Book .....	10
Conduct of Test.....	10
Viva Voice .....	10
Report of the Test.....	10
Internal Assessment.....	10
=====	
<b>Total Marks.....</b>	<b>50</b>

**References**

- Aamodt, M.G. (2001): Industrial Organizational Psychology. India: Cengage Learning.
- Chadha, N. K. (2007): Organizational Behavior. Galgotia; New Delhi.
- Greenberg, J. and Baron R. A. (2007): Behavior in Organization. (9thEd), India; Dorling Kindersley.
- Luthans, F. (2009): Organizational Behaviour. New Delhi McGraw Hill.
- Nimbalkar, K. P. (2016): Psychology Experiments and Tests (in Marathi), Psychoscan, Wardha
- Muchinsky, P. (2006): Psychology applied to work: An introduction to industrial and organizational psychology, N C; Hyper graphic Press.
- Pareek, U. (2010): Understanding organizational behaviour. Oxford University Press.

**Rashtrasant Tukdoji Maharaj Nagpur University**  
**Syllabus for B. A. Semester- VI (Psychology)**

## **Counselling and Positive Psychology**

To be implemented progressively from 2016-2017 onwards  
Objective: To Develop and understanding of well-being.

(Marks: Theory: **40**, Internal Assessment: **10=50**). (Marks: Practical: **40**, Internal Ass: **10=50**) Total marks= **100**

---

**Code:COU&POS1T6**

### **Unit I: Counselling**

Meaning and goals of counselling, counselling process and relationship. Counselling in Indian context

Application: Counselling an Art.

Unit II:

**Techniques:** Play, Art, Drama, Music, Dance, Yoga and Meditation.

Application: Role of Counselling techniques .

Unit III:

**Applications of counselling:** family, School, Career Premarital, Marriage.

Application: Challenges before Counsellor. Premarital counseling to students.

Unit: IV:

**Well Being:** Components of well-being; life satisfaction Life: Enhancing Virtues: Wisdom and Knowledge, Courage, Humanity, Justice, Temperance, Transcendence.

Application: Understanding importance of Well-being.

**Project :** With a view to facilitate creativity, arouse curiosity and promote skills in planning and conducting psychological research, students are required to take up a mini project on an issue of interest, under the supervision of teacher.

- Note:**
- 1) 2 periods per week per batch of 16 students and 04 periods for theory per Week shall be allotted.
  - 2) Student has to submit duly certified record book at the time of examination.
  - 3) Every student has to submit one assignment and also participate in group discussion.

- 4) In Group Discussion, applications of Unit I, II, III & IV should be discussed.
- 5) Students will have to perform any **Four** of the following. Project work is compulsory.

**Practical:**

**CODE:1P6**

- 1) Well-Being Scale
- 2) Psychological Counseling Need Scale
- 3) Psychological Hardiness Scale
- 4) Big Five Personality Inventory
- 5) Type A/B Behavioural pattern Scale
- 6) Retroactive Inhibition
- 7) Verbal Intelligence Test
- 8) Research Project

Distribution of Marks for practical:

Record Book .....	10
Conduct of Test.....	10
Viva Voice .....	10
Report of the Test.....	10
Internal Assessment.....	10
<hr/>	
<b>Total Marks.....</b>	<b>50</b>

**References:**

- Baumgardner, S. R. (2012): Positive Psychology. New Delhi, Pearson
- DiMatteo, M. R. and Martin, L. R. (2002): Health Psychology. New Delhi, Pearson.
- Nimbalkar, K. P. (2016): Psychology Experiments and Tests (in Marathi), Psychoscan, Wardha
- Rao, S. N. (2003): Counselling and Guidance (2<sup>nd</sup> Ed) New Delhi: Tata McGraw Hill.
- Snyder, C. R. & Lopez, S. J. (2007): Positive Psychology: The Scientific & practical explorations of human strengths. Thousand Oaks, CA: Sage.
- Taylor, S. E. (2006): Health Psychology (6<sup>th</sup> Ed.) New York:Tata McGraw Hill.

# Rashtrasant Tukdoji Maharaj Nagpur University

## Syllabus for B. A. Semester – I (Psychology)

### FUNDAMENTALS OF PSYCHOLOGY

To be implemented progressively from 2016-17 onwards

**Objectives:** To provide solid foundation to understand basic Psychological processes and their applications in everyday life.

Marks: Theory: 40, Internal Assessment: 10 Marks: Practical: 40, Internal Assessment 10. Total Marks: 100

#### Unit I Introduction

Definition and goals of psychology. Fields of Psychology: Theoretical and Applied.

Methods of Psychology: Introspection, Experimental and Observation.

Application: Understanding behavior through methods of psychology

#### Unit II Cognitive Processes

Perception: Definition, Gestalt principles: Figure and Ground. Laws of perceptual organization

Application: Laws of perceptual organization in daily life.

Learning: Conditioning, Trial and Error, Insight learning. Thorndike's laws of learning

Memory: Definition, Stages of memory: Sensory memory, short term memory, long term memory.

Application: Memory improvement.

#### Unit III Motivation and Emotion

Motivation: Definition. Types of motives: Physiological, Psychological and Social.

Application: Enhancing self motivation.

Emotion: Definition and nature. Correlates: Internal and External changes.

Application of emotion: Understanding emotion.

#### Unit IV Intelligence and Personality

Intelligence: Definition, Concept of C. A., M. A. Distribution of I.Q. in population. Measurement of

Intelligence, Types of Intelligence Test.

Application: Improving intelligence in childhood.

Personality: Nature and Definition. Techniques of Personality Assessment: Projective and non-projective.

#### Note:

1. Two periods per week per batch of 16 students and 04 periods for theory per week shall be allotted.
2. Student has to submit duly certified record book at the time of examination.
3. Every student has to submit one assignment and also participate in group discussion.
4. In group discussion, application of Unit I, II, III and IV should be discussed.
5. Students will have to perform any **Four** of the following practical.

#### Practicum

1. Substitution Learning
2. Knowledge of Results
3. Effect of Mental Set on Perception
4. Memory Span for Digit
5. Personality Test
6. Alexander's Pass Along Test
7. Maze Learning
8. Judgment of emotion from photographs

28/2/19

28/2/19

28/2/19

PTO

**RASHTRASANT TUKDOJI MAHARAJ  
NAGPUR UNIVERSITY, NAGPUR.**

**Faculty- Social Science**

**Home-Economics**

**Semester Pattern Syllabus for Under Graduate**

**B.A. (Part I) – Semester – I & II**

**B.A. (Part II) – Semester – III & IV**

**B.A. (Part III) – Semester – V & VI**

**(WITH EFFECT FROM 2017-18)**

**Committee Members:**

Dr. Rambha Sonaye  
Dr. Shreebala Deshpande  
Dr. Bharati Katekhaye  
Dr. Geeta Ambatkar  
Prof. Anjali Humne  
Prof. Rekha Meshram

**Co-ordinator:**

Dr. Shubhangi Dange

## Semester wise distribution of marks

Sr. No.	Semester	Subject Name	Subject Code		Teaching Scheme (Hrs/Wk)			Theory Examination Scheme				Practical Examination Scheme				Total Marks
			Th.	Pr.	Th	Pr	Total	Theory Ext. Marks	Theory Int. Marks	Total	Min. Marks	Prac. Ext. Marks	Prac. Int. Marks	Total	Min. Marks	
01	Semester I	Family Resource Management	1T1	1P1	04	02	06	40	10	50	20	40	10	50	20	100
02	Semester II	Family Resource Management	2T1	2P1	04	02	06	40	10	50	20	40	10	50	20	100
03	Semester III	Nutrition and Dietetics	3T1	3P1	04	02	06	40	10	50	20	40	10	50	20	100
04	Semester IV	Nutrition and Dietetics	4T1	4P1	04	02	06	40	10	50	20	40	10	50	20	100
05	Semester V	Child Development	5T1	5P1	04	02	06	40	10	50	20	40	10	50	20	100
06	Semester VI	Child Development	6T1	6P1	04	02	06	40	10	50	20	40	10	50	20	100
Total					24	12	36	240	60	300		260	60	300		600

## **PATTERN OF EXAMINATION**

### **Theory:**

One theory paper of 40 marks each and of two hours duration will be conducted at the end of each semester.

### **Practical:**

- 1) One Practical examination of 40 marks of three hour duration in each semester will be conducted at the end of the semester.
- 2) Practical examination in all six semester will be conducted by Internal and External examiners appointed by the University.

### **Internal Assessment for Theory Examination for all Semesters:**

Distribution of 10 marks of Internal Theory Assessment-

Test Exam:                            10 Marks

### **Internal Assessment for Practical Examination:**

Internal marks on activities:        10 Marks

# **Pattern of Question Paper**

## **Examination U.G. Level Home-Economics**

**Time –Two Hours** **Total Marks – 40**

**Instructions –**      **1) All Questions are compulsory.**  
**2) All Question carry equal marks**

- Que. No. 1. Long answers question with Internal Choice from Unit I and Unit II (08 Marks)

Que. No. 2. Long answers question with Internal Choice from Unit III and Unit IV (08 Marks)

Que. No. 3. Two Short answers question with Internal Choice from Unit I and Unit II  
 $2 \times 4 = 8$  Marks.

Que. No. 4. Two Short answers question with Internal Choice from Unit III and Unit IV  
 $2 \times 4 = 8$  Marks.

Que. No. 5. Four very Short answers question on all Units without Internal Choice-  
 $4 \times 2 = 8$  Marks.

## **Rules and Regulations**

1. There will be **4 periods / week** for theory.
2. There will be **2 periods /week/ per batch** for practical
3. The Practical batch shall comprise of **sixteen students**.
4. The minimum passing marks of Theory Paper & Internal Assessment (40%) - 20 Marks.
5. The minimum passing marks of Practical Examination & Internal Assessment(40%) - 20 Marks.
6. Separate passing in theory and practical is necessary.
7. Theory paper will be of 40 marks and 2 Hrs duration. The practical examination shall be of 40 marks and 3 Hrs duration.

### **Private Candidates and practical work**

- In regard to the practical work of the Private candidate should be instructed to complete the practical prescribed in the syllabus in the college affiliated to the Nagpur University and where this subject is taught. The record book should be duly signed by the Head of the Department or Principal of the College.
- Private candidates should write to the Principal concerned at the beginning of the session as per the Semester for information regarding the time of Practical concerned which will be conducted for the private students.

**Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.**

**B.A. I (Home –Economics)**

**Semester-I**

## **Family Resource Management**

**1T1**

**Total Marks – 100**

**Time: 2 Hrs (Theory)**

**Theory - 40 Marks**

**3 Hrs (Practical)**

**Theory Internal - 10 Marks**

**Practical -40 marks**

**Practical Internal -10 marks**

**Objectives-**

- To create an awareness among the students about the management in the family.
- To provide knowledge and develop skills regarding principles and methods of interior decoration.
- To introduce to the students, the job opportunities in Home-Economics.
- To train the students for self-employment.
- To develop employability skills and ‘earn while learn’ skills.

### **Course Content**

#### **UNIT-I**

##### **a. Introduction to Home-Economics.**

- Brief history of Home-Economics.
- Definition of Home-Economics.
- Scope, Need/Importance of Home-Economics.

##### **b. Branches of Home-Economics, their utility in daily life.**

- Family Resources Management
- Foods and Nutrition
- Human Development
- Textile and Clothing
- Extension and Communication
- Contribution of Home-Economics education in National Development.

## **UNIT-II**

### **a. Family Resource Management.**

- Definition and process of Home-Management.  
    1) Planning, 2) Controlling, 3) Evaluation
- Definition of Family Resource Management.
- Types of Family Resources.
- Characteristics of Family Resources.
- Ways to improve the use of family resources.
- Factors affecting family resource management
- Family Budget-Definition, Types of budget, preparation of budget.

### **b. Decision Making**

- Meaning & Types of Decisions
- Steps involved in decision making.
- Decision Tree.

## **UNIT- III**

### **a. Elements of Art & Design**

Line,Form,Texture,Colour, Light,Space,Pattern,Idea.

### **b. Principles of Art and design**

- Harmony-Definition, importance and application in interior decoration.
- Scale and proportion- Definition, importance and application.
- Balance- Definition, importance and application.
- Rhythm- Definition, importance and application.
- Emphasis- Definition, importance and application.

## **UNIT – IV**

### **Flower Arrangement**

#### **a. Definition**

- Material required for flower arrangement.
- Factors to be considered while arranging flowers.

#### **b. Art Principles in flower arrangement.**

- Types of flower arrangement-Traditional, Japanese, Miniature, Dry arrangement.
- Different shapes of flower arrangement-S-Shape, Round-shape, Right angle-shape

## **Practical:1P1**

- a. Embroidery** –The following stitches should be included on five samples  
1. Stem Stitch, 2. Chain stitch, 3. Lazy-Daisy, 4. Bullion knot, 5. Feather Stitch,  
6. Satin Stitch, 7. Button hole, 8. Open work, 9. Long and short, 10. Herring bone.

**b. Flower Arrangement**

1. Bouquet (Fresh/Artificial)
2. Floral carpet (by using any material).
3. Artificial flower arrangement /Fresh flower arrangement.

**c.Tie and dye (four samples)**One colour 2 sample & Two colour 2 sample

**Internal:**

Skill Development Activities

**a. Making of any one article from the following**

- a) Ceramic work.
- b) Wall Hanging
- c) Utility Bag making
- d) Decorative Envelope making
- e) Best out of Waste material.
- f) Mobile cover

**b. Guest lecture on skill development/workshop on above related topics and report writing.**

### **Distribution of Marks**

#### **Practical Examination (40 Marks)**

- |                                 |   |            |
|---------------------------------|---|------------|
| 1. Embroidery (Any two stiches) | - | (15 marks) |
| 2. Flower Arrangement (Any one) | - | (05 marks) |
| 3. Tie and dye(two Sample)      | - | (10 marks) |
| 4. Record Book                  | - | (05 marks) |
| 5. Viva                         | - | (05 marks) |

#### **Internals Assessment (10 marks)**

- |  |   |            |
|--|---|------------|
| 1. Preparation of any one article      | - | (05 marks) |
| 2. Attendance, Report on guest lecture | - | (05 marks) |

**Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.**

**B.A. I (Home –Economics)**

**Semester-II**

**Family Resource Management**

**2T1**

**Total Marks – 100**

**Time: 2 Hrs (Theory)**

**Theory - 40 Marks**

**3 Hrs (Practical)**

**Theory Internal - 10 Marks**

**Practical -40 marks**

**Practical Internal -10 marks**

**Course Content**

**UNIT –I**

**a. Self-Employment in Home-Economics.**

- Definition of self-employment.
- Need of self-employment in Home-Economics.
- Opportunities of self-employment in Home-Economics.
- Guiding Principles of self-employment.

Registration, Training, Knowledge of equipment's and their care and Material required, Loan facility

Preparation of Project Report, Account Keeping, Costing, Labelling, Packaging.

**b. Family Housing Needs**

- Family Housing Needs

Protective, Economic,Affectional,Social, Standard of living,Housing goals, Style,Function, Occupation.

- Factors affecting selection of site.

Legal,Location,Physical Features,Soil Conditions,Cost, Services

- Principles of Housing

Grouping of rooms,Orientation,Circulation, Flexibility,Privacy, Spaciousness, Aesthetics, Economy, Light, Ventilation.

## **UNIT-II**

### **a. Work Simplification**

- Meaning and Importance of work simplification.
- Techniques of work simplification
- Improving Methods of work simplification
- Mundel's Law of Changes

### **b. Colour**

- Study of colours
- Sources of colours
- Classification of Colours
- Dimensions of colour-Warm and Cool colours etc.
- Colour Wheel
- Colour Schemes and its effects.

## **UNIT-III**

### **a. Consumer Education**

- Meaning and definition
- Problems of Consumers
- Rights and Responsibilities of Consumers.
- Consumer Protection Act- 1986.

## **UNIT-IV**

### **a. Furniture Arrangement**

- Styles of Furniture  
Traditional, Contemporary, Modern
- Factors involved in selection of Furniture  
Comfort, Rest and relaxation, Durability, For storage purpose

### **b. Arrangement of Furniture in different rooms**

- Drawing Room, Bed Room, Dining Room, Multipurpose Rooms etc.
- Care of different types of furniture.

## **Practical: 2P1**

**a. Knitting Patterns-** Making three knitted samples with the following variations.

**(Hand/knitting machine/computer)**

1. Cable Pattern
2. Double colour pattern
3. Lace pattern

**b. Colour and colour schemes.**

- a) Preparing Colour Wheel
- b) Preparing Colour Schemes- i) Mono chromatic, ii) Analogous, iii) Complimentary  
iv) Double complimentary v) split complimentary vi) Triad.

**c. Block Printing and Fabric Painting**

### **Internal:**

**a) Visit/Exhibition of Student made Articles.**

Visit to any one of the following.

1. Cottage Industry
2. Women entrepreneurship establishment.
3. Exhibition cum sale.

**b) Report writing of the above activity.**

**c) Preparation of hand wash/Washing Powder/Phenyl/Shampoo etc. (Any one)**

**Or**

**Apron stitching**

### **Distribution of Marks Practical Examination (40 marks)**

- |                                   |   |            |
|-----------------------------------|---|------------|
| 1. Knitting Sample(Any One)       | - | (15 marks) |
| 2. Colour Schemes or Colour Wheel | - | (10 marks) |
| 3. Block printing/painting        | - | (05 marks) |
| 4. Record Book                    | - | (05 marks) |
| 5. Viva                           | - | (05 marks) |

### **Internal Assessment (10 marks)**

1. Visit/Exhibition/Preparation of any one item (C) -(05 marks)
2. Attendance & report writing -(05 marks)

## **Books Recommended**

- 1- AawasevamGruhasajja-Karuna Sharma**
- 2- Gruhavyvasthapan-ManjuPatni**
- 3- AawasevamGruhaSajja- ManjuPatni**
- 4- GruhaPrabandh-KantiPandeya**
- 5- Gruha Kala TathaGruhaPrabandha – Vimla Sharma.**
- 6- Sajaavatiteelsaptarang-VaishaliShivte,Dr. J. Godsey.**
- 7- KautumbikSadhansampatticheVyawasthapananiGruhasajawat- Dr.VandanaDhavad and Dr.KanchanKite,G.C.Publishers,Nagpur.**
- 8- KautumbikSadhansampatticheVyawasthapananiGruhasajawat-Dr. Mina Kalele,PimpalapurePublishers,Nagpur.**
- 9- Pariwariksansadhanonkavyavasthapanaurantariksusajja- Dr.SmitaPattarkine,G.C.Publishers,Nagpur.**
- 10- GruhaVyavasthapanevamAntarikSajja- Dr.GokulaBhalerao, Satyam Publishers, Shastrinagar, Jaipur.**

# **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.**

## **B.A. II (Home –Economics)**

### **Semester-III**

#### **Nutrition and Dietetics**

**3T1**

**Total Marks – 100**

**Time: 2 Hrs (Theory)**

**Theory - 40 Marks**

**3 Hrs (Practical)**

**Theory Internal - 10 Marks**

**Practical -40 marks**

**Practical Internal -10 marks**

#### **Objectives-**

- To understand the concept of an adequate diet, functions of food and the role of various nutrients, their requirements and the effect of deficiency and excess.
- To learn about the structure, composition, Nutritional contribution and selection of different food stuff.
- To develop and ability to improve the nutritional quality of food.
- To familiarize students with the role of nutritional quality of food.
- To develop marketing and entrepreneurship skills to enhanced employability.

#### **Course Content**

##### **UNIT-I**

- Definition of Health, Nutrition, Dietetics, Nutritional status, optimum Nutrition and Nutrients.
- Definition of food and functions of food.
- Dimensions of health (Physical, Psychological, Emotional, Spiritual).
- Macronutrients-Carbohydrates, Fats, Proteins- Classification, Functions, Sources, Recommended dietary allowances, Deficiency and excess.

## **UNIT-II**

- **Micro Nutrients-**
  - a) **Minerals** – 1) Calcium, 2) Phosphorus, 3) Iron, 4) Sodium, 5) Magnesium, 6) Iodine Functions, Sources, Absorption, Recommended dietary allowances, Deficiency.
  - b) **Vitamins**- Fat soluble – Vitamin A, D, E, K. Water Soluble-Vitamin C, Vitamin B Complex, (B1, B2, B3, B6, B12, Folic acid), Properties, Function Sources, Recommended dietary allowances, Absorption, Deficiency.
- **Water**- Function, Sources, Recommended dietary allowances, Deficiency.

## **UNIT-III**

- **Fibre** – composition, Classification, Functions, Sources, Recommended dietary allowances, Deficiency, Excess.
- **Energy (Calorie)** - Definition of calorie, Factors affecting energy requirement, Fuel value of foods, Calorimeter-Bomb, Benedict Oxy, Atwater Rosa Benedict. Basal Metabolic Index, Calorie requirement for sedentary, moderate and heavy workers Men and Women.
- Antioxidants

## **UNIT-IV**

- **Basic Food Groups**- Sources and importance of Cereals, Pulses, oilseeds, Vegetables, Fruits, Milk and milk products, sugar and jiggery, spices, beverages, eggs, fish, meat.
- **Methods of Cooking**- Meaning of cooking of food, objectives of cooking of food, Methods- Boiling, steaming, Pressure cooking, shallow frying, deep frying, Roasting, Baking, Grilling, Micro wave, solar and informatics. Advantages and disadvantages of cooking food.
- **Sports Nutrition**- Meaning of sports Nutrition, Objectives of Nutritional management, sports supplements, nutritional allowances given by NIN.

## Practical: 3P1

- 1. Preparation of following recipes.Calculation of Calories and Proteins of prepared dishes.**

**Snacks:** i) Dahi Wada, ii) Dhokla, iii) Chole Bhature, iv) Pudachi Vadi/ Bhajiwada.

**Sweets:** i) Rava Besan Burfi, ii) Gulab Jamun, iii) Lavang Latika, iv) Shahi Toast

**Bake items:** i)Cake **OR** Nan Khatai **OR** Biscuits (Any one type)

**Beverage:** i) Tomato soup **OR** Mixed Vegetable soup

**Salads:** i) Sprouted Salads / Mixed Vegetable salad/ Mexican Salad

## Activities:

1. Preparation of charts/health pyramid/ or related to any topic from syllabus.(Any one)
  2. Celebration of Nutrition Week/ World Food Day/ Any nutritional awareness programme(Any one).
  3. Report writing of the above programme.

## Distribution of Marks

### **Practical Examination (Total Marks- 40)**

1. Preparation and presentation of Two Dishes	-	(15 Marks.)
2. Calculation of Calories and Proteins of the prepared dishes	-	(10 Marks.)
3. Viva	-	(05 Marks)
4. Menu Card	-	(05 Marks.)
5. Record Book	-	(05 Marks)

1. Preparation of charts/health pyramid/ or related to any topic from syllabus/ Celebration of any one programme (Any one) - (05Marks.)

2. Attendance & Report writing- - (05Marks)

# **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.**

## **B.A. II (Home –Economics)**

### **Semester-IV**

#### **Nutrition and Dietetics**

**4T1**

**Total Marks – 100**

**Time: 2 Hrs (Theory)**

**Theory - 40 Marks**

**3 Hrs (Practical)**

**Theory Internal - 10 Marks**

**Practical -40 marks**

**Practical Internal -10 marks**

#### **Course Content**

##### **UNIT-I**

- **Balanced Diet-** Definition, Factors affecting balance diet, Different Nutrients in balanced diet, Principles of Meal Planning.
- **Nutrition through Life Cycle**  
1.Pregnancy, 2. Lactation. Infancy, 3. Pre-School, 4.School going, 5. Adolescence, 6. Adulthood, 7. Old age.

##### **UNIT-II**

- Principles of Diet Therapy.
  - a) Modification of Normal diet for Therapeutic purposes.
  - b) Types of Diet
  - c) Nutritional Management in common diseases.
  - i) Diarrhoea ii) Diabetes Mellitus iii) Constipation iv) Anaemia v) Sickle Cell Anaemia.
- Nutrition Education: Meaning and Definition, ObjectivesMethods of Nutrition Education.

## **UNIT-III**

- **Food spoilage, Food Poisoning-** Definition, various types of food poisoning and Remedies.
- **Food Preservation –** Definition and importance. Methods of food preservation- Dehydration, Chemical Preservation, with salt, Sugar, Oil and spices, by control of temperature.
- **Food and Adulteration –** Definition, Reasons behind food adulteration, effects of food adulteration, detection of food Adulteration, Standards, Remedies to tackle food adulteration, Laws regarding food adulteration.

## **UNIT-**

- Improving Nutritional Quality of foods-Germination, Fermentation, Supplementation, Substitution, Fortification and enrichment.
- Malnutrition in India- Definition of Malnutrition, over nutrition and under nutrition. Nutritional problems in India, Causes and remedies of malnutrition, Different agencies to combat malnutrition-FAO,CARE,NIN.

## **Practical 4P1**

### **1. Preparation of following recipes. Calculation of Calories and Proteins of prepared dishes.**

- **Types of Rice (Any One )**Vegetable Pulav / Curd Rice / Lemon Rice.
- **Sweets**i) KhowaPoli, ii)Karanji, iii) SattuLaddoo, iv) GajarHalwa
- **Indian Pizza-** Veg Thalipith/ Uttapam (Any one)
- **Starters ( Any Two )**i) Hara Bhara Kabab/Paneer Tikka/Cutlets/Appetizers
- **Party Menu** –PavBhaji ,RagdaPatice.

### **Activities:**

1. Canteen activity/Any Entrepreneurship activity/ Earn while Learn for ex.  
Papad,Masala,pickle, metkut, supari ,Amla Candy (Any Two)
2. Report writing of the above programme.

### **Distribution of marks Practical Examination (Total Marks- 40)**

1. Preparation and presentation of Two Dishes - (15 Marks.)
2. Calculation of Calories, Proteins of the prepared dishes - (10 Marks.)
3. Viva - (05 Marks)
4. Menu Card - (05 Marks.)
5. Record Book - (05 Marks.)

### **Internal Assessment on Activities (Total- 10 Marks)**

1. Canteen Activity/Any Entrepreneurship activity  
ex. Papad, Masala, Pickle, Metkut, supari, AmlaCandy (Any two)- (05 marks)
2. Report writing of the above programme - (05 marks)

### **Books Recommended**

1. Sherman and Longford: Essentials of Nutrition.
2. Dr.Patwardhan: Nutrition in India
3. W.E Aykoroyd: The Nutritive value of Indian Food and the Planning of Satisfactory Diet.
4. Maxinre, E.Mc. Divit and S.R.Mudambi: Human Nutrition principles and application in Indias.
5. R.L. Brijlani: Eating Scientifically
6. Robinson Proudifit : Normal and Therapeutic Nutrition.
7. S.W.Swaminathan : Essential of Nutrition, part –I and II.
8. Poshan Ani Arogya: Dr.SandipaSurjuse,VishvaPublishers,Nagpur.
9. PoshananiAharshastra-Dr. AnuradhaNisal and Dr.PrabhaChinchkhede,G.C.Publishers,Nagpur.
10. PoshananiAaharshstra :Dr. Mina Kalele,PimpalapurePublishers,Nagpur.

**Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.**

**B.A. III (Home –Economics)**

**Semester-V**

**Child- Development  
5T1**

**Total Marks – 100**

**Time: 2 Hrs (Theory)**

**Theory - 40 Marks**

**3 Hrs (Practical)**

**Theory Internal - 10 Marks**

**Practical -40 marks**

**Practical Internal -10 marks**

**Course Content**

**Objectives**

- To introduce the field of Child-Development. It's concept, scope, dimensions and interrelations.
- To sensitize the students to interventions in the field of child- development.
- To understand the biological and physiological foundation of development.
- To appreciate sequential ages of development during child- hood.
- To sensitize students about childhood behavioural problems.
- To understand and appreciate the importance of parents-child development.
- To develop in student's creative ability related to children-leading to enhanced employability.

**UNIT-I**

- An overview of the field of child-development. Meaning, Definition, importance and scope of child- development.
- Orientation to growth and development
  1. Definition of growth and development.

2. Stages of development.
3. General Principles of growth and development.
4. Constraints and facilitators in growth and development.
5. Influence of heredity and environment on growth and development.
6. Difference between growth and development.
7. Factors affecting growth and development.

## **UNIT-II**

- Genetic Inheritance-Fertilization,Number of Chromosomes, sex determination,Genotype and Phenotype.
- Prenatal Development- Emphasis on major developments during the three stages of intra-uterine development.
- Factors affecting prenatal development- Age of mother, Illness, diet and nutrition, stress and emotional strains, environmental hazards etc. Misconception of diet intake during pregnancy and its effect on health, Recommendations.
- Twins- Fraternal and Identical.

## **UNIT-III**

- **Post- Natal Period**-Neonatal Period -(From birth to two weeks)- Definition, Characteristics, Factors affecting post natal period.
- Hazards of Neonatal period-Physical hazards, Psychological hazards.
- Infancy and Babyhood (2 weeks to 2 years)- Definition, Characteristics of babyhood, Physical growth and Motor development, Speech development – Four Pre speech Forms-Crying, Cooing, Babbling , Gestures.
- development of senses – Visual, Auditory, Smell, Taste, Touch, Reflexes during neonatal Period-Rooting reflex, Sucking reflex, Blink Reflex, Moro Reflex, Bobinski Reflex, Tonic neck Reflex, Darwinian Reflex etc. Hazards and Happiness.

## **UNIT-IV**

- Immunization and its importance.
- importance of Supplementary food.
- Role of NGOs

## **Practical 5P1**

**A) Cooking-** Diet planning and preparation of following recipes.

- **For Pregnant Women-** 1. Mix vegetable Paratha 2. Vegetable upma/ Vegetable dalia (Soji)  
3. Curd raita with vegetables, Mix Sprouted usal .
- **For Lactating Women-** 1. AlivKheer , Mung dal dhirde with vegetables, Gum Laddo.

**B) Knitting (6months- 1 year) Hand/Machine/Computer**

1. Sweater
2. Bonnet
3. Socks

### **Activities:**

1. Preparation of supplementary food for 0-1 year- Cerelac/Nachni product /Any as per nutrients.(Any one).
2. Immunization Charts/Female FeticidesPoster/Organization of breast feeding week (Any one).

Report writing of above.

### **Distribution of Marks**

#### **Practical Examination (40 Marks)**

1. Knitting (Any one )	-	(15 Marks)
2. Preparation of dish ( Any Two)	-	(15 Marks)
3. Viva	-	(05 Marks)
4. Record book	-	(05 marks)

#### **Internal Assessment on Activities- (10 Marks)**

1. Preparation of supplementary food for 0-1 year.  
Cerelac/ Nachani Product / any as per nutrients - (05 Marks)
2. Immunization chart/Collection of news paper cutting/  
posters/ Female Feticides etc. and Report writing- (05 Marks)

# **Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.**

**B.A. III (Home –Economics)**

**Semester-VI**

**Child- Development**

**6T1**

**Total Marks – 100**

**Time: 2 Hrs (Theory)**

**Theory - 40 Marks**

**3 Hrs (Practical)**

**Theory Internal - 10 Marks**

**Practical -40 marks**

**Practical Internal -10 marks**

## **Course Content**

### **UNIT –I**

#### **Early Childhood- (2-6 years)**

- Characteristics, developmental tasks.
- **Physical development**-Definition, 1. Change in size- change in height, weight, development of bones, Teeth etc. 2. Change in body proportion3. Growth of internal organs, factors affecting physical development.
- **Motor Development**- Meaning, Skills of early childhood-Hand skills and leg skills. Handedness, Essentials of development of skills, factors affecting motor development.
- **Emotional development**-Definition. Types of emotions, importance of emotions, Emotions during early childhood-**Positive emotions**- Happiness, Love and Affection, Curiosity. **Negative emotions**-Fear, Anger, Jealousy, Anxiety.Characteristics of emotions, factors affecting emotional development.

### **UNIT-II**

- **Speech Development**-Definition, Importance of speech.Steps of speech development during early childhood- 1)comprehension, 2) Pronunciation, 3) Vocabulary building,

4) Sentence formation.**Speech defects**- 1. Lisping 2. Cluttering 3. Stuttering 4. Slurring. Remedies of speech defects.Factors affecting speech development.

- **Intellectual development**- Definition, Classification of intelligence, Measurement of intelligence, Intelligence quotient (I.Q.), Factors affecting intellectual development.
- **Moral development**- Definition, Methods of learning of Moral development, Levels of moral development during early childhood, Factors affecting moral development.

### **UNIT-III**

- **Social Development**-Definition, Companions during early childhood 1. Associates, 2. Playmates, 3. Friends, 4. Imaginary friends.  
Forms of social behaviour. Factors affecting social development.
- Play- Importance of play(Values of play), characteristics of play, Stages of play, Types of play-Free spontaneous play, Dramatic or imaginary play, Constructive play.

### **UNIT-IV**

- Childhood behavioural problems: Common causes of behavioural problems.
- Types of Behavioural problems, its causes and remedies-1. Lying, 2. Stealing, 3. Temper Tantrums, 4. Nail biting, 5. Thumb Sucking.
- Parent-child relationship- Importance, Need for desirable Child rearing practices, Parental Challenges –Attraction toward junk food, Television watching and its effects on children.
- Discipline- Definition, Objectives, Need and importance, Types of discipline 1. Authoritarian discipline 2. Democratic discipline 3. Permissive discipline. Advantages and disadvantages. Role of Reward and Punishment in discipline,
- Agencies in the field of child development- Mahila evam Balkalyan vibhag, ICDS, UNICEF, Role of NGO's.

## **Practical: 6P1**

- A) Diet planning and preparation of following recipes.**
- **For Babyhood (6 months -2 years)**-1.Soft Khichadi, 2. Tomato soup,  
3.Nachani/Badam/ RavaKheer .
  - **For Pre-school children(2-6 years)** -1.Sandwiches 2. Groundnut Chikki/Groundnut  
and Khajur laddo 3. Idli Chutney/Sambar 4. Fruit Chat.
- B) Drafting , cutting and Stitching (0-1 year)**
1. Bonnet
  2. Feeder
  3. Zabla

### **Activities:**

1. Organization of guest Lecture on health awareness of women and children.
2. Preparation of Teaching aids for preschool Children: Finger Puppets, Masks, flash cards, Charts, (any one) And Report writing on above.

### **Distribution of Marks**

#### **Practical Examination – (40 Marks)**

- |  |   |            |
|--|---|------------|
| 1. Drafting,cutting and Stitching of garment (Any one) | - | (15 Marks) |
| 2. Preparation of dish ( Any Two) & Menu card          | - | (15 Marks) |
| 3. Viva  | - | (05 Marks) |
| 4. Record book   | - | (05 marks) |

#### **Internals Assessment on Activities (10 Marks)**

- |  |   |            |
|--|---|------------|
| 1. Organization of guest Lecture on health awareness<br>of women & children.   | - | (05 Marks) |
| 2. Preparation of Teaching aids for preschool Children:<br>Finger Puppets, Masks, flash cards, Charts, (any one)<br>And Report writing on above. | - | (05 Marks) |

### **Books Recommended**

1. Speaking of child care, Everything you wanted to know (Gupta (1991) 2<sup>nd</sup>Ed.NewDelhi,Sterling.
2. Child rearing and psycho-social development-New Delhi: Lidhop M (1987) Ashish Publication.
3. Family interaction: Bahr S.J. (1989) N.V. Macmillan.
4. Human Development: Rice F.P. (1995) New Jersy : Prentice Hill.
5. Moral Values in child development- Dutt,S. (1998) New Delhi-Anmol.
6. Child-Development: Elizabeth Hurlock.
7. Child growth and development: Elizabeth Hurlock.
8. Child- Development: Dr.Neelima Sinha and Dr.Vaijayanti Deshpande,G.C.Publisher,Nagpur.

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY NAGPUR**

**SEMESTER SYSTEM SYLLABUS**

**FOR**

**B.A.(Part-I)- Semester-I & II**

**B.A.(Part-II)- Semester-III & IV**

**B.A.(Part-III)- Semester-V & VI**

**GEOGRAPHY**

**(WITH EFFECT FROM 2016-17)**

**RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY NAGPUR**

**SEMESTER SYSTEM SYLLABUS**

**FOR**

**B.A.GEOGRAPHY**

**Semester wise Distribution of Marks**

Code	Class	Seme ster	Theory Paper Marks	Theory Internal Assessment	Code	Practical Marks	Practical Internal Assessment	Total Marks
1T1	B.A. Part-I	I	40	10	1P1	40	10	100
1T2	B.A. Part-I	II	40	10	1P2	40	10	100
2T1	B.A.Part-II	III	40	10	2P1	40	10	100
2T2	B.A.Part-II	IV	40	10	2P2	40	10	100
3T1	B.A.Part-III	V	40	10	3P1	40	10	100
3T2	B.A.Part-III	VI	40	10	3P2	40	10	100
			240	60		240	60	600

## **PATTERN OF EXAMINATION**

### **Theory:**

One theory paper of 40 marks each and of two hours duration will be conducted at the end of each semester.

### **Practicals:**

- 1) One Practical examination of 40 marks of four hour duration in each semester will be conducted at the end of the same semester.
- 2) Practical examination in all six semester will be conducted by Internal and External examiners appointed by the University.

### **Internal Assessment for Theory Examination:**

- 1) Head of the department will carry out internal assessment of the students on the basis of evaluation report from the concerned teacher/ teachers, under the supervision of the principal of the college and will be done at the end of each semester.
- 2) Distribution of 10 marks of internal assessment is as under-

- |                    |          |
|--------------------|----------|
| i) Home Assignment | 05 marks |
| iii) Test Exam     | 05 marks |

### **Internal Assessment for Practical Examination:**

- |              |          |
|--------------|----------|
| i) Test Exam | 10 marks |
|--------------|----------|

## **Pattern of Question Paper**

### **Examination U.G. Level Geography**

**B.A.(Part-I)- Semester-I & II**

**B.A.(Part-II)- Semester-III & IV**

**B.A.(Part-III)- Semester-V & VI**

**Time – Two Hours** **Full Marks-40**

**Instructions- 1) All Questions are compulsory.**

**2) All Question carry equal marks.**

Que.No.1. Long answers question with Internal Choice from any Unit of 08 Marks.

Que.No.2. Long answers question with Internal Choice from any Unit of 08 Marks.

Que.No.3. Two Short answers question with Internal Choice from any Unit of 4X2=08 Marks.

Que.No.4. Two Short answers question with Internal Choice from any Unit of 4X2=08 Marks.

Que.No.5. Four very short answer question without internal choice 4X2=08 Marks.

**Note: 1) One question from each unit.**

**2) Question No.5 should be asked from all 4 units.**

## **Rules and Regulations**

1. There will be four periods per week for theory papers.
2. The batch of Practical class should not be exceeding 16 students.
3. There will be two periods per batch per week for practicals.
4. Passing Marks Theory + Internal =40% (Combined passing).
5. Passing Marks Practical+ Internal =40% (Combined passing).
6. Marks will not be allotted to student if he/she is found absent in study tour.

## **CERTIFICATE**

Department of Geography

Name of College .....

This is to certify that this practical record is the Original Practical works of Shri/ Kumari/  
Smt. ....

Class..... Semester..... During the academic year.

He/ She has attended/ not attained the field work/ Study tour prescribed by the  
RTM Nagpur University Nagpur.

Note: Student will not be allowed to appear in the practical examination without duly  
signed Practical record by teacher & Head of the Department

Signature of the teacher who taught the examinee

- 1) .....
- 2) .....
- 3) .....
- 4) .....

Head of Department

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**  
**B.A.I. Geography**

## **Semester-I (1T1)**

Semester Exam: 40 Marks

Internal Assessment: 10 Marks

---

### **Introduction to Geography**

#### **Unit-I**

The Nature of Geography – Meaning, Definition, Scope, Approach, Objectives, Relevance of Geography; Place of Geography in the Classification of Sciences; Branches of Geography; Geography and other disciplines.

#### **Unit-II**

The Physical Dimension in Geography, The Universe; The Solar System: Earth as an Unique Planet, The Earth Movement: Rotation and Revolution, Size and Shape of the Earth, Latitudes, Longitudes & Local time and Time zones, Phase of moon, lunar and solar eclipse.

#### **Unit-III**

Geography as a study of Environment; Man- Environment; Ecology and Ecosystem; Environmental Determinism, Possibilism, Neo-determinism; Dualism in Geography- Systematic/ Regional, Physical / Human; Complementarities.

#### **Unit-IV**

A brief Historical overview of Geography as a discipline- contribution of ancient classical time and modern classical time geographers. Recent Trends in Geography with special reference to India; Imperatives for the future; Career Opportunities for Geographers. Contribution of ancient classical time and modern period classical time geographers.

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.I. Geography**

**Semester-I (1P1)**

## **Practical Geography**

Semester Practical Examination Marks:40

Internal Assessment: 10

### **Unit-I:**

Meaning Definition, Nature & Scope of Cartography, Globe & Maps, Essentials of maps, History of Map-Making, Types & Uses of Maps.

### **Unit-II:**

Scale:

- (A) Conversion of Scale: Statement to R.F. & R. F. to Statement
- (B) Linear Scale:-
  - a) Simple Scale
  - b) Comparative scale: Time and Distance
  - c) Diagonal Scale

### **Unit-III**

Statistical Method

- a) Tabulation, Seriation and frequency distribution
- b) Measures of central tendency: Mean Median and Mode.

### **Plan of Practical Examination**

The following plan will be strictly followed to test the skill developed by the students.

- 1) Introduction to Cartography (5 Marks)
- 2) Scale (Two Problems) (10 Marks)
- 3) Statistical method- Tabulation Seriation and Frequency distribution (5 Marks)
- 4) Statistical method- Central tendency (Two Problems) (10 Marks)
- 5) Viva-voce (5 Marks)
- 6) Practical Records, (5 Marks)

### **Internal Assessment:**

- Test Exam (10 Marks)

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**  
**B.A.I. Geography**  
**Semester-II (1T2)**

Semester Exam: 40 Marks

Internal Assessment: 10 Marks

---

**Physical Geography (Climatology)**

**Unit-I**

Meaning, Scope and significance of Climatology, Atmospheric composition and structure, Elements of Weather and Climate, Insolation: Determinants & Distribution; Global energy Budget.

**Unit-II**

Temperature: Factors, Horizontal & Vertical Distribution of Temperature and Processes of Heating & Cooling of the Atmosphere, pressure and wind, Vertical and Horizontal Distribution of Pressure, Planetary, Periodic and local winds, Monsoon.

**Unit-III**

Atmospheric Moisture, Humidity, Evaporation and Condensation; Precipitation: Forms & Types; Rainfall; Air Masses and Fronts,; Concepts, Classification and Properties.

**Unit-IV**

Atmospheric disturbances, Cyclones; Tropical & Temperature; Anticyclones, Thunderstorms and Tornadoes; Climatic Classification: Basis of Koppens Classification and types, Role of Climate in Human Life, Global Warming- General causes, Consequences and Measures of control.

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.I. Geography**

**Semester-II(1P2)**

Semester Practical Examination Marks:40

Internal Assessment: 10

**Unit-I:**

Preparation of climatic maps and diagrams-

- a) Preparation of Isopleths showing temperature, pressure and rainfall. (Each Two Examples)
- b) Construction of Histogram, Hythergraph, Windrose Diagram and Taylor's Climograph.

**Unit-II:**

Study of Indian daily Weather Maps: Showing summer, Rainy seasons and winter condition.

**Unit-III:**

Study of following weather instruments:

- a) Maximum and minimum thermometer.
- b) Barometer
- c) Dry and Wet Bulb Thermometers
- d) Rain Gage and Anemometer & Wind vane

**Unit-IV**

Instrumental Survey- Plane table Survey- Methods & Type.

**Plan of Practical Examination**

The following plan will be strictly followed to test the skill developed by the students.

- 1) Preparation of climatic maps and diagrams
  - a) Isopleths (6 Marks)
  - b) Diagrams (Two Problems) (8Marks)
- 2) Study of Indian daily Weather Maps (6 Marks)
- 3) Surveying (6 Marks)
- 4) Weather instruments (4 Marks)
- 5) Viva-voce (5 Marks)
- 6) Practical Record, Attendance and Punctuality (5 Marks)

**Internal Assessment:**

- |           |            |
|-----------|------------|
| Test Exam | (10 Marks) |
|-----------|------------|

## **Suggested Readings**

1. Contemporary American Geography; Routlege New Jersy 1992
2. Dikshit R.D. Geographical Thought- A contextual History of Ideas. Prentice Hall of India Pvt. Ltd 2000.
3. Dohrs. F. E. and Sommers, L.W. (sds.) Introduction to Geography, Thomas Y. Crowell Co. Chicago, 1959.
4. Harvey, David: Explanation in Geography Edward- Arnold, London, 1972.
5. Holt-Jensen, A Geography: Its History and Concepts, Longmans, 1980
6. Husain, Majid: Evolution of Geographical Thought, RawatPublicaions, Jaipur, 1984
7. James, P.E. All Possible Worlds: A History of Geographical Ideas. Sachin Publication, Jaipur.
8. Johnston, P.J. and Claval, P. (eds) Geography Since the Second World War. Croom Helm London/ Bernes and Noble, N.J. 1984
9. Jones, PA/: Field work in Geography, Longmans 1968
10. Lownsburg J.F. and Aldrich F.T. Introduction to Geographical Methods and Techniques, Charles Marrili., Columbus, 1979.
11. Matthews J.A. and Herbert D.T.; Geography; A very short introduction, oxford university press New York 2009
12. Minshull, R: The changing Nature of Geography. Hutchinson University Library, London, 1970
13. Wooldridge S.W.: The Geographer as Scientist, Thomas Nelson and Sons Ltd. London. 1956.
14. Barry, R. G. and Carleton, M. (200 I): Synoptic and Dynamic Climatology, Rout ledge, London.
15. Chorley, R.J. (200 I): Atmosphere, Wea-Oimate, Methuen, and London.
16. Critchfield, H. J. (2002): General Climatology. Prentice- Hall of India, New Delhi.
17. Finch, J.E. and Trewartha .G.T.: Elements of weather and Climate. Prentice –Hall London.
18. Kendrew W.e. (1998): Climatology. Edward Arnold London 5<sup>th</sup> edition.
19. Lal, D.S. (1986): Climatology. Chaitanya Publications, Allahabad.
20. Oliver J.E. and Hidore, J.J. (2003): Climatology: An Atmospheric Science, Pearson Education Private Ltd. Pratapganj, Delhi.
21. Robinson P.J. and Henderson, S. (1999): Contemporary Climatology, 2<sup>nd</sup> edition, Pearson Education Ltd. Harlow, UK.
22. Singh M.B. (1998): JalvayuAvamSamudraVigyan. Tara Book Agency, Varanasi.
23. Singh M.B. (1999): JalvayuAvamSamudraVigyan. Tara Book Agency, Varanasi.
24. Singh S. (2005): Climatology. PrayagPustakBhawan, Allahabad.

25. Singh S. (2006): Climatology. PrayagPustakBhawan, Allahabad.
26. Anthes, R. (1997) Meteorology, Seventh Edition PHI, New Delhi.
27. F. J. Mankhouse- maps and Diagram- B.L. Publication Pvt. Ltd.
28. डॉ. वेळापूरकरडॉ. के. बी. कनकुरे “भौगोलिकविचारधारांचाविकास” संध्या उगाडेप्रकाशनउदगिर.
- 29<sup>ण</sup> प्रा. के. टी. कोलते, प्रा. श्रीमती. सुमतीकुबडे, प्रा. माधवपूराणिक: भूगोलशास्त्राचीमूलतत्वे, विद्या प्रकाशननागपूर.
- 30<sup>ण</sup> डॉ. जयकूमारमगर : हवामानशास्त्र, विद्याप्रकाशन, नागपूर.
- 31<sup>ण</sup> डॉ. पी.एम. नागतोडे: हवामानपरिचय, विद्याप्रकाशन, नागपूर.
- 32<sup>ण</sup> डॉ. सारंग: प्राकृतिकभूविज्ञान, विद्याप्रकाशन, नागपूर.
- 33<sup>ण</sup> प्रा. डी. वाय. अहिरावआणिप्रा.इ.के. करंजखेले: प्रात्याक्षिकभूगोल, सुदर्शनप्रकाशन.
- 34<sup>ण</sup> डॉ. जयकूमारमगर व डॉ. जगताप: प्रात्याक्षिकभूगोलभाग 1, 2, 3 विद्याप्रकाशननागपूर.
- 35<sup>ण</sup> डॉ. अर्जुनकुंभार : प्रात्याक्षिकभूगोल.
- 36<sup>ण</sup> डॉ. डी.एस.लाल : जलवायुविज्ञान
- 37<sup>ण</sup> डा. अल्कागौतम : जलवायु एव सागरविज्ञान
- 38<sup>ण</sup> सिहरविंद्र : भौतीकभूगोल
- 39<sup>ण</sup> भार्मा : प्रायोगीकभूगोल 40. हिरालालप्रायोगीकभूगोल

## **Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

### **B.A.II. Geography**

#### **Semester-III (2T1)**

Semester Exam : 40 Marks

Internal Assessment: 10 Marks

---

### **Geomorphology**

#### **Unit-I-**

The nature and scope of physical Geography, The place of Geomorphology in physical Geography, Geological time scale, Earth's interior, Rocks- origin and composition, types & their characteristics.

#### **Unit-II**

Wegner's theory of continental Drift, Plate tectonic, Isostasy, Earth movements-orogenic and eperogenic, Earthquakes and volcanoes.

#### **Unit -III**

Weathering, Geomorphic agents and process-erosion, transportation and deposition, Concept of cycle of erosion, Interruption of cycle of erosion.

#### **Unit -IV**

Fluvial, Glacial, Arid, Karst and Coastal landforms.

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.II. Geography**

**Semester-III (2P1)**

**Practical Geography**

Semester Practical Examination Marks:40

Internal Assessment: 10

**Unit-I**

Preparation of relief Maps and diagrams.

- a) Representation of different landforms by contours
- b) Study of contours maps representing different relief features with the help of profiles.

**Unit-II**

Drawing of profiles- Serial, superimposed, composite and projected and their relevance in landform analysis.

**Unit-III**

Study of topographical Maps-Classification and scale, interpretation of GOI toposheets of a hilly, plateau and plain area of India in respect of (i) relief, (ii) drainage (iii) Settlement, (iv) communication pattern.

**Plan of Practical Examination**

The following plan will be strictly followed to test the skill developed by the students.

1. Representation of different landforms by using contours (5 Marks)
2. Study of Contour maps representing different relief features with the help of profiles. (5 Marks)
3. Drawing of Profiles- serial, superimposed and compound (10 Marks)
4. Question on the study of topographical maps.
  - (I) Classification of Maps & Scale of GOI toposheets (5 Marks)
  - (II) Interpretation of topographical Map. (5 Marks)
5. Viva-voce. (5 Marks)
6. Practical record, attendance and punctuality (5 Marks)

**Internal Assessment:**

- |           |            |
|-----------|------------|
| Test Exam | (10 Marks) |
|-----------|------------|

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.II. Geography**

**Semester-IV (2T2)**

Semester Exam: 40 Marks

Internal Assessment: 10 Marks

---

**Human Geography**

**Unit-I**

Nature and scope of human geography, Branches of human geography. Human races-meaning, criteria of racial types, brief history of racial classification, races of India.

**Unit-II**

Early economic activities of mankind, food gathering, hunting, fishing and shifting cultivation. Human adaptation to the environment (i) Cold region- Eskimo!, Hot region-Bushman, Beduin, (iii) Plateau- Gonds, Masai (iv) Mountain- Gujjars.

**Unit-III**

Distribution of world population, physical, economic and social factors influencing spatial distribution, concepts of over, under and optimum population. Population Theories-classical and modern. Migration- aspects of migration, major migrations of the world, effects of migration.

**Unit-IV**

Population regions of India, problem of over population in India, remedial measures, Population policies in India.

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.II. Geography**

**Semester-IV (2P2)**

**Practical Geography**

Semester Practical Examination Marks:40

Internal Assessment: 10

**Unit-I:**

Construction Merits, Demerits, characteristics and uses of the following Projections-

- (i) Simple cylindrical projection
- (ii) Cylindrical equal area projection
- (iii) Conical projection with one standard parallel
- (iv) Conical projection with two standard parallel.

**Unit-II:**

Use of Statistical method-

Measuring of dispersions

- (i) Mean Deviation, (ii) Quartile Deviation, (iii) Standard Deviation

**Unit-III:**

Use of line and Bargraphs for representing population, agriculture, industry and transport data. (Simple, multiple and compound)

**Unit-IV**

Field study of topographical features.

**Plan of Practical Examination**

The following plan will be strictly followed to test the skill developed by the students.

- |   |           |
|---|-----------|
| 1.(a) Construction of Projection                | (8 Marks) |
| (b) Merits, demerits and use of projection      | (2 Marks) |
| 2. Statistical Method (Two Examples)            | (8 Marks) |
| 3. (a) Use of Bargraphs                         | (4 Marks) |
| (b) Use of Linegraphs                           | (4 Marks) |
| 4. Field Study of topographical features        | (4 Marks) |
| 5. Viva-voce.                                   | (5 Marks) |
| 6. Practical record, attendance and punctuality | (5 Marks) |

**Internal Assessment:**

- |           |            |
|-----------|------------|
| Test Exam | (10 Marks) |
|-----------|------------|

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.III. Geography**

**Semester-V (3T1)**

Semester Exam: 40 Marks

Internal Assessment: 10 Marks

---

**Geography of Maharashtra**

**Unit-I**

Maharashtra- Geographical location and extent, Administrative divisions.

Physiography and drainage- Main physiographic divisions, Drainage pattern.

**Unit-II**

Climate- Regional and seasonal variations, Major climatic regions.

Forest- Major forest types and their distribution, forest conservation.

Soil- Major soil types and their distribution, soil conservation.

**Unit-III**

Agriculture- Production and distribution of major crops (Rice, Wheat, Cotton, Sugarcane)

Industries –Major agro based industries- (Cotton textile, sugar)

Major Industrial regions.

Mineral and power resources-Distribution and utilization of Iron ore,

Manganese, Coal and major hydro and thermal power projects.

Tourism- Importance, factors influencing, development of Tourism, Tourism in Maharashtra.

**Unit-IV**

Population- Distribution, Density, growth and problems, urbanization,

Migration - causes and effects.

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.III. Geography**

**Semester-V (3P1)**

**Practical Geography**

Semester Practical Examination Marks:40

Internal Assessment: 10

**Unit-I:**

Enlargement & Reduction by Graphical Method.

**Unit-II:**

- a) Prismatic Compass Survey
- I) Correction of Bearings
- II) Plotting of Bearing and Closing Error.

**Unit-III:**

Representation of Statistical Data

- a) Diagrams- I) Divided Circle (Pie)
  - ii) Divided Rectangle
  - iii) Pyramid- Simple, Compund.
- b) Maps- I) Dot II) Proportinal Circle III) Choropleth

**Plan of Practical Examination**

The following plan will be strictly followed to test the skill developed by the students.

- |   |           |
|---|-----------|
| 1. Enlargement and Reduction                    | (5 Marks) |
| 2. (a) Correction of Bearings                   | (4 Marks) |
| (b) Plotting and closing error.                 | (6 Marks) |
| 3. (a) Preparation of diagrams.                 | (7 Marks) |
| (b) Preparation Maps.                           | (8 Marks) |
| 5. Viva-voce.                                   | (5 Marks) |
| 6. Practical record, attendence and punctuality | (5 Marks) |

**Internal Assessment:**

- |           |            |
|-----------|------------|
| Test Exam | (10 Marks) |
|-----------|------------|

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.III. Geography**

**Semester-VI (3T2)**

Semester Exam: 40 Marks

Internal Assessment: 10 Marks

---

**Geography of India**

**Unit-I**

India in the context of Southeast and South Asia; India: a land of diversities; unity within diversities.

Major terrain elements of India and their role in shaping physical landscape of India. Drainage systems of India and their functional significance.

**Unit-II**

Regional and seasonal variations of climate- The monsoon, Climatic regions of India. Soil types of India, Vegetation types and distribution.

Forest, minerals (Iron-ore, Manganese) and power resources(Coal, Petroleum & Hydro-electricity). The status of their use the need for conservation.

**Unit-III**

Spatial distribution of population and density, age, sex and literacy structure, Green Revolution; regionalisation of Indian agriculture

**Unit-IV**

Industries- Iron & steel, Cotton textile, Sugar Industries., Industrial regions of India, composition of domestic and international trade.

**Rashtrasant Tukadoji Maharaj Nagpur University Nagpur**

**B.A.III. Geography**

**Semester-VI (3P2)**

**Practical Geography**

Semester Practical Examination Marks: 40

Internal Assessment: 10

**Unit-I:**

Dumpy Level Survey- Use of Dumpy Level

- a) Preparation of field Book (Rise and fall Method and Collimation Method)
- b) Drawing of Profile.

**Unit-II:**

Introduction to modern Techniques.

- (a) Equipments of Air Photography, types of Air Photographs, Scales of Air Photographs, interpretation of Air Photographs, merits and demerits of Air Photographs.
- (b) GIS and Remote Sensing- Introduction to GIS, Fundamentals of GIS-spatial and concepts and spatial relationship, Definition of R.S., R.S. Platforms and scanners, R.S. as a tool for data generation and mapping.

**Unit-III:**

Meaning and Computation of Correlation, Correlation Co-efficient by Karl Pearson's and Spearman's Method.

**Unit-IV**

Field Work and Field Report. Socio-economic Survey of Small Village.

**Plan of Practical Examination**

The following plan will be strictly followed to test the skill developed by the students.

- 1. Problem on levelling
  - (a) Preparation of field book (6 Marks)
  - (b) Drawing of Profile (4 Marks)
- 2. Introduction to Modern techniques
  - (a) Aerial photographs (4 Marks)
  - (b) G.I.S. and Remote Sensing (6 Marks)
- 3. Computation of correlation (5 Marks)
- 4. Field Survey report (5 Marks)
- 5. Viva-voce. (5 Marks)
- 6. Practical record, attendance and punctuality (5 Marks)

**Internal Assessment:**

- Test Exam (10 Marks)

**Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur**

**SEMESTER SYSTEM SYLLABUS**

**FOR**

**B.A.I**

**MUSIC**

**( VOCAL AND INSTRUMENTAL )**

**(WITH EFFECT FROM 2016-17 AND ONWARDS)**

**A)**

**Semester Pattern**  
**B. A. - Part I**  
**INDIAN MUSIC**  
**(Vocal and Instrumental)**

- 1) दर आठवड्याला प्रात्यक्षिकासाठी (Practical) ६ तासिका व संगीत शास्त्रासाठी (Theory) २ तासिका असाव्यात.
- 2) एका वेळी एका गटात ७ पेक्षा अधिक विद्यार्थी/विद्यार्थिनी नसाव्यात.
- 3) आवाजाच्या नैसर्गिक भिन्नतेमुळे विद्यार्थी/विद्यार्थिनी यांचा प्रात्यक्षिकाचा वर्ग वेगळा असावा.
- 4) ४८ मिनिटांची प्रात्यक्षिकाची एक तासिका ही ४८ मिनिटांच्या शास्त्राच्या एका तासिकेसमान मानली जाईल.

One practical period of 48 Minutes shall be counted equal to one lecture period of 48 Minutes.

---

**Notes:-**

- 1) Acoustic (Manual) taanpura is mandatory in practical classes as well as practical exam.
- 2) Attention of the candidates, their guardians and teachers is drawn to the fact that the Harmonium accompaniment for vocal music will not be allowed.
- 3) Tabla player's accompaniment is mandatory in practical classes, as well as in practical exam. Only external students are allowed to arrange their own tabla accompanist in practical exam.
- 4) Following instruments can be offered for Exam in instrumental music:

a) Violin	e) Bin	i) Sanai	m) Guitar
b) Dilruba	f) Got-bin	j) Flute	n) Keyboard
c) Israj	g) Sitar	k) Tabla	
d) Sarangee	h) Sarod	l) Harmonium	

5) **A)** Candidate offering instrumental music should study and practice मसितखानी गत instead of विलंबित ख्याल and रजाखानी गत instead of द्रुत ख्याल. Candidates are expected to know the history of their instrument, parts, related technical terms and method of tuning.

**B)** Syllabus for Tabla is given at the end separately.

- 6) Candidates should submit the checked practical record at the time of practical exam.
- 7) Bhatkhande or Paluskar system of notation will be followed.

# **Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur**

## **SEMESTER SYSTEM SYLLABUS**

### **B.A.I MUSIC**

**(Vocal and Instrumental)**

---

## ***PATTERN OF EXAMINATION AND MARKS DISTRIBUTION***

### **Theory Paper :**

- One theory paper of **40 marks of two hours duration** will be conducted at the end of each semester.

### **Practicals :**

1. One Practical examination of **40 marks of half an hour duration** in each semester will be conducted at the end of the same semester.
2. Practical examination in each semester will be conducted by Internal and External examiners appointed by the University.

### **Internal Assessment:**

1. Head of the department will carry out internal assessment of the students on the basis of evaluation report from the concerned teacher/ teachers, under the supervision of the principal of the college and will be done at the end of each semester.
2. Distribution of **20 marks** of Internal Assessment is as under-
  - **10 marks for Theory Assessment --**

i. Assignment /Project work	-----	(05 marks)
ii. Group disc./ Seminar/ guest lectures	-----	(05 marks)
  - **10 marks for Practical Assessment --**

i. Class Attendance	-----	(05 marks)
ii. Participation in College activities	-----	(05 marks)

**गुण विभाजन**  
**विषय – भारतीय संगीत**  
**क्रियात्मक परिक्षेच्या गुण विभाजनाचा तक्ता**

	गुण
1) प्रात्याक्षिक वही	०५
2) अलंकार	०३
3) सरगम व लक्षणसंगीत	०३
4) विलंबित ख्याल गायकीसह/मसीतखानी गत	१०
5) छोटाख्याल/रजाखानी गत	०८
6) धृपद, धमार, तराणा/धुन	०४
7) तालज्ञान व रागज्ञान	०४
8) सुगमसंगीत	०३
<hr/>	
<b>एकूण गुण</b>	<b>४०</b>

<b>Theory Paper</b>	---	<b>40 marks</b>
<b>Internal Assessment (Theory)</b>	---	<b>10 marks</b>
<b>Practical Exam</b>	---	<b>40 marks</b>
<b>Internal Assessment (Practical)</b>	---	<b>10 marks</b>
<hr/>		
<b>Total</b>	---	<b>100 marks</b>

- Marking distribution will be same for each semester.
- The student has to pass theory, practical and internal assessment separately with minimum 40 percent.

---

**B. A. Part I**  
**Semester I**  
**Practical Test**  
**(Approximately half an Hour)**      **Marks - 40**

---

1. The candidate will be required to study the following.  
शुद्ध स्वरांचे १० अलंकार
2. Sargam and Lakshana Geet in each from of the following Ragas.  
**i) Yaman ii) Kafi iii) Tilang iv) Bhairav**
3. Vilambit Khyal / Masit Khani Gat with detailed Gayaki in **any one** of the prescribed Ragas. Drut Khyal or Raja Khani Gat with Gayaki in all the prescribed Ragas.
4. One Dhrupad with Dugun and a Tarana from prescribed Ragas.
5. Study of following Talas with dugun.  
**i) Trital ii) Ektal iii) Choutal iv) Dadra**
6. Any one form of light music.

<b>B. A. Part I</b>		
<b>Semester I</b>		
<b>Time - Two hours</b>	<b>Theory</b>	<b>Marks - 40</b>

### **Unit I (Marks: 08)**

- 1) Mathematical derivation of 72 Thaat by Pt. Venkatmakhi.
- 2) Classification of Instruments, with detailed knowledge of Taanpura / Tabla /Harmonium.

### **Unit II (Marks: 12)**

- 1) Study of theoretical details of Ragas prescribed for practical course (Yaman, Kafi, Tilang, Bhairav) and their comparative study.
- 2) Reading and writing of notation of songs (Bandish / Gat) prescribed in the practical course.
- 3) Writing of Talas (Trital, Ektal, Choutal, Dadra) with dugun and chougun.

### **Unit III (Marks: 08)**

- 1) General knowledge of the biographies and the contribution of the following Musicians:
  - Pt. Vishnu Narayan Bhatkhande
  - Amir Khusro
- 2) Definition, Genesis and Development of Music.

### **Unit IV (Marks: 12)**

- 1) General knowledge of the musical compositions –
  - a) Dhrupad b) Khyal c) Tarana d) Ghazal e) Bhajan
- 2) Definitions of following terms:
 

Aroha, Avaroha, Pakad, Sthayee, Antara, Sargamgeet, Lakshangeet, Vadi-Samvadi, Anuvadi, Vivadi, Varna, Alankar, Saptak, Thaat and its rules, Varjya swar, Vakra swar, Shuddha -Vikrut swar, Tali, Khali, Matra, Sam, Taal, Theka, Laya and its kinds, Avartan.

---

**B. A. Part I**  
**Semester II**  
**Practical Test**  
**(Approximately half an Hour)**      **Marks – 40**

---

- 1) The candidate will be required to study the following.

शुद्ध स्वरांचे १० अलंकार

- 2) Sargam and Lakshan Geet in each from of the following Ragas.

**i) Bhupali ii) Alhaiya bilawal iii) Vrindawani Sarang iv) Bhairavi**

- 3) Vilambit Khyal / Masit Khani Gat with detailed Gayaki in **any two** of the prescribed Ragas. Drut Khyal or Raja Khani Gat with Gayaki in all the prescribed Ragas.

- 4) One Dhamar with Dugun and a Tarana from prescribed Ragas.

- 5) Study of following Talas with dugun –

**i) Tilwada ii) Zaptal iii) Dhamar iv) Keharwa**

- 6) Any one form of light music.

<b>B. A. Part I</b>		
<b>Semester II</b>		
<b>Time – Two hours</b>	<b>Theory</b>	<b>Marks - 40</b>

### **Unit I (Marks: 08)**

- 1) Mathematical derivation of 484 Ragas from one Thaat on the basis of Raga Jati.
- 2) Place of Music in Fine Arts.

### **Unit II (Marks: 12)**

- 1) Study of theoretical details of Ragas prescribed for practical course (Bhupali, Alhaiya bilawal, Vrindavani Sarang, Bhairavi) and their comparative study.
- 2) Reading and writing of notation of songs (Bandish)/ Gats prescribed in the practical course.
- 3) Writing of Talas (Tilwada, Zaptal, Dhamar and Keharawa) with dugun and chougun.

### **Unit III (Marks: 08)**

- 1) General knowledge of the biographies and the contribution of the following Musicians:
  - Pt. Vishnu Digambar Paluskar
  - Nayak Gopal
- 2) Raga Samay Siddhant

### **Unit IV (Marks: 12)**

- 1) General knowledge of the musical compositions –
  - a) Dhamar b) Tappa c) Thumri d) Hori e) Chaturang
- 2) Definition of Technical terms :

Nad, Shruti, Swar, Elementary Study of sound: Musical sound, Noise, Kampan gati, Andolan sankhya, Pitch, Magnitude and Timber or Quality; Purvanga, Uttaranga, Alap-Tan, Grah, Ansh, Nyas, Rag and its rules, Meend (sut), Ghasit, Krintan, Jam-Jama, Khatka, Murki.

## **Notes:-**

- 1) Tabla Solo playing along with Lehara (लहरा), independently atleast for 15 minutes – २ कायदे – चतस्र जातीचे (३–३ पलट्यांसहित), रेला, बेदम, दमदार व चक्करदार तिहाई, तुकडे व मुखडे इ.
  - 2) Practice of tuning the Tabla.
  - 3) Candidates should submit the checked practical record at the time of practical exam.

## Tabla Practical

- 1) Practice of Producing the Syllables (वर्ण) on Tabla and Dagga (दायाँ—बायाँ) :
    - a. Syllables played with right hand,
    - b. Syllables played with left hand and
    - c. Syllables played with both hands
  - 2) Study of the Thekas of the following Talas with Dugun, Tigun and Chougun:
    - i) Trital ii) Zaptal iii) Dadra
  - 3) Study of the Thekas with simple compositions and their oral renderings (पढ़त) in the following talas:
    - i) Choutal ii) Roopak iii) Deepchandi
  - 4) Uncommon tala: (Theka with dugun only) Matta Tal (9 & 18 matra)
  - 5) Vistar (Quida (कायदा), Rela, Patla (पल्टा) Gat (गत) Tihai, Tukdas and Mukhadas etc.) of the following Talas with oral rendering (पढ़त) :
    - i) Trital ii) Zaptal
  - 6) At least two variations of the Theka and Laggis of Dadra and Kaharva tal.
  - 7) Recognizing the sum of a Tal and Song.

**गुण विभाजन**  
**विषय – तबला**  
**क्रियात्मक परिक्षेच्या गुण विभाजनाचा तक्ता**

गुण

1) प्रात्याक्षिक वही	०५
2) लहरा सोबत एकल तबलावादन	१०
3) तालाचे ठेके व दुगुन इ.	०५
4) पढंत आणि साधे कायदे	०४
5) अप्रचलित तालवादन	०४
6) लग्गीवादन सामग्री	०४
7) तालज्ञान, वादनशैली व सामान्य प्रभाव	०४
8) संगीताबरोबर साथसंगत	०४
<hr/>	
<b>एकूण गुण</b>	<b>४०</b>

<b>Theory Paper</b>	---	<b>40 marks</b>
<b>Internal Assessment (Theory)</b>	---	<b>10 marks</b>
<b>Practical Exam</b>	---	<b>40 marks</b>
<b>Internal Assessment (Practical)</b>	---	<b>10 marks</b>
<hr/>		
<b>Total</b>	<b>---</b>	<b>100 marks</b>

- Marking distribution will be same for each semester.
- The student has to pass theory, practical and internal assessment separately with minimum 40 percent.

---

## **Semester Pattern Syllabus for Tabla Theory**

### **B. A. – Part I**

#### **Semester I**

**Time – Two hours**

**Marks - 40**

---

#### **Unit I (08 Marks)**

- 1) The origin and history of Tabla, its evolution and transformation in the present form.
- 2) Technique of producing different syllables (वण्ठ) on Tabla and Dagga (दायाँ—बायाँ)

#### **Unit II (12 Marks)**

Definitions of the following terms: Sangeet, Swar, Matra, Laya, Avarthan, Theka, Dugun, Tigun and Chougum, Kism (किस्म), Uthan (उठान), Laggi, Paran, Peshkar.

- 1) Method of writing notation of all Talas Prescribed in practical syllabus.
- 2) Solo playing – general idea and simple rules.

#### **Unit III (08 Marks)**

- 1) Importance of Sam-Kal, Khali-Bhari, Vibhag etc. in Tal.
- 2) Classification of Musical Instruments with description of Tat-vitat and Avanaddha vadya.

#### **Unit IV (12 Marks)**

General idea of parts of table-dagga with diagram.

- 1) Comparative study of the features and application of Damdar (दमदार) Bedam (बेदम) and Chakkradar Tihais (चक्करदार तिहाई).
- 2) Life history and Contribution to the field of Tabla of the following :-  
१. पं. सामताप्रसाद (गुदई महाराज) २. उस्ताद अल्लारखबा, ३. खलीफा वाजीद हुसैन

---

## **Semester Pattern Syllabus for Tabla Practical**

### **B. A. – Part I**

**Semester II**

**Marks – 40**

---

Note:-

- 1) Tabla Solo playing along with Lehara (लहरा), independently atleast for 15 minutes – पेशकार, २ कायदे – १ चतस्र जातीचा व १ तीस्र जातीचा (३–३ पलटयांसहित), रेला, बेदम, दमदार व चक्करदार तिहाई, तुकडे व मुखडे इ.
  - 2) Practice of tuning the Tabla.
  - 3) Candidates should submit the checked practical record at the time of practical exam.
- 

### **Tabla Practical**

- 1) Practice of Producing निकास on Tabla and Dagga (दायाँ—बायाँ)  
तिरकिट, किटक, तकडां, थिरधिर, गदिगन, कडधातिट, धागेतिट
- 2) Study of the Thekas of the following Talas with Dugun, Tigun and Chougund:
  - i) Ektal ii) Tilwada iii) Kaharava
- 3) Study of the Thekas with simple compositions and their oral renderings (पढत) in the following talas:
  - i) Tevra ii) Dhamar ii) Dhumali
- 4) Uncommon talas: (Theka with dugun only) Pancham Sawari (15 Matra)
- 5) Vistar (Peshkar, Quida (कायदा), Rela, Patla (पल्टा) Gat (गत) Tihai, Tukdas and Mukhadas etc.) of the following Talas with oral rendering (पढत):
  - i) Trital ii) Ektal.
- 6) At least two variations of the Theka and Laggis of Dadra and Kaharva tal.
- 7) Recognizing the sum of a Tal and Song; ability to play lehara on harmonium.

---

## **Semester Pattern Syllabus for Tabla Theory**

### **B. A. – Part I**

### **Semester II**

**Time – Two hours**

**Marks - 40**

---

#### **Unit I (08 Marks)**

1. Elementary knowledge of all Gharanas of Tabla, details of any one gharana.
2. Technique of producing (निकास) different syllables (any four)  
तिरकिट, किटतक, तकडां, धिरधिर, गदिगन, कडधातिट, धागेतिट

#### **Unit II (12 Marks)**

1. Meaning and Explanation of the distinctive Features and application of the following:- Quida (कायदा) Gat (गत) Mukhada (मुखडा), Rela, Tukada (तुकडा) Mohara (मोहरा) Tihai (तिहाई), Bol and Palta.
2. Writing notation of all Tala, Quida, Rela etc. Prescribed in practical syllabus.
3. Solo playing – general idea and simple rules.

#### **Unit III (08 Marks)**

1. Importance of Peshkar, Quida, Rela, Gat, Chakradhar, Paran in Solo tabla playing.
2. Classification of Musical Instruments with description of Ghana and Sushir Vadya.

#### **Unit IV (12 Marks)**

1. General rules of tabla tuning.
2. General idea about tabla accompaniment with गायन, वादन व नृत्य, its rules.
3. Comparative study of the features and application of Damdar (दमदार) Bedam (बेदम) and Chakradar Tihais (चक्करदार तिहाई).
4. Life history and Contribution to the field of Tabla of the following :-  
१. पं. राम सहाय मिश्र, २. पं. अयोध्या प्रसाद, ३. पं. पुरुषोत्तमदास पखवाजी

## **Books recommended**

1. पं. वि. ना. भातखंडे: हिंदुस्थानी संगीत क्रमिक पुस्तक मालिका, भाग २ ते ४.
2. पं. व्ही. एन. पटवर्धन : राग विज्ञान भाग १ ते ५
3. पं. वि. ना. भातखंडे : हिंदुस्थानी संगीत पध्दती, भाग २ ते ४ विष्णु शर्मा
4. पं. रामाश्रय झा : अभिनव गीतांजली भाग १ ते ५ (संगीत सदन प्रकाशन, इलाहाबाद)
5. शांति श्रीखंडे : संगीत शास्त्र दर्पण १, २
6. महेश नारायण सक्सेना : संगीत शास्त्र भाग १,२
7. Bandhopadhyaya : Sitar Marga, Part I & II
8. Pt. Rajabhayya Poochwale: Dhrupad, Dhammar Gayaki
9. S.K.Chaubey: Indian Music Today
10. Pt. Bhatkhande : A short Historical Survey of Northern Indian Music.
11. Pt. Bhatkhande: A comparative study of Indian Music of 16<sup>th</sup>, 17<sup>th</sup> and 18<sup>th</sup> Century.
12. प्रो. बी. आर. देवधर : राग संग्रह भाग १ ते ३
13. श्री. गोडबोले : तबला शास्त्र — ताल दीपिका
14. श्री किरपेकर : ताल वैभव
15. संगीत कार्यालय हाथरस — तालअंक
16. Dr. G. H. Taralekar : History of Indian Musical Instruments.
17. डॉ. नारायण मंगरुळकर — संगीत शास्त्र विजयिनी
18. श्री. ना. वि. पंडित : व्हायलिन (महाराष्ट्र विद्यापीठ ग्रंथ निर्मिती मंडळ)
19. अ. वि. बेडेकर : हार्मोनियम (म.वि.ग्रं.नि.मं)
20. श्री. अरविंद मुळगावकर : तबला (म.वि.ग्रं.नि.मं)
21. कै. चैतन्य देसाई : संगीत विषयक संस्कृत ग्रंथ (म.वि.ग्रं.नि.मं)
22. सत्यनारायण वशिष्ठ: कायदा और पेशकार
23. सत्यनारायण वशिष्ठ: ताल मार्ट्ट
24. सत्यनारायण वशिष्ठ: तबलेपर दिल्ली और पूरब
25. प्रभूलाल गर्ग “वसंत” : संगीत विशारद (संगीत कार्यालय हाथरस)
26. ताल प्रभाकर प्रश्नोत्तरी : श्री. गिरिशचंद्र श्रीवास्तव
27. ताल परिचय भाग १, २, ३ : श्री. गिरिशचंद्र श्रीवास्तव
28. डॉ. आबान मिस्त्री : तबला एवं पखवाज के घराने एवं परम्पराएँ
29. पं. रामाश्रय झा — अभिनव गीतांजली भाग १ ते ५, संगीत सदन प्रकाशन इलाहाबाद

\* \* \* \* \*

**Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur**

**SEMESTER SYSTEM SYLLABUS**

**FOR**

**B.A.II**

**MUSIC**

**( VOCAL AND INSTRUMENTAL )**

**(WITH EFFECT FROM 2017-18 AND ONWARDS)**

**A)**

**Semester Pattern**  
**B. A. - Part II**  
**INDIAN MUSIC**  
**(Vocal and Instrumental)**

- 1) दर आठवड्याला प्रात्यक्षिकासाठी (Practical) ६ तासिका व संगीत शास्त्रासाठी (Theory) २ तासिका असाव्यात.
- 2) एका वेळी एका गटात ७ पेक्षा अधिक विद्यार्थी/विद्यार्थिनी नसाव्यात.
- 3) आवाजाच्या नैसर्गिक भिन्नतेमुळे विद्यार्थी/विद्यार्थिनी यांचा प्रात्यक्षिकाचा वर्ग वेगळा असावा.
- 4) ४८ मिनिटांची प्रात्यक्षिकाची एक तासिका ही ४८ मिनिटांच्या शास्त्राच्या एका तासिकेसमान मानली जाईल.

One practical period of 48 Minutes shall be counted equal to one lecture period of 48 Minutes.

---

**Notes:-**

- 1) Acoustic (Manual) taanpura is mandatory in practical classes as well as practical exam.
- 2) Attention of the candidates, their guardians and teachers is drawn to the fact that the Harmonium accompaniment for vocal music will not be allowed.
- 3) Tabla player's accompaniment is mandatory in practical classes, as well as in practical exam. Only external students are allowed to arrange their own tabla accompanist in practical exam.
- 4) Following instruments can be offered for Exam in instrumental music:

a) Violin	e) Bin	i) Sanai	m) Guitar
b) Dilruba	f) Got-bin	j) Flute	n) Keyboard
c) Israj	g) Sitar	k) Tabla	
d) Sarangee	h) Sarod	l) Harmonium	
- 5) A) Candidate offering instrumental music should study and practice मसितखानी गत instead of विलंबित ख्याल and रजाखानी गत instead of द्रुत ख्याल. Candidates are expected to know the history of their instrument, parts, related technical terms and method of tuning.  
B) Syllabus for Tabla is given at the end separately.
- 6) Candidates should submit the checked practical record at the time of practical exam.
- 7) Bhatkhande or Paluskar system of notation will be followed.

# **Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur**

## **SEMESTER SYSTEM SYLLABUS**

### **B.A.II MUSIC**

**(Vocal and Instrumental)**

---

## ***PATTERN OF EXAMINATION AND MARKS DISTRIBUTION***

### **Theory Paper :**

- One theory paper of **40 marks of two hours duration** will be conducted at the end of each semester.

### **Practicals :**

1. One Practical examination of **40 marks of half an hour duration** in each semester will be conducted at the end of the same semester.
2. Practical examination in each semester will be conducted by Internal and External examiners appointed by the University.

### **Internal Assessment:**

1. Head of the department will carry out internal assessment of the students on the basis of evaluation report from the concerned teacher/ teachers, under the supervision of the principal of the college and will be done at the end of each semester.
2. Distribution of **20 marks** of Internal Assessment is as under-
  - **10 marks for Theory Assessment --**

i. Assignment /Project work	-----	(05 marks)
ii. Group disc./ Seminar/ guest lectures	-----	(05 marks)
  - **10 marks for Practical Assessment --**

i. Class Attendance	-----	(05 marks)
ii. Participation in College activities	-----	(05 marks)

**गुण विभाजन**  
**विषय – भारतीय संगीत**  
**क्रियात्मक परिक्षेच्या गुण विभाजनाचा तक्ता**

	गुण
1) प्रात्याक्षिक वही	०५
2) अलंकार	०३
3) सरगम व लक्षणसंगीत	०३
4) विलंबित ख्याल गायकीसह/मसीतखानी गत	१०
5) छोटाख्याल/रजाखानी गत	०८
6) धृपद, धमार, तराणा/धुन	०४
7) तालज्ञान व रागज्ञान	०४
8) सुगमसंगीत	०३
<hr/>	
<b>एकूण गुण</b>	<b>४०</b>

<b>Theory Paper</b>	---	<b>40 marks</b>
<b>Internal Assessment (Theory)</b>	---	<b>10 marks</b>
<b>Practical Exam</b>	---	<b>40 marks</b>
<b>Internal Assessment (Practical)</b>	---	<b>10 marks</b>
<hr/>		
<b>Total</b>	---	<b>100 marks</b>

- Marking distribution will be same for each semester.
- The student has to pass theory, practical and internal assessment separately with minimum 40 percent.

---

**B. A. Part II**  
**Semester III**  
**Practical Test**  
**(Approximately half an Hour)**      **Marks - 40**

---

1. The candidate will be required to study the following.

कोणत्याही दोन थाटांचे १० अलंकार

2. The candidate will be required to study सरगम and लक्षणगीत in each of the following ragas:  
i) **Bihag** ii) **Desh** iii) **Bageshree** iv) **Bhimpalasi** v) **Deshkar**
3. विलंबित ख्याल or मसीतखानी गत with detail गायकी in **any two** of the prescribed Ragas and द्रुत ख्याल or रजाखानी गत with गायकी in all ragas with आलाप and तान.
4. One धूपद with दुगुन and चौगुन and one तराणा from Prescribed ragas.
5. Study of the following Talas with their Dugun and Chougun.  
i) **Dipchandi** ii) **Rupak** iii) **Sool taal**
6. Any one of the following style:  
**Bhajan, Ghazal, Patriotic song**

<b>B. A. Part II</b>		
<b>Semester III</b>		
<b>Time – Two hours</b>	<b>Theory</b>	<b>Marks - 40</b>

### **Unit I (Marks: 08)**

1. a) Rabindra Sangeet  
b) Karnatic Sangeet (Saptak and music styles)
2. Biographies and contribution of following musicians
  - Ustad Allaudin Khan
  - Ustad Zakir Hussain

### **Unit II (Marks: 12)**

1. Study of theoretical details of Ragas (Bihag, Desh, Bageshree, Bhimpalasi, Deshkar) prescribed for practical course and their comparative study.
2. Reading and writing of notation of compositions (Bandish / Gats) prescribed in the practical course.
3. Writing of Talas (Deepchandi, Rupak, Sool taal) in notation with dugun and chougun.

### **Unit III (Marks: 08)**

1. Comparative study of Bhatkhande and Paluskar notation system.
2. Essay on any of the following topics:
  - Role of Music in National Integration
  - Natya sangeet of Maharashtra

### **Unit IV (Marks: 12)**

1. Study of the following technical terms:-  
Vrunda vadan, Vaggeyakar, Merits and demerits of Vaggeykar, Naandi, Haveli Sangeet, Raagmala, Kaku Bhed, Geet- Gandharva- Gaan, Gayak - Nayak
2. General knowledge of various folk songs as :-  
Kajri, Chaiti, Mand, Garba, Powada.
3. Study of Musical Scales:-  
Pythagorean Scale, Natural Scale, Chromatic Scale.

---

**B. A. Part II**  
**Semester IV**  
**Practical Test**  
**(Approximately half an Hour)**                   **Marks - 40**

---

1. The candidate will be required to study the following.  
**कोणत्याही दोन थाटांचे १० अलंकार**
2. The candidate will be required to study सरगमगीत and लक्षणगीत in each of the following ragas:  
**i) Malkauns ii) Jounpuri iii) Hamir iv) Kedar v) Purvi**
3. विलंबित ख्याल or मसीतखानी गत with detail गायकी in **any two** of the prescribed Ragas and द्रुत ख्याल or रजाखानी गत with गायकी in all ragas with आलाप and तान.
4. One धमार with दुगुन, चौगुन and one चतुरंग from prescribed ragas.
5. Study of the following Talas with their Dugun and Chougund  
**i) Dhamar ii) Zumra iii) Tivra**
6. Any one of the following style:  
**Bhajan, Ghazal, Patriotic song**

<b>B. A. Part II</b>		
<b>Semester IV</b>		
<b>Time – Two hours</b>	<b>Theory</b>	<b>Marks - 40</b>

### **Unit I (Marks: 08)**

1. Dakshinatyta taal system
2. Biographies and contribution of following musicians
  - Sadarang – Adarang
  - Ustad Abdul Kareem Khan

### **Unit II (Marks: 12)**

1. Study of theoretical details of Ragas (Malkauns, Jounpuri, Hamir, Kedar, Purvi) prescribed for practical course and their comparative study.
2. Reading and writing of notation of compositions (Bandish / Gats) prescribed in the practical course.
3. Writing of Talas (Dhamar, Zoomra, Tivra) in notation with dugun and chougun.

### **Unit III (Marks: 08)**

1. Definition and types of intervals (स्वरांतर), intervals in western music and its comparison with Indian intervals (चतुःश्रुतिक, त्रिः श्रुतिक, द्विःश्रुतिक), Diatonic Scale.
2. Essay on any of the following topics:
  - Importance of Music festivals / seminars / conferences.
  - Remix and Fusion
  - Music Therapy

### **Unit IV (Marks: 12)**

1. Definition of following terms:  
Vrunda gayan, Merits and demerits of Gayak-vadak, Shikshakar-Anukar, Parmel Praveshak Rag, Adhwadarshak Swar, Saptak-Ashtak (Octave)
2. General knowledge of various folk songs:  
Baul, Bhatiyali, Lawani, Bharud, Kirtan
3. Study of Musical Scales:  
Pentatonic Scale, Hexatonic Scale, Equally Tempered Scale.

<b>B)</b>	<b>Semester Pattern Syllabus for Tabla Practical</b>	
	<b>B. A. – Part II</b>	
	<b>Semester III</b>	<b>Marks – 40</b>

Note:-

1. Tabla Solo-playing along with Lehara (लहरा) independently at least for 30 minutes in all the Talas (as per Syllabus)
2. Practice of tuning the Tabla.
3. In addition to the course prescribed up to B.A. – Part I & Part II.

## **Tabla Practical**

- 1) Thekas and advanced playing in:
  - I. Trital, Zaptal, Roopak, and Darda
  - II. Zumra and Dhamar
- 2) Uncommon Talas: Rudra with dugun
- 3) Use of Jat tala in Thumri (along with laggee playing, showing sam with tihai)
- 4) Oral rendering (पढ़त) of all Talas and Bols Prescribed in Second year.
- 5) Vistar of the following Talas with a good collection in Trital and Roopak; Advanced Quidas, Gats, Relas, Parans, Mukhadas, Tukdas, Tihais and Gat Quidas (गत कायदा)
- 6) Knowledge of Chougun laya with oral renderings.
- 7) At least four varieties Darda and Karava tal.

**गुण विभाजन**  
**विषय – तबला**  
**क्रियात्मक परिक्षेच्या गुण विभाजनाचा तब्ला**

	गुण
1) प्रात्याक्षिक वही	०५
2) लहरा सोबत एकल तबलावादन	१०
3) तालाचे ठेके व दुगुन इ.	०५
4) पढंत आणि साधे कायदे	०४
5) अप्रचलित तालवादन	०४
6) लग्गीवादन सामग्री	०४
7) तालज्ञान, वादनशैली व सामान्य प्रभाव	०४
8) संगीताबरोबर साथसंगत	०४
<hr/>	
<b>एकूण गुण</b>	<b>४०</b>

<b>Theory Paper</b>	---	<b>40 marks</b>
<b>Internal Assessment (Theory)</b>	---	<b>10 marks</b>
<b>Practical Exam</b>	---	<b>40 marks</b>
<b>Internal Assessment (Practical)</b>	---	<b>10 marks</b>
<hr/>		
<b>Total</b>	---	<b>100 marks</b>

- Marking distribution will be same for each semester.
- The student has to pass theory, practical and internal assessment separately with minimum 40 percent.

---

## **Semester Pattern Syllabus for Tabla Theory**

### **B. A. – Part II**

### **Semester III**

**Time – Two hours**

**Marks - 40**

---

#### **Unit I (08 Marks)**

- 1) History of Tabla:
  - i) From ancient time to 1300 A.D.
  - ii) Development onward till the present age.
- 2) History of two Gharanas of Tabla: Delhi, Farrukhabad and Punjab.

#### **Unit II (12 Marks)**

- 1) Writing notation of all the talas prescribed in the practical course of this year along with previous year and their Layakaris in Dugun, Tigin.
- 2) Definition and knowledge of application of the following:  
Jarab (ज़रब), Vazan (वज़न), Yati (यती), Graha(ग्रह), Paran.
- 3) Merits and Demerits of Tabla Players. (तबला वादकाचे गुण—दोष)

#### **Unit III (08 Marks)**

- 1) General knowledge and practical utility of पखवाज, तबला
- 2) Detailed knowledge of Tabla accompaniment with different styles of vocal and instrumental music: धृपद, रघाल, गङ्गल-
- 3) Knowledge of Bhatkhande and Paluskar Tala-Notation System.

#### **Unit IV (12 marks)**

- 1) Essay on any one following subjects:
  - i) Model accompaniment
  - ii) Peculiarities of Different Gharanas of Tabla.
- 2) Life History and contribution of the following Tabla Maestros:  
१) पं. गोविंदबुवा बुच्हाणपूरकर २) उ. अहमदजान थिरकवा ३) उ. मोटू खाँ

---

## **Semester Pattern Syllabus for Tabla Practical**

**B. A. – Part II**

**Semester IV**

**Marks – 40**

---

Note:-

4. Tabla Solo-playing along with Lehara (लहरा) independently at least for 30 minutes in all the Talas (as per Syllabus)
  5. Practice of tuning the Tabla.
  6. In addition to the course prescribed up to B.A. – Part I & Part II.
- 

### **Tabla Practical**

- 1) Thekas and advanced playing in:
  - i) Ektal, Dhumali, and Kaharva
  - ii) Tewara and Ada choutal
- 2) Uncommon Talas: Shikhar
- 3) Use of Deepchandi tala in Thumri (along with laggee playing, showing sam with tihai)
- 4) Oral rendering (पढ़त) of all Talas and Bols Prescribed in Second year.
- 5) Vistar of the following Talas with a good collection in Ektal and Zaptal; Advanced Quidas, Gats, Relas, Parans, Mukhadas, Tukdas, Tihais and Gat Quidas (गत कायदा)
- 6) Knowledge of Tigun laya with oral renderings.
- 7) At least four varieties Darda and Karava tal.

---

## **Semester Pattern Syllabus for Tabla Theory**

### **B. A. – Part II**

<b>Time – Two hours</b>	<b>Semester IV</b>	<b>Marks - 40</b>
-------------------------	--------------------	-------------------

---

#### **Unit I (08 Marks)**

- 1) History of Tabla:
  - i) Transformation in the time of Amir Khusro (अमीर खुसरो)
  - ii) Development onward till the present age.
- 2) History of four Gharanas of Tabla: Ajrada, Banaras and Lucknow.

#### **Unit II (12 Marks)**

- 1) Writing notation of all the talas prescribed in the practical course of this year along with previous year and their Layakaris in Chougund and Aad (3/2).
- 2) Definition and knowledge of application of the following:  
Chakradar Paran, Gat-Quida, Tripalli, Rela, Baant, Chalan (बांट, चलन).
- 3) Merits and Demerits of Tabla Players. (तबलावादकाचे गुण—दोष)

#### **Unit III (08 Marks)**

- 1) General knowledge and practical utility of different Indian Percussion Instruments in folk music.
- 2) Detailed knowledge of Tabla accompaniment with different styles of vocal and instrumental music: धमार, तुमरी, भजन.
- 3) Writing any taal in Bhatkhande and Paluskar Tala-Notation System.

#### **Unit IV (12 marks)**

- 1) Essay on any one following subjects:
  - i) Principles of effective presentation
  - ii) Different 'Baaj' of tabla
- 2) Life History and contribution of the following Tabla Maestros:  
१) पं. पागलदास २) उ. सुधार खाँ ३) पं. नानासाहेब पानसे.
- 3) Three Characteristics of नाद (Nad) (Pitch, Volume and Timber)

## **Books Recommended:**

1. पंडित वि.ना.भातखंडे : हिंदुस्थानी संगीत क्रमिक पुस्तक मालिका भाग २ ते ४
2. व्ही.एन.पटवर्धन – राग विज्ञान – १ ते ५
3. पंडित वि. ना. भातखंडे (विष्णु शर्मा) हिंदुस्थानी संगीत पध्दती भाग २ ते ४
4. पं. रामाश्रय झा : अभिनव गीतांजली भाग १ ते ५ (संगीत सदन प्रकाशन, इलाहाबाद)
5. प्रभूलाल गर्ग “वसंत” : संगीत विशारद (संगीत कार्यालय हाथरस)
6. शांति श्रीखंडे – संगीत शास्त्र दर्पण भाग १ व २
7. महेश नारायण सक्सेना – संगीत शास्त्र भाग १ व २
8. प्रो. बी. आर. देवधर – थोर संगीतकार
9. डॉ. नारायण मंगरुळकर – संगीतातील घराणी आणि चारित्रे
10. डॉ. नारायण मंगरुळकर – संगीत शास्त्र विजयिनी
11. लक्ष्मी नारायण गर्ग – हमारे संगीत रत्न
12. अशोक रानडे – लोक संगीताचे शास्त्र
13. संगीत हाथरस – लोक संगीत अंक
14. डॉ.अनिता सेन – रविंद्र संगीत
15. Bandhopadhyaya – Sitar Marg part, I, II, III
16. गोडबोले – तबला शास्त्र
17. गोडबोले – ताल दीपिका
18. किरपेकर : ताल वैभव
19. ताल अंक – संगीत कार्यालय हाथरस
20. सत्यनारायण वशिष्ठ – कायदा और पेशकार
21. सत्यनारायण वशिष्ठ – ताल मार्टड
22. अरविंद मुळगावकर – तबला

23. डॉ. जी. एच. तारळेकर — भारतीय वाद्यांचा इतिहास
24. कै. चैतन्य देसाई — संगीत विषयक संस्कृत ग्रंथ (म.वि.ग्रं.नि.मं)
25. डॉ. एस. एस. परांजपे — भारतीय संगीत का इतिहास
26. वायलीन : श्री. ना. वि. पंडित (म.वि.ग्रं.नि.मं)
27. हार्मोनियम अ. वि. बेडेकर (म.वि.ग्रं.नि.मं)
28. डॉ. आबान मिस्त्री : तबला एवं पखवाज के घराने एवं परम्पराएँ
29. लोकसंगीत अंक — केशवचंद्र वर्मा, प्रदीपन प्रकाशन ६५, टैगोर टाउन, इलाहाबाद
30. Pt. Bhatkhande: A short historical survey of Northern Indian Music
31. Pt. Bhatkhande: A Comparative study of Indian Music of 16<sup>th</sup>, 17<sup>th</sup> and 18<sup>th</sup> Century.
32. ताल प्रभाकर प्रश्नोत्तरी : श्री. गिरीशचंद्र श्रीवास्तव
33. ताल परिचय: भाग १, २, ३ श्री. गिरीशचंद्र श्रीवास्तव
34. पं. रामाश्रय झा — अभिनव गीतांजली भाग १ ते ५, संगीत सदन प्रकाशन इलाहाबाद

\* \* \* \* \*

**Rashtrasant Tukadoji Maharaj  
Nagpur University, Nagpur**

**SEMESTER SYSTEM SYLLABUS**

**FOR**

**B.A.III**

**MUSIC**

**( VOCAL AND INSTRUMENTAL )**

**(WITH EFFECT FROM 2018-19 AND ONWARDS)**

**A)**

**Semester Pattern**  
**B. A. - Part III**  
**INDIAN MUSIC**  
**(Vocal and Instrumental)**

- 1) दर आठवड्याला प्रात्यक्षिकासाठी (Practical) ६ तासिका व संगीत शास्त्रासाठी (Theory) २ तासिका असाव्यात.
- 2) एका वेळी एका गटात ७ पेक्षा अधिक विद्यार्थी/विद्यार्थिनी नसाव्यात.
- 3) आवाजाच्या नैसर्गिक भिन्नतेमुळे विद्यार्थी/विद्यार्थिनी यांचा प्रात्यक्षिकाचा वर्ग वेगळा असावा.
- 4) ४८ मिनिटांची प्रात्यक्षिकाची एक तासिका ही ४८ मिनिटांच्या शास्त्राच्या एका तासिकेसमान मानली जाईल.

One practical period of 48 Minutes shall be counted equal to one lecture period of 48 Minutes.

---

**Notes:-**

- 1) Acoustic (Manual) taanpura is mandatory in practical classes as well as practical exam.
- 2) Attention of the candidates, their guardians and teachers is drawn to the fact that the Harmonium accompaniment for vocal music will not be allowed.
- 3) Tabla player's accompaniment is mandatory in practical classes, as well as in practical exam. Only external students are allowed to arrange their own tabla accompanist in practical exam.
- 4) Following instruments can be offered for Exam in instrumental music:

a) Violin	e) Bin	i) Sanai	m) Guitar
b) Dilruba	f) Got-bin	j) Flute	n) Keyboard
c) Israj	g) Sitar	k) Tabla	
d) Sarangee	h) Sarod	l) Harmonium	
- 5) A) Candidate offering instrumental music should study and practice मसितखानी गत instead of विलंबित ख्याल and रजाखानी गत instead of द्रुत ख्याल. Candidates are expected to know the history of their instrument, parts, related technical terms and method of tuning.  
B) Syllabus for Tabla is given at the end separately.
- 6) Candidates should submit the checked practical record at the time of practical exam.
- 7) Bhatkhande or Paluskar system of notation will be followed.

**Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur**

**SEMESTER SYSTEM SYLLABUS**

**B.A.III MUSIC**

**(Vocal and Instrumental)**

---

***PATTERN OF EXAMINATION AND MARKS DISTRIBUTION***

**Theory Paper :**

- One theory paper of **40 marks of two hours duration** will be conducted at the end of each semester.

**Practicals :**

1. One Practical examination of **40 marks of half an hour duration** in each semester will be conducted at the end of the same semester.
2. Practical examination in each semester will be conducted by Internal and External examiners appointed by the University.

**Internal Assessment:**

1. Head of the department will carry out internal assessment of the students on the basis of evaluation report from the concerned teacher/ teachers, under the supervision of the principal of the college and will be done at the end of each semester.
2. Distribution of **20 marks** of Internal Assessment is as under-
  - **10 marks for Theory Assessment --**

i. Assignment /Project work	-----	(05 marks)
ii. Group disc./ Seminar/ guest lectures	-----	(05 marks)
  - **10 marks for Practical Assessment --**

i. Class Attendance	-----	(05 marks)
ii. Participation in College activities	-----	(05 marks)

**गुण विभाजन**  
**विषय – भारतीय संगीत**  
**क्रियात्मक परिक्षेच्या गुण विभाजनाचा तक्ता**

	गुण
1) प्रात्याक्षिक वही	०५
2) अलंकार	०३
3) सरगम व लक्षणसंगीत	०३
4) विलंबित ख्याल गायकीसह/मसीतखानी गत	१०
5) छोटाख्याल/रजाखानी गत	०८
6) धृपद, धमार, तराणा/धुन	०४
7) तालज्ञान व रागज्ञान	०४
8) सुगमसंगीत	०३
<hr/>	
<b>एकूण गुण</b>	<b>४०</b>

<b>Theory Paper</b>	---	<b>40 marks</b>
<b>Internal Assessment (Theory)</b>	---	<b>10 marks</b>
<b>Practical Exam</b>	---	<b>40 marks</b>
<b>Internal Assessment (Practical)</b>	---	<b>10 marks</b>
<hr/>		
<b>Total</b>	<b>---</b>	<b>100 marks</b>

- Marking distribution will be same for each semester.
- The student has to pass theory, practical and internal assessment separately with minimum 40 percent.

---

**B. A. Part III**  
**Semester V**  
**Practical Test**  
**(Approximately half an Hour)**

---

**Marks - 40**

---

- 1) The candidate will be required to study the following.  
**अलंकार तालांत बनविणे.**
- 2) Sargam and Lakshan geet in each from of the following Ragas:  
**i) Chhayanat ii) Durga iii) Puriyadhanashri**  
**iv) Darbari Kanada v) Miya Malhar**
- 3) Vilambit khyal / masitkhani gat with detailed gayaki in **any two** of the prescribed Ragas. Drut khyal or raja khani gat with gayaki in all the prescribed Ragas.
- 4) One Dhrupad, Dhamar with Dugun, Tigun, Chaugun and one Tarana from prescribed Ragas.
- 5) Study of following Talas with dugun, tigun and chougun.  
**i) Jat Tal ii) Ada Chautal iii) Dhumali**
- 6) Outline of semi classical songs.  
**Dadra, Thumri, Natyageet**

<b>B. A. Part III</b>		
<b>Semester V</b>		
<b>Time - Two hours</b>	<b>Theory Syllabus</b>	<b>Marks - 40</b>

### **Unit I (Marks: 08)**

- 1) Classification of Rag (रागवर्गीकरण)
  - i) That – rag vargikaran
  - ii) Dashavidhi rag vargikaran (By Pt. Sharang Dev)
- 2) General knowledge of the biographies and the contribution of the following Musicians:
  - i) Haddu-Hassu Khan    ii) Bal Gandharva    iii) Pt. Ravi Shankar

### **Unit II (Marks: 12)**

- 1) Study of theoretical details of ragas prescribed for practical course (Chhayanan, Durga, Puriya dhanashri, Darbari kanada, Miya malhar) and their comparative study.
- 2) Reading and writing of notation of songs (Bandish) / Gats prescribed in practical course.
- 3) Writing of Talas (Jat taal, Ada choutal, Dhumali) with Dugun, Tigun and Chougund

### **Unit III (Marks: 08)**

- 1) Analysis of the styles of the following Gharanas and their history:
  - i) Gwalior, Agra, Patiyala
  - ii) Development of Gayaki/Gatkari styles of instrumental music, History and development of the musical instrument offered (only for students of instrumental music )
- 2) Essay on any of the following topics:
  - i) GurushishyaParampara and Institutional system of music teaching.
  - ii) Contribution of Saints in Music.

### **Unit IV (Marks: 12)**

- 1) Samvad, Anuvad and Vivad and their relation with shruties.
- 2) श्रुती—स्वर व्यवस्था in Ancient, Medieval and Modern period, its comparative Study.
- 3) Harmony-melody, Present day Alap gayan, Gamak and its kinds, Taan and its kinds.

---

**B. A. Part III**  
**Semester VI**  
**Practical Test**  
**(Approximately half an Hour)**      **Marks - 40**

---

- 1) The candidate will be required to study the following.  
**अलंकार तालांत बनविणे.**
- 2) Sargam and Lakshan Geet in each from of the following Ragas:  
**i) Shuddha kalyan ii) Jaijaiwanti iii) Miya ki todi**  
**iv) Marva v) Bahar**
- 3) Vilambit khyal / Masitkhani gat with detailed gayaki in **any two** of the prescribed Ragas. Drut khyal or Rajakhani gat with gayaki in all the prescribed Ragas.
- 4) One Dhrupad, one Dhamar with dugun, tigun and chaugun and a Tarana from prescribed Ragas.
- 5) Study of following Talas with dugun, tigun and chougun.  
**i) Addha Trital ii) Sawari (15 matra) iii) Panjabī**
- 6) Outline of Outline of semi classical songs.  
**Dadra, Thumri, Natyageet.**

---

**B. A. Part III**  
**Semester VI**

**Time – Two hours**

**Theory Syllabus**

**Marks - 40**

---

**Unit I (Marks: 08)**

- 1) Classification of Rag (रागवर्गीकरण)
  - i) Rag-Ragini vargikaran
  - ii) Ragang-rag vargikaran
- 2) General knowledge of the biographies and the contribution of the following Musicians:
  - i) Hirabai Badodekar
  - ii) Vasantrao Deshpande
  - iii) Ustad Faiyaz Khan

**Unit II (Marks: 12)**

- 1) Study of theoretical details of ragas and prescribed for practical course (Shuddha kalyan, Jaijaiwanti, Miya ki todi, Marva, Bahar) and their comparative study.
- 2) Reading and writing of notation of songs (Bandish / Gat) prescribed in the practical course.
- 3) Writing of Talas [Aaddha trital, Sawari (15 matra), Panjabil] with dugun, tigun, chougun and Aad laya (3/2).

**Unit III (Marks: 08)**

- 1) Analysis of the styles of the following Gharanas and their history.  
Kirana, Jaipur, Seniya
- 2) Essay on any of the following topics:
  - i) Propagation of Music through audio-visual aids.
  - ii) Application of Music (advertisement, Films, Drama etc.)
  - iii) Role of Music in Multi-Media

**Unit IV (Marks: 12)**

- 1) Gramas, Murchana, Jatigayan
- 2) Ancient Nibaddha gaan: Prabandha, vastu, rupak. Anibaddha gaan: Rag Alap, roopakalap, aalapti.
- 3) Swasthan Niyam, mukhachalan, Akshiptika.

---

**B) Semester Pattern Syllabus for Tabla Practical****B. A. – Part III****Semester V****Marks – 40**

---

Note:-

1. Tabla Solo-playing along with Lehara (लहरा) independently at least for 30 minutes in all the Talas (as per Syllabus)
  2. Practice of tuning the Tabla.
  3. In addition to the course prescribed up to B.A. – Part I & Part II.
- 

**Tabla Practical**

- 1) Thekas of the following Talas:-

Punjabi, Vishnu

- 2) Solo playing with 'Lehara' (लहरा) at least 30 minutes in each of the following talas: Zaptal, Ada Choutal, along Trital with the Vistar with various bols.
- 3) Advanced presentation of Peshkars, Quidas, Gats, Parans, Mukhadas, Tukdas, Relas and Bedam, Damdar and Chakradaar tihaees for (at least) 10 minutes.
- 4) Use of Dadra tala in Thumri (along with laggee playing, showing sam with tihai)
- 5) Oral rendering in all Talas and Bols prescribed in syllabus
- 6) Proficiency in accompaniment to vocal music and dance (Kathhak).
- 7) Good collection of various bols in different Talas (Tripallis, Choupallis, Farmishi, etc.)
- 8) Two Paran's and two chakardar Parans (चक्करदार परन) in Tal Choutal and Tevra
- 9) Proficiency in 'Tirkit, 'Dhirkit' and 'Dhirdhir' Playing and Drut Trital.

**गुण विभाजन**  
**विषय – तबला**  
**क्रियात्मक परिक्षेच्या गुण विभाजनाचा तब्ला**

	गुण
1) प्रात्यक्षिक वही	०५
2) लहरा सोबत एकल तबलावादन	१०
3) तालाचे ठेके व दुगुन इ.	०५
4) पढंत आणि साधे कायदे	०४
5) अप्रचलित तालवादन	०४
6) लग्गीवादन सामग्री	०४
7) तालशान, वादनशैली व सामान्य प्रभाव	०४
8) संगीताबरोबर साथसंगत	०४
<hr/>	
<b>एकूण गुण</b>	<b>४०</b>

<b>Theory Paper</b>	---	<b>40 marks</b>
<b>Internal Assessment (Theory)</b>	---	<b>10 marks</b>
<b>Practical Exam</b>	---	<b>40 marks</b>
<b>Internal Assessment (Practical)</b>	---	<b>10 marks</b>
<hr/>		
<b>Total</b>	<b>---</b>	<b>100 marks</b>

- Marking distribution will be same for each semester.
- The student has to pass theory, practical and internal assessment separately with minimum 40 percent.

---

## **Semester Pattern Syllabus for Tabla Theory**

### **B. A. – Part III**

### **Semester V**

**Time – Two hours**

**Marks - 40**

---

#### **Unit I (08 Marks)**

1. Critical study of all the Gharanas of Tabla: Delhi, Banaras and Punjab with their 'Baaj', and its appropriate examples
2. Essays on the following topics:
  - a. Peculiarities of accompaniment with Vocal, Instrumental music and dance
  - b. Importance of रियाज़ and हस्त साधन

#### **Unit II (15 Marks)**

1. Definition and knowledge of application of the following terms: Theka-Prastar (ठेका—प्रस्तार), Mishra and Sankeerna jati, Ku-aad, Be-aad, Gat-Paran (गत—परन), Navahakka (नौहक्का) Tripalli, Choupali (त्रिपल्ली, चौपल्ली)
2. Study of North Indian Tal system and Notation system
3. Theoretical details of all practical portions of the syllabus.

#### **Unit III (08 Marks)**

1. Short life sketches of eminent Tabla Maestros:  
१) ड. कुद्रु सिंह २) पं. अनोखे लाल ३) पं. कण्ठे महाराज ४) उस्ताद झाकीर हुसैन.
2. Knowledge of different Layakaries viz:- Ku-Aad(कुआड), Biaad (बिआड) Different Tal (Rhythm) Instruments and their co-relation.

#### **Unit IV (12 marks)**

1. Comparative study of Khula and Bandh Baj (खुला व बंद बाज)
2. Writing notation of all talas prescribed for third year Practical course along with different Quida, Relas, Peshkar, Paran, Tukdas, Mukhdas and different Layakaries
3. Comparative study of tabla solo v/s accompaniment

---

## **Semester Pattern Syllabus for Tabla Practical**

### **B. A. – Part III**

#### **Semester VI**

**Marks - 40**

---

Note:-

1. Tabla Solo-playing along with Lehara (लहरा) independently at least for 30 minutes in all the Talas (as per Syllabus)
  2. Practice of tuning the Tabla.
  3. In addition to the course prescribed up to B.A. – Part I & Part II.
- 

### **Tabla Practical**

- 1) Thekas of the following Talas:-

Brahma tal, Gaja Zampa

- 2) Solo playing with ‘Lehara’ (लहरा) at least 30 minutes in each of the following talas: Ektal, Pancham Sawari and Rudra tal Talong with Trital with Vistar with various bols.
- 3) Advanced presentation of Peshkars, Quidas, Gats, Parans, Mukhadas, Tukdas, Relas and Bedam, Damdar and Chakradaar tihaees for (at least) 10 minutes.
- 4) Use of Keharava tala in Thumri (along with laggee playing, showing sam with tihai)
- 5) Oral rendering in all Talas and Bols prescribed in syllabus
- 6) Proficiency in accompaniment to instrumental and light music.
- 7) Good collection of various bols in different Talas (Tripallis, Choupallis, Farmishi, etc.)
- 8) Two Paran’s and two chakardar Parans (चक्करदार परन) in Tal Dhamar, and Sool tal.
- 9) Proficiency in ‘Tirkit’, ‘Dhirkit’ and ‘Dhirdhir’ Playing and Drut Trital.
- 10) Thorough knowledge of the methods of playing (Baaj) and Two Gharanas of choice.

---

## **Semester Pattern Syllabus for Tabla Theory**

### **B. A. – Part III**

### **Semester VI**

**Time – Two hours**

**Marks - 40**

---

#### **Unit I (08 Marks)**

1. Critical study of all the Gharanas of Tabla: Lakhnow, Farrukhabad and Ajarada with their 'Baaj', and its appropriate examples
2. Essays on the following topics:
  - a. Preparation for the solo performance
  - b. Importance of Tabla - in the Indian Rhythm Instruments

#### **Unit II (12 Marks)**

1. Definition and knowledge of application of the following terms:  
Farmaishi and Kamali (फर्माईशी व कमाली) Ten-Pranas of Tal (तालाचे दशप्राण),  
Aamad (आमद), Rao (रौ), Ladi (लडी).
2. Comparative study South Indian Tal system and Notation system
3. Theoretical details of all practical portions of the syllabus.

#### **Unit III (08 Marks)**

1. Short life sketches of eminent Tabla Maestros:  
१) उ. करामतुल्ला खाँ, २) उ. मुनीर खाँ ३) उ. अमीर हुसैन खाँ ४) पं. चतुरलाल
2. Knowledge of different Layakaries viz:- Ku-Aad(कुआड), Biaad (बिआड) Different Tal (Rhythm) Instruments and their co-relation.

#### **Unit IV (12 marks)**

1. Comparative study of tabla solo v/s accompaniment.
2. Writing notation of all talas prescribed for third year Practical course along with different Quida, Relas, Peshkar, Paran, Tukdas, Mukhdas and different Layakaries

## **Books Recommended –**

1. पंडित वि.ना.भातखंडे : हिंदुस्थानी क्रमिक पुस्तक मालिका भाग २ ते ४
2. व्ही.एन.पटवर्धन : राग विज्ञान भाग १ ते ५
3. पंडित वि.ना.भातखंडे : (विष्णु शर्मा)हिंदुस्थानी संगीत पद्धती भाग २ ते ४
4. पं. रामाश्रय झा : अभिनव गीतांजली भाग १ ते ५ (संगीत सदन प्रकाशन, इलाहाबाद)
5. शांति श्रीखंडे : संगीत शास्त्र भाग १ व २
6. महेश नारायण सक्सेना : संगीत शास्त्र भाग १ व २
7. Pandit Bhatkhande: A short historical survey of Northern Indian Music.
8. Pandit Bhatkhande : A comparative study of Indian Music of 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup> Century
9. Sangit Karyalaya: Hatharas – Sangit Visharad
10. Bandhopadhyaya: Sitar Marga Parts I, II, III
11. गोडबोले : तबला शास्त्र
12. गोडबोले : ताल दीपिका
13. किरपेकर : ताल वैभव
14. तालअंक : संगीत कार्यालय हाथरस
15. सत्यनारायण वशिष्ठ: कायदा और पेशकार
16. सत्यनारायण वशिष्ठ : ताल मार्टड
17. डॉ. जी. एच. तारळेकर: भारतीय वाद्यांचा इतिहास
18. कै. चैतन्य देसाई : संगीत विषयक संस्कृत ग्रंथ (म.वि.ग्र.नि.मं)
19. डॉ.एस.एस.परांजपे : भारतीय संगीताचा इतिहास
20. डॉ.नारायण मंगरूळकर : संगीत शास्त्र विजयिनी
21. डॉ.नारायण मंगरूळकर : संगीतातील घराणी आणि चारित्रिये
22. प्रो. बी. आर. देवधर: थोर संगीतकार

23. लक्ष्मी नारायण गर्ग : हमारे संगीत रत्न
24. अशोक रानडे : लोक संगीताचे शास्त्र
25. लोक संगीत अंक : संगीत हाथरस
26. डॉ. अनिता सेन : रविंद्र संगीत
27. वायलीनः श्री. ना. वि. पंडित (म.वि.ग्र.नि.मं)
28. डॉ. आबान मिस्त्री : तबला एवं पखवाज के घराने एवं परम्पराएँ
29. हार्मोनियम : अ. वि. बेडेकर (म.वि.ग्र.नि.मं)
30. तबला : अरविंद मुळगांवकर (म.वि.ग्र.नि.मं)
31. लोक संगीत अंक केशवचंद्र वर्मा, प्रदीपन प्रकाशन ६५ए टँगोर ए इलाहाबाद
32. ताल प्रभाकर प्रश्नोत्तरीः श्री. गिरीशचंद्र श्रीवास्तव
33. ताल परिचय भाग १, २, ३ : श्री. गिरीशचंद्र श्रीवास्तव
34. पं. रामाश्रय झा – अभिनव गीतांजली भाग १ ते ५, संगीत सदन प्रकाशन इलाहाबाद

\* \* \* \* \*

## **PROGRAMME OUTCOMES – B.A.**

1. Integrate student's learning across all facets of their lives.
2. Analyse critically and imaginatively. Develop skills of critical analyse and interpretation.
3. Communicate effectively
4. Understand the ethical implications of ideas, communications and actions
5. Appear in competitive examinations.

## **PROGRAMME SPECIFIC**

1. Understand background of our historic past, religion, customs, institutions, administration and so on.
2. Understand Social, Political, Religious and Economic conditions of the people.
3. Understand the history of world with comparative approach.
4. Analyse relationship between the past and the present times and bringing its contemporary relevance.
5. Emphasis on developing critical thinking in historical writing, discussion and interpretation among students.
6. Prepare students for various competitive examinations.

## **B.A. First Year**

### **Semester I**

#### **Paper 1T1      History of India from Earliest Times to 1525**

##### **Outcomes:-**

1. Study the ancient Indian civilization such as Harappa and Vedic and understand social, political and religious changes during the period.
2. Develop the ability to understand the origin and tenets of Jainism and Buddhism.
3. Acquire knowledge about ancient Indian dynasties – Maurya, Gupta and Vakataka.
4. Introduction to prominent Sultanate dynasties and their administrative systems in medieval India.
5. Acquire knowledge on religious, culture and art history in medieval India.

**Time : Three Hours**

**Full Marks : 80**

---

#### **Unit – 1**

- a. The Harappan Civilization – Extent, Town Planning, Social, Religious Condition.
- b. Rig Vedic, Later Vedic Age – Polity, Society, Religious Condition
- c. Jainism, Buddhism – Origin, Tenets

#### **Unit – 2**

- a. Chandragupta Maurya – Administration, Ashoka – His Conquests, Dhamma.
- b. The Gupta Dynasty – Chandra Gupta-I, Samudragupta, Chandragupta Vikramaditya
- c. Vakataka – Prabhavati Gupta, Pravarsen-I, Harisen, Cultural condition

#### **Unit – 3**

- a. Iltutmish – Founder of Slave Dynasty, Balban – Blood and Iron Policy
- b. Alauddin Khilji – Administrative Policy
- c. Mohammad – bin – Tuglaq – His Experiments, Firoz Tuglaq – Administration

#### **Unit – 4**

- a. Sufi cult – Tenets, Moinuddin chisti
- b. Bhakti Movement – Main features
- c. Architecture of Sultanate period.

## **Books Recommended:-**

### **English:-**

1. The Wonder that was India – A. L. Basham
2. History & Culture of the Indian people Vols II, III, IV & V (Bharatiya Vidya Bhavan Series) – R. C. Majumdar et al.
3. Ancient India – R. C. Majumdar
4. Ancient India – V.D. Mahajan
5. Ancient Indian History & Culture - S.R. Sharma
6. Medieval India, from Sultante to the Mughals – Satish Chandra.
7. Delhi Sultanate – A.L. Shrivastava
8. Mughal Empire – A.L. Shrivastava
9. New History of the Marathas Vol. I – G.S. Sardesai.

### **हिन्दी :-**

10. प्राचीन भारत का इतिहास – डी. एन. झा और के. एम. श्रीमाली
11. प्राचीन भारत का इतिहास – दिनानाथ वर्मा
12. भारत का बृहत इतिहास भाग १, २ – श्री. नेत्र पाण्डे
13. दिल्ली सल्तनत – ए. एल. श्रीवास्तव
14. मुगल साम्राज्य – ए. एल. श्रीवास्तव
15. मराठों का नवीन इतिहास, खंड १ – गो. स. सरदेसाई

### **मराठी :-**

16. प्राचीन भारत – अ. वि. विश्वरूपे
17. भारताचा इतिहास (प्राचीन काळ ते १६०५) – श. गो. कोलारकर
18. भारताचा प्राचीन व मध्ययुगीन इतिहास – च. श. फडनाईक
19. भारताचा इतिहास (प्रारंभापासून इ.स. १७६०) – नी. सी. दीक्षित
20. मध्य कालीन भारत – ढवळे, बारगळ
21. मराठी सत्तेचा विकास व च्छास – प्रा. ल. सासवडकर
22. प्राचीन भारताचा सांस्कृतिक व राजकीय इतिहास – आचार्य केशद्वीवार
23. मध्ययुगीन भारत – आचार्य केशद्वीवार
24. भारताचा इतिहास प्रारंभापासून १७६० पर्यंत – डॉ. धनंजय आचार्य

बी.ए. भाग — १

सत्र — प्रथम

पेपर १T1

भारताचा इतिहास प्रारंभापासून ते १५२५ पर्यंत

वेळ : तीन तास

एकूण गुण : ८०

---

घटक — १

- अ) हडप्पा संस्कृती — विस्तार, नगर रचना, सामाजिक, धार्मिक स्थिती
- ब) ऋग्वेदिक व उत्तरवैदिक काळ — राजकीय, सामाजिक, धार्मिक स्थिती
- क) जैन धर्म, बौद्ध धर्म — उदय, सिध्दान्त

घटक — २

- अ) चंद्रगुप्त मौर्य — प्रशासन, अशोक — कामगिरी व धम्म
- ब) गुप्त राजवंश — चंद्रगुप्त प्रथम, समुद्रगुप्त, चंद्रगुप्त विक्रमादित्य
- क) वाकाटक — प्रभावती गुप्ता, प्रवरसेन-I, हरीसेन, सांस्कृतिक स्थिती

घटक — ३

- अ) अल्तमश — गुलाम राजवंशाचा संस्थापक, बल्बन — रक्त आणि लोह धोरण
- ब) अल्लाउद्दीन खिलजी — प्रशासकिय धोरण
- क) महम्मद—बिन—तुघलक — त्याचे प्रयोग, फिरोज तुघलक — प्रशासन

घटक — ४

- अ) सुफीपंथ — सिध्दांत, मोईनुद्दीन चिश्ती
- ब) भक्ती चळवळ, प्रमुख वैशिष्ट्ये, कबीर, नानक
- क) सल्तनतकालीन स्थापत्यकला

बी.ए. भाग — १

सत्र — प्रथम

विषय — इतिहास

पेपर 1T1

भारत का इतिहास आरंभ से १५२५ तक

समय : तीन घंटे

कुल अंक : ८०

---

इकाई : १

- अ) हड्ड्या सभ्यता — विस्तार, नगर नियोजन, सामाजिक एवं धार्मिक स्थिती
- ब) ऋग्वैदिक एवं उत्तर वैदिक काल — राजकीय, सामाजिक, धार्मिक स्थिती
- क) जैनधर्म, बौद्धधर्म — उदय एवं सिद्धांत

इकाई : २

- अ) चंद्रगुप्त मौर्य — प्रशासन, अशोक विजय अभियान, धर्म
- ब) गुप्त वंश — चंद्रगुप्त प्रथम, समुद्रगुप्त, चंद्रगुप्त विक्रमादित्य
- क) वाकाटक — प्रभावती गुप्ता, प्रवरसेन प्रथम, हरीसेन, सांस्कृतिक स्थिती

इकाई : ३

- अ) इल्लुतमिश — गुलाम वंश का संस्थापक, बलबन — रक्त एवं लौह नीति
- ब) अल्लाउद्दीन खिलजी — प्रशासनिक नीति
- क) मुहम्मद — बिन — तुगलक — प्रयोग, फिरोज तुगलक का प्रशासन

इकाई : ४

- अ) सुफी पंथ — सिद्धांत; मोईनुद्दीन चिश्ती
- ब) भक्ती आंदोलन — प्रमुख विशेषताएँ; कबीर, नानक
- क) सल्तनतकालीन स्थापत्यकला

**B.A. First Year**

**Semester II**

**Paper 2T1**

**History of India from 1526 to 1761**

**Outcomes:-**

1. To understand rise and establishment of Mughal dynasty in India.
2. Know about the war of succession or Shahjahan and understand the Deccan Policy of Aurangzeb.
3. Introduction to history of Marathas; understand significance of coronation and administrative system of Chhatrapati Shivaji.
4. Analyse the Maratha War of Independence and study third battle of Panipat in Peshwa period.
5. Understanding foundation of East India Company's rule in India.

**Time : Three Hours**

**Full Marks : 80**

---

**Unit – 1**

- a. Establishment of Mughal Power – Babur
- b. Sher Shah Suri – His Administrative Reforms
- c. Akbar – Religious Policy, Territorial Expansion

**Unit – 2**

- a. Shah Jahan – War of Succession
- b. Aurangzeb – Deccan Policy
- c. Art and Architecture

**Unit – 3**

- a. Shivaji – Relations with Deccan Powers and the Mughals
- b. Shivaji's Coronation and Administration
- c. Chhatrapati Sambhaji – His relations with Mughals

**Unit – 4**

- a. Maratha War of Independence, Accession of Shahu
- b. Third battle of Panipat – Causes and Consequences
- c. Establishment of East India Company's rule in India

## **Books Recommended :-**

### **English:-**

1. The Wonder that was India – A. L. Basham
2. History & Culture of the Indian people Vols II, III, IV & V (Bharatiya Vidya Bhavan Series) – R. C. Majumdar et al.
3. Ancient India – R.C. Majumdar
4. Ancient India – V. D. Mahajan
5. Ancient Indian History & Culture - S. R. Sharma
6. Medieval India, from Sultante to the Mughals – Satish Chandra.
7. Delhi Sultanate – A. L. Shrivastava
8. Mughal Empire – A. L. Shrivastava
9. New History of the Marathas Vol. I - G.S. Sardesai.

### **हिन्दी :-**

१०. प्राचीन भारत का इतिहास – डी. एन. झा और के. एम. श्रीमाली
११. प्राचीन भारत का इतिहास – दिनानाथ वर्मा
१२. भारत का बृहत इतिहास भाग १, २ – श्री. नेत्र पांडे
१३. दिल्ली सल्तनत – ए. एल. श्रीवास्तव
१४. मुगल साम्राज्य – ए. एल. श्रीवास्तव
१५. मराठों का नवीन इतिहास, खंड १ – गो. स. सरदेसाई

### **मराठी :-**

१६. प्राचीन भारत – अ. वि. विश्वरूपे.
१७. भारताचा इतिहास (प्राचीन काळ ते १६०५) – श. गो. कोलारकर
१८. भारताचा प्राचीन व मध्ययुगीन इतिहास – च. श. फडनाईक
१९. भारताचा इतिहास (प्रारंभापासून इ.स. १७६०) – नी. सी. दीक्षित
२०. मध्यकालीन भारत – ढवळे, बारगळ
२१. मराठी सत्तेचा विकास व न्हास – प्रा. ल. सासवडकर
२२. प्राचीन भारताचा सांस्कृतिक व राजकीय इतिहास – आचार्य केशटीवार
२३. मध्ययुगीन भारत – आचार्य केशटीवार
२४. भारताचा इतिहास प्रारंभापासून १७६० पर्यंत – डॉ. धनंजय आचार्य

बी.ए. भाग — १

सत्र — द्वितीय

पेपर 2T1

भारताचा इतिहास १५२६ ते १७६१ पर्यंत

वेळ : तीन तास

एकूण गुण : ८०

---

घटक — १

- अ) मुघल सत्तेची स्थापना — बाबर
- ब) शेरशाह सुरी — त्याची प्रशासकीय सुधारणा
- क) अकबर — धार्मिक धोरण, साम्राज्य विस्तार

घटक — २

- अ) शहाजहान — वारसा युद्ध
- ब) औरंगजेब — दक्षिण धोरण
- क) कला आणि स्थापत्यकला

घटक — ३

- अ) शिवाजी — दख्खनी सत्ता आणि मुघलांसोबत संबंध
- ब) शिवाजीचा राज्याभिषेक आणि प्रशासन
- क) छत्रपती संभाजी—मुघल संबंध

घटक — ४

- अ) मराठा स्वातंत्र्य संग्राम, शाहूचे राज्यारोहण
- ब) पानिपतची तिसरी लढाई — कारणे आणि परिणाम
- क) भारतात ईस्ट इंडिया कंपनीच्या सत्तेची स्थापना

बी.ए. भाग — १

सत्र — दोन

पेपर 2T1

भारत का इतिहास १५२६ से १७६१ तक

समय : ३ घंटे

कुल अंक : ८०

---

इकाई : १

- अ) मुगल सत्ता की स्थापना—बाबर
- ब) शेरशाह सूरी — प्रशासनिक सुधार
- क) अकबर — धार्मिक नीति एवं साम्राज्य विस्तार

इकाई : २

- अ) शारजहाँ — उत्तराधिकार युद्ध
- ब) औरंगजेब — दख्खन नीति
- क) कला एवं स्थापत्य

इकाई : ३

- अ) शिवाजी — दख्खन के राज्य एवं मुगलों के साथ संबंध
- ब) शिवाजी का राज्यभिषेक एवं प्रशासन
- क) छत्रपती संभाजी—मुगल संबंध

इकाई : ४

- अ) मराठा स्वतंत्रता युद्ध, शाहू का पदारोहण
- ब) पानीपत की तीसरी लड़ाई — कारण और परिणाम
- क) भारत में ईस्ट इंडिया कंपनी के शासन की स्थापना

**B.A. Second Year**

**Semester III**

**Paper 3T1**

**History of India : 1764 to 1885**

**Outcomes:-**

1. Understand the rise of British Power in India and analyse their agrarian policy and land revenue system.
2. Analyse policies of Governor-Generals in India under East India Company's rule.
3. Study socio-religious movements of modern India.
4. Understand the administrative reforms introduced by Viceroys during establishment of British rule in India.
5. Analyse the causes of rise of Indian nationalism and emergence of local organisations.

**Time : Three Hours**

**Full Marks : 80**

---

**Unit : 1**

- a. Battle of Buxar – Treaty of Allahabad, Dual Government of Lord Clive
- b. Permanent Settlement, Ryotwari, Mahalwari System of Agriculture
- c. Commercialization of Agriculture

**Unit : 2**

- a. Subsidiary Alliance of Lord Wellesley
- b. Internal Reforms of Lord William Bentinck
- c. Doctrine of Lapse of Lord Dalhousie

**Unit: 3**

- a. Revolt of 1857 – Causes, Effects
- b. Brahmo Samaj, Prarthna Samaj, Arya Samaj
- c. Satya Shodhak Samaj, Depressed Class Movement

**Unit : 4**

- a. Lord Lytton's Administration
- b. Lord Ripon's Internal Reforms
- c. Rise of Indian Nationalism, Foundation of Local organizations

## **Books Recommended**

### **English:-**

1. The New look at Modern Indian History – B.L. Grover and Alka Mehta
2. An Advanced History of India – Majumdar, Ray Choudhary, Datta
3. A History of Modern India – Ishwari Prasad, Subhedar
4. An Advanced Study in the History of Modern India, Vol. I, II, III – G.S. Chabra
5. History of Freedom Movement in India – Four Volumes – Tarachand
6. India's Struggle for Independence – Bipan Chandra
7. History of Modern India – A.L. Shrivastava.

### **हिन्दी :—**

8. आधुनिक भारत — दीनानाथ वर्मा
9. आधुनिक भारत का इतिहास — ग्रोवर एवं म् यशपाल
10. आधुनिक भारत का इतिहास — आर. एल. शुक्ला
11. भारत का स्वतंत्रता संघर्ष — बिपन चंद्र
12. भारतीय स्वतंत्रता आन्दोलन का इतिहास, चार खण्ड — ताराचंद
13. आधुनिक भारत — बिपन चंद्र
14. आधुनिक भारत का इतिहास, दो खण्ड — धनपति पाण्डे

### **मराठी :—**

15. अर्वाचीन भारत — के. मु. केशवीवार
16. आधुनिक भारत — ढवळे, बारगळ
17. भारताचा इतिहास (१७०७ ते १९५०) — श. गो. कोलारकर
18. आधुनिक भारताचा इतिहास (१७५७ ते १८५८) — डॉ. सुमन वैद्य, डॉ. शांता कोठेकर
19. आधुनिक भारताचा इतिहास (१८५८ ते १९२०) — डॉ. सुमन वैद्य, डॉ. शांता कोठेकर
20. आधुनिक भारताचा इतिहास (१९२० ते १९४७) — डॉ. सुमन वैद्य, डॉ. शांता कोठेकर
21. आधुनिक भारताचा इतिहास (१९४७ ते १९८६) — डॉ. शांता कोठेकर
22. आधुनिक भारताचा इतिहास — व्ही. के. जाधव

घटक — १

- अ) बक्सारची लढाई — अलाहाबादचा तह, लार्ड क्लार्क्सची दुहेरी शासनव्यवस्था
- ब) कृषी व्यवस्थेतील कायमधारा पद्धती, रयतवारी, महालवारी
- क) कृषीचे व्यापारीकरण

घटक — २

- अ) लॉर्ड वेलस्लीची तैनाती फौज पद्धत
- ब) लॉर्ड विल्यम बॅटिकच्या अंतर्गत सुधारणा
- क) लॉर्ड डलहौसीचा खालसा सिध्दान्त

घटक — ३

- अ) १८५७ चा उठाव — कारणे, परिणाम
- ब) ब्राह्मो समाज, प्रार्थना समाज, आर्य समाज
- क) सत्यशोधक समाज, वंचित वर्गाची चळवळ

घटक — ४

- अ) लॉर्ड लिटनचे प्रशासन
- ब) लॉर्ड रिपनच्या अंतर्गत सुधारणा
- क) भारतीय राष्ट्रवादाचा उदय, स्थानिक संघटनाची स्थापना

बी.ए. भाग — २

सत्र — तृतीय

पेपर 3T1

भारत का इतिहास : १७६४ से १८८५

समय : तीन घंटे

कुल अंक : ८०

---

इकाई : १

- अ) बक्सर की लड़ाई — इलाहाबाद की संधि, लॉर्ड क्लार्क्स की द्वैध शासन प्रणाली
- ब) कृषि व्यवस्था में स्थायी बंदोबस्त, रयतवारी एवं महलवारी
- क) कृषि का व्यापारीकरण

इकाई : २

- अ) लॉर्ड वेलस्ली की सहायक संधि
- ब) लॉर्ड विलियम बैंटिक के आंतरिक सुधार
- क) लॉर्ड डलहौजी की हड्डप नीति

इकाई : ३

- अ) १८५७ का विद्रोह—कारण एवं परिणाम
- ब) ब्रम्हो समाज, प्रार्थना समाज, आर्य समाज
- क) सत्यशोधक समाज, वंचित वर्ग का आंदोलन

इकाई : ४

- अ) लॉर्ड लिटन का प्रशासन
- ब) लॉर्ड रिपन के आंतरिक सुधार
- क) भारतीय राष्ट्रवाद का उदय, स्थानिय संघटनाओं की स्थापना

## **B.A. Second Year**

### **Semester IV**

**Paper 4T1**

**History of India : 1885 - 1947**

#### **Outcomes:-**

1. Understand the origin and establishment Indian National Congress.  
Understand the nature of moderates and extremists ideology.
2. Understand the phases of Indian National Movement and its impact under the leadership of Mahatma Gandhi.
3. Study various missions proposed by British government.
4. Examine role of Subhash Chandra Bose and his formed INA in struggle of Indian Independence.
5. Evaluate Mountbatten plan and Indian Independence Act of 1947.

**Time : Three Hours**

**Full Marks : 80**

---

#### **Unit : 1**

- a. Establishment of Indian National Congress
- b. Nature of Moderate Politics – 1885-1905
- c. Rise and Growth of Extremism – 1905-1920

#### **Unit : 2**

- a. Non Co-operation Movement
- b. Civil Disobedience Movement
- c. Quit India Movement

#### **Unit : 3**

- a. Rashtriya Swaysevak Sangh (R.S.S.) Role in Nation building
- b. Cripps Mission
- c. Cabinet Mission Plan

#### **Unit : 4**

- a. Subhash Chandra Bose, I.N.A.
- b. Mountbatten Plan
- c. Indian Independence Act

## **Books Recommended**

### **English:-**

1. A New Look at Modern Indian History – B.L. Grover and Alka Mehta
2. An Advanced History of India – Majumdar, Ray Choudhary, Datta
3. A History of Modern India – Ishwari Prasad, Subhedar
4. An Advanced Study in the History of Modern India, Vol. I, II, III – G.S. Chabra
5. History of Freedom Movement in India – Four Volumes - Tarachand
6. India's Struggle for Independence – Bipan Chandra
7. History of Modern India – A.L. Shrivastava.

### **हिन्दी :—**

8. आधुनिक भारत — दीनानाथ वर्मा
9. आधुनिक भारत का इतिहास — ग्रोवर एवं म् यशपाल
10. आधुनिक भारत का इतिहास — आर. एल. शुक्ला
11. भारत का स्वतंत्रता संघर्ष — बिपन चंद्र
12. भारतीय स्वतंत्रता आन्दोलन का इतिहास, चार खण्ड — ताराचंद
13. आधुनिक भारत — बिपन चंद्र
14. आधुनिक भारत का इतिहास, दो खण्ड — धनपति पाण्डे

### **मराठी :—**

15. अर्वाचीन भारत — के. मु. केशवीवार
16. आधुनिक भारत — ढवळे, बारगळ
17. भारताचा इतिहास (१७०७ ते १९५०) — श. गो. कोलारकर
18. आधुनिक भारताचा इतिहास (१७५७ ते १८५८) — डॉ. सुमन वैद्य, डॉ. शांता कोठेकर
19. आधुनिक भारताचा इतिहास (१८५८ ते १९२०) — डॉ. सुमन वैद्य, डॉ. शांता कोठेकर
20. आधुनिक भारताचा इतिहास (१९२० ते १९४७) — डॉ. सुमन वैद्य, डॉ. शांता कोठेकर
21. आधुनिक भारताचा इतिहास (१९४७ ते १९८६) — डॉ. शांता कोठेकर
22. आधुनिक भारताचा इतिहास — व्ही. के. जाधव

बी.ए. भाग — २

सत्र — चतुर्थ

पेपर 4T1

भारताचा इतिहास : १८८५ — १९४७

वेळ : तीन तास

एकूण गुण : ८०

---

घटक — १

- अ) भारतीय राष्ट्रीय काँग्रेस ची स्थापना
- ब) मवाळ राजकारणाचे स्वरूप — १८८५—१९०५
- क) जहालवादाचा उदय आणि विकास — १९०५—१९२०

घटक — २

- अ) असहकार चळवळ
- ब) सविनय कायदेभंग चळवळ
- क) 'चले जाव' चळवळ

घटक — ३

- अ) राष्ट्रीय स्वयंसेवक संघ (R.S.S.) राष्ट्रनिर्माणातील भूमिका
- ब) क्रिप्स मिशन
- क) कॉबिनेट मिशन योजना

घटक — ४

- अ) सुभाषचन्द्र बोस, आय.एन.ए.
- ब) माउंटबैटन योजना
- क) स्वतंत्र भारताचा कायदा

बी.ए. भाग — २

सत्र — चतुर्थ

पेपर 4T1

भारत का इतिहास : १८८५ — १९४७

समय : तीन घंटे

कुल अंक : ८०

---

इकाई : १

- अ) भारतीय राष्ट्रीय कॉंग्रेस की स्थापना
- ब) नरमपंथी राजनीति का स्वरूप — १८८५—१९०५
- क) उग्र राष्ट्रवाद का उदय एवं विकास : १९००—१९२०

इकाई : २

- अ) असहयोग आंदोलन
- ब) सविनय अवज्ञा आंदोलन
- क) भारत छोड़ो आंदोलन

इकाई : ३

- अ) राष्ट्रीय स्वयंसेवक संघ (R.S.S.) राष्ट्रनिर्माण में भूमिका
- ब) क्रिप्स मिशन
- क) कॉबिनेट मिशन योजना

इकाई : ४

- अ) सुभाषचंद्र बोस, आजाद हिंद फौज
- ब) माउंटबैटन योजना
- क) भारतीय स्वतंत्रता अधिनियम

**B.A. III or Final Year**

**Semester V**

**Paper 5T1**

**Modern World – 1789-1920**

**Outcomes:-**

1. Introduction to landmark events in World history.
2. Understand policy of imperialism and changes in world political order.
3. Emergence of State of Germany and its diplomatic policy.
4. Critically analyse background of First World War and international peace making attempts that followed.

**Time : Three Hours**

**Full Marks : 80**

---

**Unit : 1**

- a. French Revolution
- b. European Colonialism of Asia and Africa
- c. Causes and consequences of Imperialism

**Unit : 2**

- a. Sino-Japanese War of 1894-1895
- b. Russo – Japanese War of 1904-1905
- c. Chinese Revolution of 1911

**Unit : 3**

- a. Foreign Policy of Bismark and Kaiser Willium - II
- b. Causes of the First World War
- c. Treaty of Versailles

**Unit : 4**

- a. League of Nations - Structure
- b. League of nations – Achievements and failures
- c. Russian Revolution of 1917

## **Books Recommended**

### **English:-**

1. A History of Modern Europe Since 1789 (S. Chand & Comp.) V.D. Mahajan
2. Europe and the World (S. Chand & Comp.) – Sailendra Nath Sen.
3. Europe in 19<sup>th</sup> and 20<sup>th</sup> Century - Lipson
4. Modern Europe up to 1945 - Hazen
5. The World Since 1919-Langsam
6. Twentieth Century World – L.P. Mathur
7. Modern World – B.V. Rao
8. A History of the far East in Modern Times – H.M. Vinacke
9. The far East – Clyde and Beers
10. Modern World – S.P. Nanda
11. History of far East – Majumdar and Shrivastava

### **हिन्दी :-**

12. आधुनिक युरोप का इतिहास – व्ही. डी. महाजन
13. आधुनिक युरोप का इतिहास – सत्यकेतु विद्यालंकार
14. अन्तर्राष्ट्रीय संबंध – हरिदत्त वेदालंकार
15. आधुनिक विश्व का इतिहास – दीनानाथ वर्मा
16. बीसवीं सदी का विश्व – डॉ. संजिव जैन
17. एशिया का इतिहास – डॉ. अंबिका प्रसाद शर्मा

### **मराठी :-**

18. आधुनिक युरोप भाग २ – ब. म. मेहता
19. आंतरराष्ट्रीय संबंध भाग १, २ – म. गो. शुक्ल
20. आधुनिक भारताचा इतिहास (एस.चांद) – विद्याधर महाजन
21. आधुनिक जग – डॉ. कोलारकर, मंगेश प्रकाशन, नागपूर
22. युरोपचा इतिहास – डॉ. नी. सी. दीक्षित, पिंपळापुरे पब्लिकेशन, नागपूर
23. अर्वाचीन युरोप – डॉ. के. मु. केशद्वीवार
24. विसाव्या शतकातील जग नांदेड २००३ – डॉ. सुहास जोशी
25. आधुनिक जग भाग – १ (१८७० ते १९४५) – डॉ. सुमन वैद्य आणि डॉ. शांता कोठेकर
26. आधुनिक जग भाग – २ (१९४५ ते १९८०) – डॉ. सुमन वैद्य आणि डॉ. शांता कोठेकर
27. आधुनिक चीन – जपानचा इतिहास – तानाजीराव निकम
28. चीन व जापान : राजकीय इतिहास – डॉ. यादव गुजर
29. आधुनिक जग – धनंजय आचार्य

बी.ए. भाग — ३

सत्र — पाचवे

पेपर 5T1

आधुनिक जग — १९८९—१९२०

वेळ : तीन तास

एकूण गुण : ८०

---

घटक — १

- अ) फ्रेंच राज्यक्रांती
- ब) आशिया व आफ्रिकेतील युरोपचा वसाहतवाद
- क) साम्राज्यवादाचे कारणे व परिणाम

घटक — २

- अ) चीन—जपान युद्ध — १८९४—१८९५
- ब) रशिया—जपान युद्ध — १९०४—१९०५
- क) १९११ ची चीन मधील क्रांती

घटक — ३

- अ) बिस्मार्क व कैसर विलियम द्वितीयचे परराष्ट्र धोरण
- ब) प्रथम महायुद्धाची कारणे
- क) व्हर्सायचा तह

घटक — ४

- अ) राष्ट्रसंघ — रचना
- ब) राष्ट्रसंघ — यशापयश
- क) १९१७ ची रशियन राज्यक्रांती

पेपर 5T1

आधुनिक विश्व — १९८९—१९२०

समय : तीन घंटे

कुल अंक : ८०

---

इकाई : १

- अ) फ्रेंच क्रांति
- ब) एशिया एवं आफ्रिका में यूरोप का उपनिवेशवाद
- क) साम्राज्यवाद के कारण एवं परिणाम

इकाई : २

- अ) चीन — जापान युद्ध — १८९४—१८९५
- ब) रूस—जापान युद्ध — १९०४—१९०५
- क) १९११ — चीन की क्रांती

इकाई : ३

- अ) बिस्मार्क, कैसर विलियम द्वितीय की विदेश नीति
- ब) प्रथम विश्वयुद्ध के कारण
- क) वर्साय की संधि

इकाई : ४

- अ) राष्ट्रसंघ की संरचना
- ब) राष्ट्रसंघ की उपलब्धियाँ एवं असफलताएँ
- क) रूसी क्रांती — १९१७

**B.A. III or Final Year**

**Semester VI**

**Paper 6T1**

**Modern World : 1920-1960**

**Outcomes:-**

1. Analyse causes for the rise of dictatorship in Europe.
2. Understand international crisis; inter world war period politics and events leading to Second World War and its aftermath.
3. Understand world politics after World War and attempts to restore World peace.
4. Introduction to political shifts in West Asia.

**Time : Three Hours**

**Full Marks : 80**

---

**Unit : 1**

- a. Soviet Russia – Five Year Plans
- b. Hitler – Foreign Policy
- c. Mussolini – Foreign Policy

**Unit : 2**

- a. Sino-Japanese War of 1937-39
- b. Causes of the Second World War
- c. U.N.O. – Structure, Achievements

**Unit : 3**

- a. Cold War
- b. NATO, SEATO, Warsaw Pact
- c. Decolonisation of Asia

**Unit : 4**

- a. Establishment of Israel
- b. Non Alignment
- c. Suez Crisis

## **Books Recommended**

### **English:-**

1. A History of Modern Europe Since 1789 (S. Chand & Comp.) V.D. Mahajan
2. Europe and the World (S. Chand & Comp.) – Sailendra Nath Sen.
3. Europe in 19<sup>th</sup> and 20<sup>th</sup> Century - Lipson
4. Modern Europe up to 1945 - Hazen
5. The World Since 1919-Langsam
6. Twentieth Century World – L.P. Mathur
7. Modern World – B.V. Rao
8. A History of the far East in Modern Times – H.M. Vinacke
9. The far East – Clyde and Beers
10. Modern World – S.P. Nanda
11. History of far East – Majumdar and Shrivastava
12. A Short History of the Middle East – Somendra Lal Ray
13. Studies in World History – Satish Kumar

### **हिन्दी :-**

14. आधुनिक युरोप का इतिहास – व्ही. डी. महाजन
15. आधुनिक युरोप का इतिहास – सत्यकेतु विद्यालंकार
16. अन्तर्राष्ट्रीय संबंध – हरिदत्त वेदालंकार
17. आधुनिक विश्व का इतिहास – दीनानाथ वर्मा
18. बीसवीं सदी का विश्व – डॉ. संजिव जैन
19. एशिया का इतिहास – डॉ. अंबिका प्रसाद शर्मा

### **मराठी :-**

20. आधुनिक युरोप भाग २ – ब. म. मेहता
21. आंतरराष्ट्रीय संबंध भाग १, २ – म. गो. शुक्ला
22. आधुनिक भारताचा इतिहास (एस.चांद) – विद्याधर महाजन
23. आधुनिक जग – डॉ. कोलारकर, मंगेश प्रकाशन, नागपूर
24. युरोपचा इतिहास – डॉ. नी. सी. दीक्षित, पिंपळापुरे पब्लिकेशन, नागपूर
25. अर्वाचीन युरोप – डॉ. के. मु. केशद्वीवार
26. विसाव्या शतकातील जग नादेड २००३ – डॉ. सुहास जोशी
27. आधुनिक जग भाग – १ (१८७० ते १९४५) – डॉ. सुमन वैद्य आणि डॉ. शांता कोठेकर
28. आधुनिक जग भाग – २ (१९४५ ते १९८०) – डॉ. सुमन वैद्य आणि डॉ. शांता कोठेकर
29. आधुनिक चीन – जपानचा इतिहास – तानाजीराव निकम
30. चीन व जापान : राजकिय इतिहास – डॉ. यादव गुजर
31. आधुनिक जग – धनंजय आचार्य

बी.ए. भाग — ३

सत्र — सहावे

पेपर 6T1

आधुनिक जग : १९२०—१९६०

वेळ : तीन तास

एकूण गुण : ८०

---

घटक — १

- अ) सोवियत रशिया — पंचवार्षिक योजना
- ब) हिटलर — पराराष्ट्र धोरण
- क) मुसोलिनी — पराराष्ट्र धोरण

घटक — २

- अ) चीन—जपान युद्ध — १९३७—३९
- ब) द्वितीय महायुद्धाची कारणे
- क) संयुक्त राष्ट्रसंघ — रचना, उपलब्धी

घटक — ३

- अ) शीत युद्ध
- ब) नाटो (NATO), सिटो (SEATO), वार्सा करार (Warsaw Pact)
- क) आशियाचे निर्वसाहतीकरण

घटक — ४

- अ) इस्लायलची स्थापना
- ब) असंलग्नता
- क) सुवेद्ध प्रश्न

पेपर 6T1

आधुनिक विश्व : १९२० — १९६०

समय : ३ घंटे

कुल अंक : ८०

---

इकाई : १

- अ) रूस की पंचवर्षीय योजना
- ब) हिटलर की विदेश नीति
- क) मुसोलिनी की विदेश नीति

इकाई : २

- अ) चीन — जापान युद्ध — (१९३७—३९)
- ब) द्वितीय विश्वयुद्ध के कारण
- क) संयुक्त राष्ट्रसंघ की संरचना एवं उपलब्धियाँ

इकाई : ३

- अ) शीत युद्ध
- ब) नाटो (NATO), सिटो (SEATO), वार्सा समझौता (Warsaw Pact)
- क) एशिया का वि—उपनिवेशीकरण

इकाई : ४

- अ) इजराईल की स्थापना
- ब) गुट—निरपेक्षता
- क) सुवेज समस्या

## **NEED FOR THE SEMESTER SYSTEM**

Under the so-called conventional system of higher education governed by the old and unchanged University Act, largely shaped by the state Government keeping in view the convenience and state of mind of the majority of the mediocre learners, the undergraduate colleges entrusted with the task of catering to the needs of higher education in society, have been constrained to operate freely towards achieving their goal of both quantity and quality in higher education. Any kind of innovative change in the form of introduction of the new papers having potentials for job market or ensuring skills for the jobs in demand seems to be almost impossible owing to their lack of academic autonomy. Perhaps due to the same reason the colleges are unable to initiate some reforms in the examination and evaluation patterns largely warranted in the interest of the students' community as well as the institution. In the present crisis in higher education the semester-oriented syllabi and the corresponding examination system would be just a boon to the undergraduate colleges affiliated to Rashtrasant Tukadoji Maharaj Nagpur University by ensuring the teaching faculties as much academic autonomy as required for the change and reform in the curriculum, internal and external examination patterns and evaluation of the students from time to time.

With the commencement and implementation of semester pattern U.G. Syllabi there can be higher academic autonomy resulting into more creativity and thoughtful engagement of the teachers for academic pursuit. The colleges can hopefully bring about some meaningful changes in terms of more quantity of students admitted as well as the quality in the academic performance.

## **OBJECTIVES OF SEMESTER SYSTEM IN SOCIOLOGY**

Sociology as one of the most dynamic disciplines is primarily involved in the study of society and the social structure characterizing society. Conventionally the interest of sociology has been on knowing the intricacies of the older institutions such as family, marriage, kinship, religion and many other aspects such as group, culture, norms, values, education, stratification, etc., gaining momentum in the process of building up of a society. The focus in sociology has always been on understanding the web of social relationship and interaction which go into making the society a stronger social fabric. The theories claiming an overriding influence in sociology till the recent past have been mainly of structural-functional and conflict perspective and said to characterize the mainstream society. The structural-functional and conflict theories as a part of the mainstream society operate as the two extremes opposing each other on the basis of their respective laws of operation which mostly remain fixed or unchanged in their own right. But sociology today does not seem to remain confined to the fixed boundaries determined by the laws of structural-functionalism and social conflict. The subject has now acquired enormous flexibility and thus entered into the realms of other social sciences. It has in general assumed an interdisciplinary character. Some of the early areas of interest now either have started losing their importance or giving way to the new thrust areas of study. The prevailing scenario at the global level makes the subject oblivious of one dominant culture, order, system of values, ideas and thought. Sociology at present engages itself in focusing more on the emerging trends of multiculturalism, post-structuralism, post-modernism, hyper-modernity and globalization. The theory at present emerges to be increasingly characterized as synthetic or integrative rather than deterministic. The trend now accommodates more of a soft approach and avoids as much of a hard core approach as it can. The proposed semester pattern syllabus in sociology at the undergraduate level has been planned keeping in mind the growing acceptance for the new trends, facts of life and orientations within the domain of sociology as a science of society. The learners of

sociology, the students and teachers, now will have ample scope to know and understand the subject in a broad perspective. The U.G. course under semester pattern syllabi will aim at the following objectives in general:-

1. To make students understand the nature of sociology and its nexus with other disciplines.
2. To make students understand the recent concepts surfacing in the studies of sociologists and social scientists.
3. To make students know the current issues, problems and the measures to address them in right perspective.
4. To sustain the interest of the students in terms of making them capable of fitting into the job market.
5. To develop a multi-disciplinary interest and a broad perspective among the students to understand the intricacies of the concepts, issues and problems brought by the papers.

## **YEAR OF COMMENCEMENT OF THE SEMESTER PATTERN SYLLABI**

The semester pattern syllabi shall come into force from the academic year 2016-2017 for the students seeking enrollment in B.A. Semester I and Semester II. For B.A. Semesters III & IV, and V & VI, the admissions shall be given in the academic years 2017-2018 and 2018-2019, respectively. This suggests for successive implementation of the U.G. semester pattern syllabi for all three years.

## **STRUCTURE OF THE SEMESTER PATTERN SYLLABI**

1. The semester pattern syllabi shall give sufficient opportunity for continuous internal evaluation of the students (CIE).
2. The whole course shall be of full-time course of three years duration equally divided among six semesters.
3. Each semester shall have only one paper having four units. The students, on the whole, in order to complete B.A. degree, shall have to give examinations for 600 marks in the subject of sociology.
4. The system shall be based on continuous external evaluation based on a descriptive written examination of 80 marks (External) and internal evaluation of 20 marks in each paper of a semester.

## **CODE/SCHEME OF EXAMINATION**

Students shall undergo the following process of examination:

### **Written Examination:**

1. There shall be a written examination of descriptive type in each paper at the end of every semester.
2. Each paper shall be of 80 marks of 3 hours duration.
3. The question paper shall contain in all total 4 questions among which only first question shall be in the long form with an internal choice, carrying 20 marks. The second, third and fourth questions shall be of short forms wherein second and third questions shall have four questions each (A, B, C and D) with an internal choice (E, F, G and H), carrying 20 marks each at the rate of 5 marks for each short question.

4. The question number four shall also consist of four questions with 5 marks each but without an internal choice.
5. Each paper shall be of 80 full marks in which each question, whether in long form or short form, shall carry an equal value of 20 marks.

**Nature of Internal Evaluation:**

- i. There shall be an internal evaluation of each student in each paper at the end of every semester.
- ii. Out of 20 internal marks in each theory paper 10 marks shall be for home assignment and another 10 marks for viva-voce test of the students based on the course content. The viva-voce test shall be conducted by a committee of two persons consisting of the teacher teaching the subject and the Principal of the college.
- III. The teacher of the concerned subject shall give the questions to the students from any portion of the syllabus already covered by him/her for home assignment. The viva-voce test of the students shall be conducted at the end of the completion of teaching. Both home assignments and viva-voce tests shall be in place before the commencement of university examination.

**PASSING MARKS**

1. The students shall be required to score a minimum of 32 marks out of 80 in order to pass in the external examination in each paper.
2. The minimum passing marks in the internal evaluation shall be 8 out of 20 in each paper.
3. This means the passing marks both in the written (external) examination and internal evaluation shall be considered separately.

**ABSORPTION OF FAILURE CANDIDATES**

1. The failure students of all B.A. I, II & III of old and annual pattern syllabi shall be given two consecutive terms such as one in winter and another in summer to clear their papers.

**Semester I**  
**Sociology: An Introduction**

**Objectives of the Paper:**

1. This paper intends to induct the students to sociology as the beginner of the subject.
2. The paper thus aims to expose the students to the basic concepts in sociology.

**1. Understanding Sociology:**

- A. Sociology: Its meaning, definition and characteristics as a science.
- B. Relationship of sociology with other social sciences: Anthropology, History, Political Science and Economics.

**2. Basic Concepts in Sociology:**

- A. Groups, reference groups, association, institution, community and society.
- B. Development of human societies: **Pre-modern societies** (hunting and gathering societies, pastoral and agrarian societies.) **Modern industrial Society:** Its characteristics-industrialism, capitalism, urbanism, liberal democracy.
- C. Society and Individual: A mutual relationship.

**3. Socialization:**

- A. Meaning, processes and importance of socialization.
- B. Agencies of socialization: Family, education, religion, peer group and mass media.
- C. Mead's concepts of 'I', 'Me' and Socialization.

**4. Social structure:**

- A. Elements of social structure.
- B. Functions and dysfunctions of social Structure.
- C. Socio-cultural processes: Cooperation, conflict, accommodation, assimilation and competition.

**Suggested Readings**

1. Bottomore, T.B., Sociology: A guide to problems and literature, George Allen and Unwin (India), Bombay, 1972.
2. Harlambos Michael, Martin Holborn and Robin Heald, 2000, Sociology: Themes and Perspectives, Collins.
3. Inkeles, Alex, What is Sociology? Prentice-Hall of India, New Delhi, 1987.
4. Jayaram, N., Introductory Sociology, Macmillan India, Madras, 1988.
5. Johnson, Harry M., Sociology: A Systematic Introduction, Allied Publishers, New Delhi, 1995.
6. Schaefer, Richard T. and Robert P. Lamm, Sociology, Tata-McGraw Hill, New Delhi, 1999.
7. Ghode R.N., and BhauDaydar, Sociology: Basic concepts, S. Spectrum Publication, Nagpur.
8. Melvin M. Tumin, Social Stratification, Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
9. Vivek, P.S., Sociological Perspectives and Indian Sociology, Himalaya Publishing House, Mumbai, 2002.
10. Vaidya, N. S., Samajshastra, VidyaPrakashan, RuikarMarg, Nagpur.
11. दुधे, मेशाम, बोरकर आणि सोनटक्के, समाजशास्त्र - विषय आणि संकल्पना, जी.सी. पब्लिशर्स, नागपूर
12. आगलावे, प्रदीप, समाजशास्त्र - विषय आणि संकल्पना, श्री साईनाथ प्रकाशन, नागपूर

**Semester II**  
**Sociology: Themes and Perspectives**

**Objectives of the Paper:**

1. This paper intends to orient the students to certain basic perspectives in sociology.
2. The paper also intends to make students know in details about culture, stratification and mobility and the deviant patterns and social control in society.

**1. Culture and Society:**

- A. Meaning, definition and characteristics of culture.
- B. Elements of culture: Cognitive elements, beliefs, values and norms, and signs.
- C. Culture and ways of individual behavior and personality.

**2. Social Deviation and Social Control:**

- A. Social deviance and conformity: Meaning and definition, causes of and measures to check deviant behavior. Factors promoting conformity.
- B. Anomie and social deviation, social structure and social deviation.
- C. Social Control: Meaning, definition and means – formal and informal means.

**3. Social Stratification and Social Mobility:**

- A. Social differentiation and social stratification.
- B. Meaning, definition and forms of social stratification.
- C. Functions and dysfunctions of social stratification.
- D. Social mobility: Meaning, definition and types of social mobility.

**4. Major Perspectives in Sociology:**

- A. Structural-functional perspective
- B. Conflict perspective
- C. Feminist perspective

**Suggested Readings**

1. Bottomore, T.B., Sociology: A guide to problems and literature, George Allen and Unwin (India), Bombay, 1972.
2. Harlambos Michael, Martin Holborn and Robin Heald, 2000, Sociology: Themes and Perspectives, Collins.
3. Inkeles, Alex., What is Sociology? Prentice-Hall of India, New Delhi, 1987.
4. Jayaram, N., Introductory Sociology, Macmillan India, Madras, 1988.
5. Johnson, Harry M., Sociology: A Systematic Introduction, Allied Publishers, New Delhi, 1995.
6. Schaefer, Richard T. and Robert P. Lamm, Sociology, Tata-McGraw Hill, New Delhi, 1999.
7. Ghode R.N., and BhauDaydar, Sociology: Basic concepts, S. Spectrum Publication, Nagpur.
8. Melvin M. Tumin, Social Stratification, Prentice-Hall, Inc., Englewood Cliffs, New Jersey.
9. Ronald S. Edari, Social Change, WM. C. Brown Company Publishers, 1976.
10. Vivek, P.S., Sociological Perspectives and Indian Sociology, Himalaya Publishing House, Mumbai, 2002.
11. Vaidya, N. S., Samajshastra, VidyaPrakashan, RuikarMarg, Nagpur.
12. दुधे, मेश्राम, बोरकर आणि सोनटक्के, समाजशास्त्र - विषय आणि संकल्पना, जी.सी. पब्लिशर्स, नागपूर
13. आगलावे, प्रदीप, समाजशास्त्र - विषय आणि संकल्पना, श्री साईनाथ प्रकाशन, नागपूर

### Semester III

### Foundations of Sociological Thought

**Objectives of the Paper:**

1. The paper aims at orienting the students to the basic sociological thoughts of the great masters of sociology.
  2. The paper also intends to help the students to shape their thoughts and ideas and also addressing many current sociological issues and problems.
- 1. Emergence of Sociology as a Discipline:**
- A. The intellectual and social forces.
  - B. The social, economic and political forces.
- 2. Founders of Sociology: I**
- A. August Comte: Views on positivism and law of three stages of society.
  - B. Herbert Spencer: Organic analogy, theory of social evolution, military and industrial society.
- 3. Founders of Sociology: II**
- A. Charles Horton Cooley: Looking-Glass Self, primary group - its characteristics and importance
  - B. Emile Durkheim: Types of suicide, religion and its functions.
- 4. Founders of Sociological Thought: III**
- A. Karl Marx: Capitalism and its criticism, class and class struggle
  - B. Max Weber: Types of social action, types of authority and bureaucracy.

**Suggested Readings:**

1. George Ritzer, 1996, Sociological Theory, TheMcGRAW-HILLInternational Editions.
2. Parsons Talcott, The Structure of Social Action, Vol. I & II, McGraw Hill, New York.
3. Nisbet, 1966, The Sociological Tradition, Heinmann Educational Books Ltd, London.
4. Zetlin Irving, 1981, Ideology and the Development of Sociological Theory, Prentice Hall.
5. Dahrendorf Ralph, 1959, Class and Class Conflict in Industrial Society.
6. BendixRinehard, 1960, Max Weber, An Intellectual Portrait.
7. Popper Karl, 1945, Open Society and its Enemies, Routledge, London.
8. Aron Raymond, Main Currents in Sociological Thought, Vol. I & II, Penguin.
9. Coser L.A., 1977, Masters of Sociological Thought, New York.
10. Giddens Anthony, 1997, Capitalism and Modern Social Theory.
11. Writings of Marx, Durkheim and Weber, Cambridge University Press.
12. R.N. Mukherjee and ArunansuGhoshal, Social Thought, VivekPrakashan, Delhi.
13. Francis Abraham and John Henry Morgan, Sociological Thought.
14. Michael Haralambos, Martin Holborn and Robin Heald, 2000, Sociology: Themes and Perspectives, Harper Collins, London.
15. H.E. Barnes, Introduction to Sociology.
16. N.S. Vaidya, SamajikVicharbant.
17. आगलावे, प्रदीप, मुलभूत समाजशास्त्रीय विचार, श्री साईनाथ प्रकाशन, नागपूर

## Semester IV Indian Sociological Tradition

**Objectives of the Paper:**

1. The paper intends to make the students understand the seminal ideas and thoughts reflected in the works of Indian Sociologists.
2. The paper also aims to help the students in understanding at the theoretical level the sociological issues concerning Indian society.

**1. Theoretical Roots of Caste in India:**

- A. **B.R. Ambedkar:** Origin of caste and its criticism.
- B. **G. S. Ghurye:** Characteristics of caste and the emergence of sub-castes.

**2. Social Change from Indian Perspective:**

- A. **M.N. Shrinivas:** Dominant caste –Meaning and implication. Sanskritization—as a factor of social change, mobility and development.
- B. **D.P. Mukherjee:** Historical Dialecticism, Indian tradition and social change.

**3. Indian Society and Contemporary Change:**

- A. **R.K. Mukherjee :**Values, symbols, personality and change.
- B. **S.C. Dubey:** Values in modernity; modernity, Indian society and social change.

**4. Gender and Society in India:**

- A. **Tarabai Shinde:** Women and patriarchy in Indian society.
- B. **Jyotibha Phule and Savitribai Phule:** Women's education and women's rights.

**Suggested Readings:**

1. George Ritzer, 1996, Sociological Theory, TheMcGRAW-HILLInternational Editions.
2. Parsons Talcott, The Structure of Social Action, Vol. I & II, McGraw Hill, New York.
3. Nisbet, 1966, The Sociological Tradition, Heinmann Educational Books Ltd, London.
4. Zetlin Irving, 1981, Ideology and the Development of Sociological Theory, Prentice Hall.
5. Dahrendorf Ralph, 1959, Class and Class Conflict in Industrial Society.
6. BendixRinehard, 1960, Max Weber, An Intellectual Portrait.
7. Popper Karl, 1945, Open Society and its Enemies, Routledge, London.
8. Aron Raymond, Main Currents in Sociological Thought, Vol. I & II, Penguin.
9. Coser L.A., 1977, Masters of Sociological Thought, New York.
10. Giddens Anthony, 1997, Capitalism and Modern Social Theory.
11. Writings of Marx, Durkheim and Weber, Cambridge University Press.
12. R.N. Mukherjee and ArunansuGhoshal, Social Thought, VivekPrakashan, Delhi.
13. Francis Abraham and John Henry Morgan, Sociological Thought.
14. Michael Haralambos, Martin Holborn and Robin Heald, 2000, Sociology: Themes and Perspectives, Harper Collins, London.
15. H.E. Barnes, Introduction to Sociology.
16. N.S. Vaidya, SamajikVicharbant.
17. आगलावे, प्रदीप, मुलभूत समाजशास्त्रीय विचार, श्री साईनाथ प्रकाशन, नागपूर
18. आगलावे सरोज, जोतीराव फुले यांचे सामाजिक विचार, सुगावा प्रकाशन, पुणे

**Semester V**  
**Indian Society: The Structural Issues**

**Objectives of the Paper:**

1. The paper aims at acquainting the students with Indian society in terms making them know the issues and problems confronting the institutions of caste and family.
  2. The paper also aims to bring into fore the issues and problems concerning the tribes and rural communities in India.
1. **Indian Society, Structure and Inequality**
    - A. Caste as a structure of inequality and discrimination.
    - B. Problems of Scheduled Castes and Other Backward Castes.
    - C. Constitutional Provisions for Scheduled Castes.
    - D. Mandal Commission for Other Backward Castes.
  2. **Family in Contemporary India:**
    - A. Intra and inter generational conflict: Meaning, causes and measures to check them.
    - B. Dowry, divorce and domestic violence.
    - C. Problems of elderly people.
  3. **Tribal Issues and Problems in India:**
    - A. Tribal problems: Education, development and agrarian problem.
    - B. Social mobility and change: Hinduization.
    - C. Reservation among the tribals, Provision of Schedule V, PESA & Forest Act.
  4. **Rural Community in India:**
    - A. Migration: causes and consequences
    - B. Unemployment: causes and consequences
    - C. Farmers' suicide & its impact on family

**Suggested Readings:**

1. Beteille, Andre., Social Inequality, OUP, New Delhi, 1974.
2. Beteille, Andre., Backward Classes in Contemporary India, OUP, New Delhi, 1992.
3. Berreman, G.D., Caste and Other Inequalities : Essays in Inequality, Folklore Institute, Meerut, 1979.
4. Dube, Leela., Women and Kinship : Comparative Perspectives on Gender in South and Southeast Asia, Sage Publications, New Delhi, 1997.
5. Gadgil, Madhav and Guha, Ramchandra., Ecology and Equity : The use and Abuse of Nature in Contemporary India, OUP, New Delhi, 1996.
6. Kothari Rajani, (ed.) Caste in Indian Politics, 1973.
7. Mehta, S.R., (ed.), Population, Poverty, and Sustainable Development, Rawat Publications, Jaipur, 1997.
8. Dube, S.C., Society in India.
9. Ahuja Ram, social Problems in India, Rawat Publications.
10. Finkle, Jason L and C. Alison McIntosh (eds.) The New Policies of Population, The Population Council, New York, 1994.
11. Bose Ashish, Demographic Diversity of India, B.R. Publishing Corporation, Delhi, 1991.
12. Premi, M.K. et al, An Introduction to Social Demography, Vikas Publishing House, Delhi, 1983.
13. Rajendra Sharma, Demography and Population Problems, Atlantic Publishers, New Delhi, 1997.
14. Srivastava, O.S., Demography and Population Studies, Vikas Publishing House, New Delhi, 1994.
15. Chandrasekhar, S., (ed.) Infant Mortality, Population Growth and Family planning in India, George Allen & Unwin Ltd., London, 1974.
16. आगलारे, प्रदीप, प्रश्न आणि समस्या, श्री साईनाथ प्रकाशन, नागपूर

## Semester VI

### Current Social Problems in India

**Objectives of the Paper:**

1. The paper is based on the problems the society in India is facing at present.
2. The paper thus intends to make the students know the nature, causes and consequences of those problems as well as the measures to put a check on them.

**1. Education in contemporary India:**

- A. Educational status among different communities in India.
- B. Gender bias in education in India: Obstacles to women's education.
- C. Problems of education among SCs, STs and Other Backward Castes and the measures to resolve it.

**2. Displacement and Rehabilitation:**

- A. Displacement: Meaning, causes and consequences.
- B. Rehabilitation: Concept, problems and plans.

**3. Intolerance, Riot and Crime:**

- A. Caste, religious and cultural intolerance.
- B. Communal riots, caste and ethnic conflict.
- C. Violence and crime against women and the marginalized.
- D. Measures to check intolerance, riots and crime.

**4. Corruption:**

- A. Meaning, definition and types of corruption.
- B. Factors inducing corruption.
- C. Measures to check corruption.

**Suggested Readings:**

1. Beteille, Andre., Social Inequality, OUP, New Delhi, 1974.
2. Beteille, Andre., Backward Classes in Contemporary India, OUP, New Delhi, 1992.
3. Berreman, G.D., Caste and Other Inequalities : Essays in Inequality, Folklore Institute, Meerut, 1979.
4. Dube, Leela., Women and Kinship : Comparative Perspectives on Gender in South and Southeast Asia, Sage Publications, New Delhi, 1997.
5. Gadgil, Madhav and Guha, Ramchandra., Ecology and Equity : The use and Abuse of Nature in Contemporary India, OUP, New Delhi, 1996.
6. Kothari Rajani, (ed.) Caste in Indian Politics, 1973.
7. Mehta, S.R., (ed.), Population, Poverty, and Sustainable Development, Rawat Publications, Jaipur, 1997.
8. Dube, S.C., Society in India.
9. Ahuja Ram, social Problems in India, Rawat Publications.
10. Finkle, Jason L and C. Alison McIntosh (eds.) The New Policies of Population, The Population Council, New York, 1994.
11. Bose Ashish, Demographic Diversity of India, B.R. Publishing Corporation, Delhi, 1991.
12. Premi, M.K. et al, An Introduction to Social Demography, Vikas Publishing House, Delhi, 1983.
13. Rajendra Sharma, Demography and Population Problems, Atlantic Publishers, New Delhi, 1997.
14. Srivastava, O.S., Demography and Population Studies, Vikas Publishing House, New Delhi, 1994.
15. Chandrasekhar, S., (ed.) Infant Mortality, Population Growth and Family planning in India, George Allen & Unwin Ltd., London, 1974.
16. आगलावे, प्रदीप, प्रश्न आणि समस्या, श्री साईनाथ प्रकाशन, नागपूर



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR**

**STRUCTURE OF SYLLABUS- SEMESTER PATTERN**

**BACHELOR OF ARTS**

**in**

**POLITICAL SCIENCE**

**2016-17**

Semester system for B.A. Programme in Political Science is being introduced from ensuing academic year 2016-17. B.A. Programme will consist of three academic years and will consist of Six Semesters. Each academic year will consist of two semesters- one odd and one even. The theory paper will be of 80 marks the examination of which will be taken by the university at the end of the semester. There shall be internal evaluation of each student for each paper consisting of 20 marks. Each student is required to obtain at least 32 out of 80 marks for passing the theory paper and 08 marks out of 20 in the internal assessment test conducted by the college/department.

Following is the scheme under Semester Pattern for B.A. Political Science Course

**B.A. I**

**SEMESTER I**

**PAPER- I : POLITICAL THEORY**

**SEMESTER II**

**PAPER-II : WESTERN POLITICAL THOUGHT**

**B.A. II**

**SEMESTER III**

**PAPER-III : INDIAN GOVERNMENT AND POLITICS**

**SEMESTER IV**

**PAPER-IV: STATE GOVERNMENT AND POLITICS**

**B.A. III**

**SEMESTER V**

**PAPER-V : COMPARATIVE GOVERNMENT AND POLITICS**

**(With Reference to UK and USA)**

**SEMESTER VI**

**PAPER-VI : INTERNATIONAL RELATIONS**

## **INTERNAL ASSESSMENT SCHEME OF B.A. SEMESTER**

The students is required to appear and qualify the internal examination separately. He/She must secure minimum 08 marks out of 20 for passing. No second chance will be given for internal assessment.

1. If the student remains absent during the internal assessment examinations he/she can be allowed for re-examination on the permission of the Principal on the recommendation of the Head of Department of the subject concerned.
2. If the student fails in the internal examination he/she will have to apply in the prescribed Application form and pay the prescribed fee as per rules laid down by the university.

(University must design a Application form for A.T.K.T. of the internal examination)

- 1) Attendance and class room participation : 05 Marks
- 2) Project Assignment : 05 Marks  
(On topics of syllabus, including research paper, Survey report, book review etc.)
- 3) Classroom Seminar Presentation : 05 Marks  
(On topics of syllabus)
- 4) Viva- Voce : 05 Marks  
(Questions on entire syllabus of the paper taught giving emphasis on conceptual clarity )

## **B.A.FIRST YEAR: SEMESTER - I**

### **POLITICAL THEORY**

**PAPER-I**

**MARKS: 80**

#### **COURSE RATIONALE:**

This is an introductory paper to the concepts, ideas and theories in political theory. It seeks to explain the evolution and usage of these concepts, ideas and theories with reference to individual thinkers both historically and analytically. The different ideological standpoints with regard to various concepts and theories are to be critically explained with the purpose of highlighting the difference in their perspectives and in order to understand their continuity and change. Furthermore there is a need to emphasize the continuing relevance of these concepts today and explain how in idea and theory of yester years gains prominence in contemporary political theory. All units to be taught with Liberal and Marxist approaches.

#### **COURSE CONTENT:**

##### **UNIT - I: POLITICAL THEORY AND STATE**

- (1) POLITICAL THEORY:** Meaning, Nature (Normative and Empirical), Scope and Significance
- (2) STATE:** Meaning, Basic Elements, Approaches (Liberal and Marxist)

##### **UNIT- II: POWER AND AUTHORITY**

- (3) POWER:** Meaning, Nature, Significance and Types
- (4) AUTHORITY:** Meaning, Nature, Significance and Types.

##### **UNIT- III: LIBERTY AND EQUALITY**

- (5) LIBERTY:** Meaning, Nature, Significance and Types.
- (6) EQUALITY:** Meaning, Nature and Significance and Types.

##### **UNIT- IV: RIGHTS AND JUSTICE**

- (7) RIGHTS:** Meaning, Nature, Types, Theory of Natural Rights, Legal Theories of Rights.
- (8) JUSTICE:** Meaning, Nature, Types, Distributive Justice, Feminist Perspective.

#### **Books Recommended:**

1. Amaj Ray & Mohit Bhattacharya: Political theory and Institutions

2. Gauba O.P.: An Introduction to Political Theory, 2014
3. Sushila Ramaswami: Political Theory: Ideas and Concepts, 2010.
4. Sushila Ramaswami: Political Theory and Thought, 2010.
5. Sushila Ramaswami: Key Concepts in Political Theory, 2014.
6. ओमप्रकाश गोबा: राजनीति—सिद्धांत एवं वित्तन, राजनीति—सिद्धांत के विवेच्य विषय
7. गवई जोगेन्द्र, हाशम शेख: राजकीय सिद्धांत, विश्व प्रकाशन, नागपूर, 2013.
8. देशमुख अलका: राजकीय सिद्धांत, साईनाथ प्रकाशन नागपूर, 2014.
9. काळे अशोक: राजकीय सिद्धांत, विद्या प्रकाशन, नागपूर, 2007.

## **B. A. I Semester – II**

### **Western Political Thought**

Paper – II

Marks: 80

#### **Course Rationale**

The paper on western political thought introduces the students to the classical ideas generated in the western world representation the ancient to the modern. The paper intends to introduce the thinkers broadly representing the individual and communitarian ideas. Four thinkers have been selected including Plato, Aristotle, J.S. Mill and Karl Marx who represent this spectrum. The paper deals with details the various aspects of the ideas of all these political thinkers.

---

#### **Unit – I**

##### **Plato**

1. Ideal State
2. Philosopher King
3. Theory of Justice
4. Theory of Communism

#### **Unit – II**

##### **Aristotle**

1. Theory of State
2. Classification of state
3. Thoughts on revolution
4. Slavery

#### **Unit – III**

##### **J. S. Mill**

1. Concept of Liberty
2. Concept of Democracy
3. Property
4. Government

#### **Unit – IV**

##### **Karl Marx**

1. Dialectical Materialism
2. Class War
3. Thoughts on State
4. Theory of surplus value

#### **Books Recommended:**

- 1) Francis W. Coker - Recent Political Thought, The world Press Pvt. Ltd.
- 2) George H. Sabine - A History of Political theory, George G. Harrap&comoany Ltd. London.
- 3) C.L. Wayper - Political thought, S.T Pauls, Honce Warwick lane London, Ec. 4
- 4) V.D. Mahajan& R.R. Seth,Recent Political Thought, Premier Publishing Co, Delhi.
- 5) William Ebenstiein,Great Political Thinkers – PlatoTo the present Modern Political thought, The great Issues, IIInd Edition, Oxford & IBH Publishing company.
- 6) Radhey Sham Chourasia, History of western Political thought – Volume I & II
- 7) Suda J.P., History of Political Thought
  - ८ प्रा. भाल. भोळे – भारतीय आणि पाश्चमात्य राजकीय विचार, पिंपळापुरे अँड क. पब्लीशर्स, नागपूर
  - ९ प्रा. वा.भा. पाटील –पाश्चमात्य राजकीय विचारक, मंगेश प्रकाशन, नागपूर
  - १० प्रा. वि.सी. जोशी –फ्लेटोआणिअरस्टॉटल यांचे राजकीय तत्वज्ञान,नाथ मुद्रणालय, औरंगाबाद
  - ११ प्रा. प.सी. काणे –काहीप्रमुख राज्यशास्त्रज्ञ, विद्याप्रकाशन, नागपूर
  - १२ डॉ. ना.य.डोळे, राजकीय विचारांचाइतिहास, कॉन्टेन्टलप्रकाशन, एपणे
  - १३ प्रा. सुधाकरकुलकर्णी, निवडकराजकीय विचारवंत, विद्याभारतीप्रकाशन, लातूर

**B.A.SECOND YEAR: SEMESTER - III**  
**INDIAN GOVERNMENT AND POLITICS**

**PAPER-III**

**MARKS: 80**

**COURSE RATIONALE:**

This paper focuses in detail on the political processes and the actual functioning of the political system. It simultaneously studies in detail the political structure both Constitutional and Administrative. It emphasizes on local influences that derive from social stratification of Castes and Jatis, from language, religious ethnic and economic determinants and critically assesses its impact on the political processes. The major contradictions of the Indian Political Process are to be critically analysed along with an assessment of its relative success and failure in a comparative perspective with other developing countries and in particular those belonging to the South Asian region.

**COURSE CONTENT:**

**UNIT - I: INDIAN CONSTITUTION**

- (1) Preamble: Nature, Objectives of Constitution of India.
- (2) Features of Indian Constitution.

**UNIT- II: FUNDAMENTAL RIGHTS, DIRECTIVE PRINCIPLES OF STATE POLICY**

- (3) Fundamental Rights: Meaning, Kinds, Restrictions.
- (4) Directive Principles of State Policy: Nature and Significance.

**UNIT- III: PRESIDENT, PARLIAMENT AND PRIME MINISTER**

- (5) President: Powers and Functions.
- (6) Parliament: Composition, Powers and Functions.
- (7) Prime Minister: Powers and Functions.

**UNIT- IV: SUPREME COURT AND MAJOR ISSUES IN INDIAN POLITICS**

- (8) Supreme Court: Composition, Powers and Jurisdiction (Original, Appellate, Advisory and Judicial Review).
- (10) Major Issues in Indian Politics: Caste, Religion, Terrorism.

**Books Recommended:**

1. Austin Granville: The Indian Constitution: Cornerstone of a Nation, 1999, Working in a Democratic Constitution: A History of the Indian Experience, 2013.
2. Morris Jones, Indian Government and Politics,

3. Fadia B.L. & Fadia Kuldeep: Indian Government and Politics, 2016.
4. Jain M.P.: Indian Constitutional Law, 2014.
5. Johari J.C.: Select World Constitutions
6. Kashyap Subhash: Our Constitution-2015, Our Parliament-2015, Our Political System-2013
7. Khan A.R.: The Constitution of India
8. Narang A.S.: Indian Political System, Process and Development
9. Rajeev Bhargave: Politics and Ethics of the Indian Constituion, 2009.
10. फाडिया बी.एल.: भारत का संविधान, 2015.
11. जैन पुखराज व फाडिया बी.एल.: भारतीय शासन एवं राजनीति, 2015.
12. डॉ. भोळे भा.ल.: भारतीय राज्यव्यवस्था, पिंपळापुरे प्रकाशन, नागपूर, 1990.
13. डॉ. गवई जोगेन्द्र, शेख हाशम: भारतीय शासन आणि राजनीती, विश्व प्रकाशन, नागपूर, 2014.
14. देशमुख अलका: भारतीय शासन आणि राजकारण, साईनाथ प्रकाशन, नागपूर, 2013.
15. लोटे रा.ज.: भारतीय शासन आणि राजकारण, पिंपळापुरे प्रकाशन, नागपूर, 2013.
16. डॉ. काळे अशोक: भारतीय शासन आणि राजकारण, अनुराधा प्रकाशन, नागपूर, 2013.

**B.A.SECOND YEAR: SEMESTER - IV**  
**STATE GOVERNMENT AND POLITICS**

**PAPER-IV**

**MARKS: 80**

**COURSE RATIONALE:**

This paper focuses in detail on the political processes and the actual functioning of the political system. It simultaneously studies in detail the political structure both Constitutional and Administrative. It emphasizes on local influences that derive from social stratification of Castes and Jatis, from language, religious ethnic and economic determinants and critically assesses its impact on the political processes. The major contradictions of the Indian Political Process are to be critically analysed along with an assessment of its relative success and failure in a comparative perspective with other developing countries and in particular those belonging to the South Asian region.

**COURSE CONTENT:**

**UNIT - I: CENTRE-STATE RELATIONS AND GOVERNOR**

- (1) Centre-State Relations: Legislative, Administrative and Financial.
- (2) Governor: Powers and Functions and Role.

**UNIT- II: STATE LEGISLATURE**

- (3) Legislative Assembly: Composition, Powers and Functions.
- (4) Legislative Council: Composition, Powers and Functions.

**UNIT- III: CHIEF MINISTER AND HIGH COURT**

- (5) Chief Minister: Powers and Functions and Role.
- (6) High Court: Composition, Powers and Functions.

**UNIT- IV: PANCHAYAT RAJ AND RIGHT TO INFORMATION**

- (7) 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendment, Women Reservation and Panchayat Raj
- (8) Right to Information: Nature, Importance and Role.

**Books Recommended:**

1. Austin Granville: The Indian Constitution: Cornerstone of a Nation, 1999, Working in a Democratic Constitution: A History of the Indian Experience, 2013.
2. Fadia B.L. & Fadia Kuldeep: Indian Government and Politics, 2016.
3. Jain M.P.: Indian Constitutional Law, 2014.
4. Johari J.C.: Selec World Constituions

5. Kashyap Subhash: Our Constitution-2015, Our Parliament-2015, Our Political System-2013
6. Khan A.R.: The Constitution of India
7. Narang A.S.: Indian Political System, Process and Development
8. Rajeev Bhargave: Politics and Ethics of the Indian Constituion, 2009.
9. फाडिया बी.एल.: भारत का संविधान, 2015.
10. जैन पुखराज व फाडिया बी.एल.: भारतीय शासन एवं राजनीति, 2015.
11. डॉ. भोळे भा.ल.: भारतीय राज्यव्यवस्था, पिंपळापुरे प्रकाशन, नागपूर, 1990.
12. डॉ. गवई जोगेन्द्र, शेख हाशम: भारतीय शासन आणि राजनीती, विश्व प्रकाशन, नागपूर, 2014.
13. देशमुख अलका: भारतीय शासन आणि राजकारण, साईनाथ प्रकाशन, नागपूर, 2013.
14. लोटे रा.ज.: भारतीय शासन आणि राजकारण, पिंपळापुरे प्रकाशन, नागपूर, 2013.
15. डॉ. काळे अशोक: भारतीय शासन आणि राजकारण, अनुराधा प्रकाशन, नागपूर, 2013.
16. देशमुख अलका: स्थानिक स्वशासन, साईनाथ, प्रकाशन, नागपूर, 2013.

**B.A.III YEAR: SEMESTER-V**

**COMPARATIVE GOVERNMENT AND POLITICS  
(GOVERNMENT & POLITICS OF U.K. and U.S.A.)**

**PAPER-V**

**MARKS: 80**

**COURSE RATIONALE**

This paper studies two major systems of the world by adopting a comparative approach. The contributional, legal provisions, the ideological basis, the institutional arrangements and their social & economical background are to be explained, analyzed and evaluated critically. The comparative perspective enables the student to understand the differences & similarities between various constitutional arrangements. Furthermore , the political institutions are to be studies in light of the political process to gain an understanding of the dynamics of actual politics and policy making.

**COURSE CONTENT :**

**Unit I :- Comparative Politics & Constitutions**

- A) Comparative Politics :- Meaning, Nature, Approaches (Legal/institutional & Behavioural) and Significance.
- B) Features of Constitution : - Salient features of U.K., U.S.A. constitution

**Unit II :- Political Culture & Executive**

- A) Political Culture :- Meaning, Nature, Types and significance in U.K. & U.S.A.
- B) Executive : - Composition, Power & functions of the executive in U.K.& USA

**Unit III :- Political Parties & Legislature**

- A) Political Parties :- Nature, function and role of political parties in U.K. & U.S.A.
- B) Legislative : - Composition, power and function of the legislature in U.K.& USA

**Unit IV :- Pressure Group & Judiciary**

A) Pressure Group :- Meaning, Nature, Types, Techniques & role adopted by pressure group in U.K. & U.S.A.

B) Judiciary : - Nature. Power and function of Judiciary in U.K. & U.S.A.

**Books Recommended:**

- 1.Harry Eckstein & David E Apter - Comparative Politics, A Reader ( New York, The Free press, 1968)
2. J Blondel – An Introduction to Comparative Government, London, 1969.
- Herman Finer - The Theory and Practice of Modern Government, Met huen and Company, London, 1969
3. S.R. Maheshwari - Comparative Govt. and Politics Laxmi Narayan Agra wal, Agra,1983.
4. V.N.khanna– Major Political Systems , Chand and Company, Delhi.
5. J.C.Johari– Comparative Politics, Sterling, Delhi.
6. Vidya Bhushan- Comparative Politics, Atlantic Publication and D istributors.
7. J.Denis Derbyshire , Ian Derbyshire - Political System of the world, Allied Publishers Ltd.
8. D.Deol– Comparative Government and Politics, sterling Publishers pvt.Ltd.
- 9.D.Mahajan- Select Modern Governments, S. Chand & Co Ltd, New Delhi.

१. चिं.ग. घांगरेकर — तुलनात्मक राजकीय विष्लेशण , कॉन्ट्रेन्टल प्रकाशन, पुणे.
- २.म. द....देशपांडे — शासनसंस्था— राज्यपद्धति तौलनिक विचार, महाराश्ट्र विद्यापीठ, ग्रंथनिर्मिती मंडळासाठी दि कोल्हापूर रायटर्स को—आँप. सोसायटी लि. कोल्हापूर.
- ३ प्रा. हाशम डॉ. गवई जोगेंद्र— तुलनात्मक शासन आणि राजकारण, विश्व पब्लिकेशन नागपूर.
- ४.लोटे रा.ज.— तुलनात्मक शासन आणि राजकारण, पिंपळापुरे पब्लिकेशन नागपूर.
५. देवगावकर रा.गो. — आधुनिक राजकीय व्यवस्था, साईनाथ प्रकाशन, नागपूर.
६. प्रा. ए.सुबोधकुमार ए कांकवे—शासनसंस्था तुलनात्मक अभ्यास, राविल पब्लिकेशन्स, सातारा.

## **B.A.III YEAR: SEMESTER-VI**

### **INTERNATIONAL RELATIONS**

**PAPER-VI**

**MARKS: 80**

#### **Course Rationale:**

This paper deals with concepts and dimensions of international relations and makes an analysis of different theories highlighting the major debates and differences within the different theoretical paradigms. The dominant theories of power and the question of equity and justice, the different aspects of balance of power leading to the present situation of a unipolar world are included. It highlights various aspects of conflict and conflict resolution through collective security and the role of UN.

#### **Course Content:**

##### **UNIT-I**

- A- International Relations:-**Meaning, Nature, Scope and significance.
- B- Theories of International Relations:-** i) Realist Theory and ii) Game theory.

##### **UNIT-II**

- A- National Power:-**Meaning, Nature and Elements.
- B- Foreign Policy:-**Meaning, Objectives and Determinants.

##### **UNIT-III**

- B- Balance of Power:-**Meaning, Types and Techniques.
- C- Collective Security:-**Meaning, Nature and Basic Principles.

##### **UNIT-IV**

- A- Global Terrorism:-**Meaning, Causes and Techniques.
- B- Human Rights:-**Meaning, Nature and Importance.

#### **References:**

- 1.Vinay Kumar Malhotra - International Relation (New Delhi: Anmol Publication 1999)
2. Joshua Goldstein - International Relation (New York: Longman, 2003)

3. Hans Morgenthau - Politics Among Nation (New York: Alfred Knopf, 1985)
4. Parmer and Perkins- International Relations,
5. Raghunandan Wharadkar, Antarrashtriya Sambandh,
4. देवळाणकर ष्टैलेंद्र-अंतरराष्ट्रीय संबंध-औरंगाबाद, विद्याप्रकाषन, 2005.
5. रायपूरकर वसंत-आंतरराष्ट्रीय संबंध-नागपूर, मंगेश प्रकाशन, 2006
6. पेंडसे अरुणा-सहस्रबुध्दे उत्तरा-आंतरराष्ट्रीय संबंध -शीतयुद्धोत्तर व जागतीकीकरणाचे राजकारण, हैद्राबाद-ओरिएंटल्सेक्स्वानप्रा. लि. 2011.
7. फडिया बी. एल.-आंतरराष्ट्रीय राजनीति, आगरा-साहित्य भवन पब्लिकेशन, 2004
8. जोषी टी. ए. -आंतरराष्ट्रीय संबंधाची ओळख, प्रकाषक-अंकिता कंप्युटर्स नांदेड 1994
9. लोटे रा. ज. - आंतरराष्ट्रीय संबंध, पिंपळापूरे अऱ्ड क. पब्लिषर्स नागपुर, 1995
10. जोरगुलवार भुषण-आंतरराष्ट्रीय संबंध, प्रकाषक, सौ. सुनिता कुलकर्णी, अहमदपूर 1998
11. कुलकर्णी सुधाकर-आंतरराष्ट्रीय संबंध: सिधांत आणि राजकारण, अरुणा प्रकाशन, 2005

## **Micro Economics Theory - I**

Time : Three Hours

Max. Marks : 80

Course Outline :-

### **Unit – I: Introduction to Economics**

Nature, Definition and Scope of Economics, Dimensions of Economics : Positive and Normative Economics, Tools of Economics Analysis, Inductive and deductive methods, Meaning of Micro and Macro Economics, Importance of Micro and Macro economics, Economic Laws, Economic Problem, Significance of the study of economics, Limitation of Economics.

### **Unit – II: Law of Demand and Law of Supply**

**Demand:** Definition and Features of Demand, Market demand, Determinants of demand, Law of Demand, Demand Schedule Demand Curve, Giffen goods and Giffen's Paradox

**Elasticity of Demand:** Definition, Types of Elasticity - Price Elasticity, Income Elasticity and Cross Elasticity, Methods of Measuring price elasticity of demand, Factor's influencing elasticity of Demand, Importance of price elasticity of demand (Theory and applicable simple problem on elasticity of demand)

**Supply:** Definition, Market Supply, Determinates of supply, Law of Supply, Supply Schedule, Supply curve

### **Unit – III: Consumer Behavior**

**Utility Analysis:** Meaning of Utility, Measure of Utility, Law of Diminishing Marginal Utility, Law of equip-Marginal Utility

**Indifference Curve Analysis:** Definition, Assumption, Schedule, Characteristics, Price or budget line, Consumers Equilibrium with help of Indifference Curve, Significance of Indifference curve analysis

**Consumer Surplus:** Concept and Measurement of Consumer Surplus, Importance of Consumer Surplus, Engel's Law.

### **Unit – IV: Production Function**

**Production Function:** Meaning and concepts of Production, Factor's of production, Return to Scale, Law of Variable Proportion, Iso-quant Curve, Economies of scale.

### **Reference Books:**

1. *Jhingan M.L, Micro Economic Theory, Vrinda Publication (P) Ltd., Delhi*
2. *Seth M.L, Micro Economics, Lakshmi Narain Agrawal Educational Publishers, Agra*
3. *Appannaiah, Reddy, Shanthi, Economics for Business, Himalaya Publishing House, Mumbai*
4. *डॉ. गजनन पाटील, सूक्ष्म अर्थशास्त्र, कर्तृपीय प्रकाशन, नागपूर*
5. *डॉ. एच.पी.सिंह, वी.पी.मित्तल, व्यष्टि आर्थिक सिद्धान्त, संजीव प्रकाशन मेरठ, मेरठ*
6. *Sunil Bhaduri, Micro Economic Theory, New Central Book Agency ( P ) Ltd, Kolkata*
7. *Dr. Deepashree, Micro Economic Theory, Sultan Chand & Son, New Delhi*

## **Micro Economics Theory – II**

Time : Three Hours

Max. Marks : 80

Course Outline :-

### **Unit – I: Cost and Revenue Analysis**

**Cost of Production:** Meaning, Costs, Different concept of production - Monetary cost, Implicit and Explicit cost, Opportunity cost, Inter-relationship between average and marginal cost, Causes to increase in marginal and average cost according to time period (short-long term)

**Revenue Analysis:** Concept of Total, Average, Marginal revenue, Relationship between average revenue and marginal revenue, concept of profit - Gross, Net, Normal and Abnormal, Break-Even point, Equilibrium of the Firm, Expansion path.

### **Unit – II: Market Structure and Perfect Competition Market**

**Market Structure:** Meaning and definitions, Classifications of the Markets.

**Perfect Competition Market:** Features of Perfect competition, Meaning of Firm and Industry, Price determination under perfect competition, Equilibrium (Short-long run) of Industry and firm

### **Unit – III: Monopoly and Imperfect Competition Market**

**Monopoly:** Definition, Characteristics, Types, Price determination under monopoly, Price discrimination under monopoly, Monopoly Control, Monopoly and anti-trust policy

**Monopolistic Competition:** Definition, Characteristics, Price determination under Monopolistic competition, Product Differentiation

**Oligopoly:** Definition, Characteristics, Price Leadership

### **Unit – IV: Factors Pricing and Statistics for Economics**

**Factors Pricing:** Factors of production – Land, Labour, Capital and organization; Theories of Distribution: Marginal Productivity and Modern Theory of Distribution; Theories of Rent: Ricardo and Modern Theory of Rent; Theories of Wages: Modern Theory of wages, Wages determination under imperfect competition; Theories of Interest: Lovable fund and Keynes liquidity Preference theory of Interest; Theories of Profit: Uncertainty theory of Profit, Dynamic theory of profit, Innovation theory of profit (only principle applicable)

**Statistics:** Nature and scope of Statistics, Relationship of Economics to statistics, Statistical Averages: Mean, Median, Mode, Geometric and Harmonic mean, their merits and demerits (Theory and applicable simple problem)

#### **Reference Books:**

1. *Jhingan M.L, Micro Economic Theory, Vrinda Publication (P) Ltd., Delhi*
2. *Seth M.L, Micro Economics, Lakshmi Narain Agrwal Educational Publishers, Agra*
3. *Appannaiah, Reddy, Shanthi, Economics for Business, Himalaya Publishing House, Mumbai*
4. *डॉ. गजानन पाटील, सूक्ष्म अर्थशास्त्र, कस्तूरी प्रकाशन, नागपूर*
5. *डॉ. एच.पी.सिंह, वी.पी.मित्तल, व्यष्टि आर्थिक सिद्धान्त, संजीव प्रकाशन मेरठ, मेरठ*
6. *Gajanan Patil, Fundamental Statistics, Kasturi Publications, Nagpur*
7. *Sunil Bhaduri, Micro Economic Theory, New Central Book Agency ( P ) Ltd, Kolkata*
8. *Dr. Deepashree, Micro Economic Theory, Sultan Chand & Son, New Delhi*

## Macro Economics Theory – I

Time : Three Hours  
Course Outline :-

Max. Marks: 80

### Unit – I: Introduction to Macro Economics

Nature and Scope of Macro Economics, Importance of Macro economics, Limitations of macro economics, Transition from Micro economics to macro economics, Difference between micro and macro economics, Basic concepts of circular flow of economic activity – two, three and four sector model.

### Unit –II : National Income

Concepts of National income, Some basic concepts- Consumption goods, Capital goods, Final goods, Intermediate goods, Gross investment and depreciation, GNP, NNP, GDP, NDP, Per Capita Income, Personal and disposal Income, Methods and difficulties in Measurement of National income, Importance of National income analysis.

### Unit –III : Money and Value of Money

**Money:** Meaning, Definitions, Types of Money, Functions of Money,

**Theories of Value of Money** - Fishers Quantity Theory of Money and Cambridge Quantity Theory of Money

**Inflation, Deflation, Dis-inflation and Reflection:** Meaning, Definition, Features, Causes, Types and Effect

**Monetary and Fiscal Policy:** Meaning, Objectives and Importance, Measures of monetary policy, Instrument of Fiscal policy, Importance of Deficit Budget, Limitations of Fiscal policy.

### Unit –IV : Output and Employment

**Say's Law of Market:** Concept of Say's Law of Market, Keynesian objection, Principle of Effective Demand: Aggregate demand and aggregate supply functions.

**Consumption Function:** Average and Marginal Propensity to Consume, Factors influencing consumption function, Importance of propensity to consume.

**Investment Multiplier:** Definition of investment multiplier, Limitations, Criticism, Importance of Multiplier

**Investment Function:** Meaning of investment, Types of investment- Autonomous and Induced investment, Marginal Efficiency of Capital

### Reference Books:

1. Jhingan M.L, *Macro Economic Theory*, Vrinda Publication (P) Ltd., Delhi
2. Seth M.L, *Lakshmi Narain Agrawal Educational Publishers*, Agra
3. डॉ. गजानन पाटील, स्थूल अर्थशास्त्र, कर्तृतोरी प्रकाशन, नागपूर
4. डॉ. एच.पी.सिंह, वी.पी.मितल, व्यष्टि आर्थिक सिद्धान्त, संजीव प्रकाशन मेरठ, मेरठ

Rashtrasant Tukadoji Maharaj Nagpur University

## **Macro Economic Theory – II**

Economics Syllabus for B.A (Part - II) Semester – VI Examination

Time : Three Hours

Max. Marks : 80

Course Outline :-

### **Unit –I : Commercial and Central Bank**

**Commercial Banks:** Evolution, Meaning, Functions, Critical appraisal of the commercial bank in India after nationalization, Principle of Sound Commercial Bank, Credit creation of commercial Banks, Process of Credit Creation, Cash Reserve Ratio of Commercial Bank, Limitation of credit creation, Management of Balance Sheet, Reforms in banking sector in India

**Central Bank and Credit Control:** Meaning, Definition, Characteristics, Importance, Functions, Credit Control of Central Bank

### **Unit –II: RBI and Innovation in Banking**

**Reserve Bank of India:** Meaning, Objects and Functions,

**Monetary policy of RBI-** Objectives, Limitation and Credit control- Quantitative and Qualitative methods

**Modern Banking System:** Non-performing Assets, Electronic Banking, CORE Banking, Innovation in Banking Sector- ATM, Debit and Credit Card, Plastic Card, Smart Card, Cheque Card, Electronic Purse, Laser Card, Bankers Clearing House – Automated Clearing House, Online Banking, Advanced Ledger posting machine, MICR Technology, Cheque Clearing, Electronic fund transfer, Internet Banking, Electronic Cheque, Electronic Clearing Service, DEMAT Account, Private sector Banks in India

### **Unit -III: Financial Market**

**Money Market:** Meaning, Definition, Features, Objectives, Components of Money Market, Function, Importance and need, Indian Money Market- Meaning and Types, Features and Demerits

**Financial Markets:** Financial institutions, Markets Instruments and financial innovations, Role of Financial Markets and institutions, Equilibrium of Financial markets, financial crises

**Capital Market:** Stock Exchange - Meaning, Features; Functions and Size of capital market, Relationship of Debt Market, Indian capital Market - Structure, Factors responsible to develop capital market in India

### **Unit –IV: Health Economics and Statistics for Economics**

**Health Economics:** Meaning, Areas of Health Economics, Causes of Health Problems in India, Sources of health finance.

**Dispersion:** Definition, Objects, Nature, Properties of good measures of Dispersion, Standard Deviation, Coefficient of Variation (Theory and applicable problem on simple and discrete series)

#### **Reference Books:**

1. Jhingan M.L, *Macro Economic Theory*, Vrinda Publication (P) Ltd., Delhi

2. *Seth M.L, Lakshmi Narain Agrwal Educational Publishers, Agra*
3. *डॉ. गजानन पाटील, स्थूल अर्थशास्त्र, कस्तूरी प्रकाशन, नागपूर*
4. *डॉ. एच.पी.सिंह, वी.पी.मित्तल, व्यष्टि आर्थिक सिद्धान्त, संजीव प्रकाशन मेरठ, मेरठ*
5. *Gajanan Patil, Fundamental Statistics, Kasturi Publications, Nagpur*
6. *Harish Basavaiah, Jaypee Brothers Medical Publishers (P) Ltd, New Delhi*

Rashtrasant Tukadoji Maharaj Nagpur University

### **B.A (Part – I, II and III) All semester Examination**

Syllabus under the Board of Studies Economics and Faculty of Social Science

Paper pattern for B.A – I,II and III year semester examination for Economics

Time: Three Hours] [Maximum Marks: 80

- N.B : *1) Attempt ALL questions.*  
*2) All questions carry equal marks.*  
*3) Draw neat diagrams wherever necessary.*

Question No. 1: a) Long Questions (16 Marks) [ 16 Marks

OR

b) Long Questions (8 Marks)  
c) Long Questions (8 Marks)

Question No. 2: a) Long Questions (16 Marks) [ 16 Marks

OR

b) Long Questions (8 Marks)  
c) Long Questions (8 Marks)

Question No. 3: Short Questions (Solved ANY FOUR of the following) [ 16 Marks

a) Short Questions (4 Marks)  
b) Short Questions (4 Marks)  
c) Short Questions (4 Marks)  
d) Short Questions (4 Marks)  
e) Short Questions (4 Marks)  
f) Short Questions (4 Marks)

Question No. 4: Short Questions (Solved ANY FOUR of the following) [ 16 Marks

a) Short Questions (4 Marks)  
b) Short Questions (4 Marks)  
c) Short Questions (4 Marks)  
d) Short Questions (4 Marks)  
e) Short Questions (4 Marks)  
f) Short Questions (4 Marks)

Question No. 5: Multiple Choice Questions (Solved ALL of the following) [ 16 Marks

a) Short Questions (2 Marks)  
b) Short Questions (2 Marks)  
c) Short Questions (2 Marks)  
d) Short Questions (2 Marks)

[TWO from each Unit – I, II, III, IV]

- |                    |           |
|--------------------|-----------|
| e) Short Questions | (2 Marks) |
| f) Short Questions | (2 Marks) |
| g) Short Questions | (2 Marks) |
| h) Short Questions | (2 Marks) |

Rashtrasant Tukadoji Maharaj Nagpur University

**B.A (Part – I, II and III) All semester Examination**

**For Economics**

Under the Board of Studies Economics and Faculty of Social Science

**Internal Assessment : 20 Marks**

	Evaluation Type	Marks
1.	Class Attendance	05
2.	One Periodical Class Test and Two Assignments	10
3.	Active participation in routine class instructional deliveries (Seminars/presentation)	03
4.	Overall conduct as a responsible student, mannerism and articulation and exhibit of leadership qualities in organizing related academic actives	02
	Total	<u>20</u>

**Guidelines about conduct of Assignment:**

The assignment should be based on any of the sub-topic suggested for the course/syllabus.

# **Rashtrasant Tukdoji Maharaj Nagpur University**

## **Syllabus**

### **B.A. Vth Semester**

#### **(Economics )**

#### **Indian Economy – I**

##### **Unit I – Nature of Indian Economy**

Meaning, Nature and types of economy: Capitalist, Socialist, Mixed. Basic features and Changing Structure of Indian Economy. National Income: Trends and Structure. Basic features of Maharashtra's Economy. The Impact of COVID-19 on the Indian Economy: Specially on Agriculture, Industry, Service Sector and International Trade.

##### **Unit II – Indian Agriculture and Rural Development**

Importance of Indian Agriculture, Problems related to Indian Agriculture and Productivity. Agrarian reforms, Irrigation: Importance, types of irrigation. Green revolution, Agriculture Price policy, Agriculture credit, Agriculture marketing, Policies for Sustainable Agriculture, Problems of Agricultural Labour, Rural Development: Concept, meaning, importance and MGNREGA Scheme for Rural development in Indian Economy.

##### **Unit III – India's Industrial Policy**

Need, Importance and Role of Industries in Economic Development. Micro, Small and Medium Enterprises(MSME) and Large-scale Industries. Role of Public and Private Sector in Indian Economy. Public Private Partnership (PPP), New Economic Policies- 1991. Privatization, Liberalization and Globalization.

##### **Unit IV – Employment and Poverty in India**

Employment: Extent of Employment- Organized and Unorganized Sector. Meaning, types, causes and problems of Unemployment. Labour problems in India. Problems of Child labour.

Poverty : Concept, methods to measure poverty in India. Vicious circle of poverty. Poverty alleviation programmes: Programmes for Rural and Urban areas, Food security programme, Social security programmes.

# **Rashtrasant Tukdoji Maharaj Nagpur University**

## **Syllabus**

### **B.A. VI th Semester**

#### **(Economics)**

#### **Indian Economy – II**

#### **Unit I – Economic Development and Growth**

Meaning and Factors affecting Economics development. Indicators and Measurement of Economic Development. Sustainable Development: Concept, Definition, Objectives and Goals. Human development Index and its components. Inclusive Growth: Need, Elements, Impact and Challenges of Inclusive Growth in Indian Economy.

#### **Unit II – India's Economic Planning and Policy**

Planning: Meaning, Definition and Objectives. Broad achievement and failures of Five year plans. NITI (National Institution for Transforming India) Aayog: Objectives and Structure. Regional planning. Features of current Economics Survey of India. Special Economic Zone (SEZ): Meaning, Definitions and its impact of Indian Economy.

#### **Unit III – Public Finance**

Meaning, Nature, Scope and Importance of Public Finance. Sources of Public Revenue. Indian Tax Structure, Classification of taxes, Shifting and Incidence of taxes. Features of Indian Tax System. Goods and Services Tax (GST). Public Debt: Meaning, Types and Problems of Public Debt. Features of Current year Budget. Concept of Deficit: Revenue, Fiscal and Primary. Gender Budgeting.

#### **Unit IV – International Trade**

India's Foreign Trade. Trends in Export and Imports. Export Promotion policy. Composition and Direction of Indian Foreign Trade. Multilateral and Bilateral trade of India. India's Free Trade and Preferential Trade Agreements and its impact on Indian Economy. BRICKS and its impact on Indian Economy. India and World Trade Organization, Foreign Direct Investment, Multinational Corporation.

**RASHTRASANT TUKDOJI MAHARAJ  
NAGPUR UNIVERSITY, NAGPUR  
SYLLABUS  
B. A. (C.B.S)  
SUBJECT : PHILOSOPHY (U.G.)**

	<b>PAPERS</b>	
<b>B. A. I</b>	<b>1 T 1</b> <b>(ETHICS : INDIAN)</b>	<b>2 T 1</b> <b>(ETHICS : WESTERN)</b>
<b>B. A. II</b>	<b>3 T 1</b> <b>(LOGIC : INDIAN)</b>	<b>4 T 1</b> <b>(LOGIC : WESTERN)</b>
<b>B. A. III</b>	<b>5 T 1</b> <b>(EPISTEMOLOGY &amp; METAPHYSICS : INDIAN)</b>	<b>6 T 1</b> <b>(EPISTEMOLOGY &amp; METAPHYSICS : WESTERN)</b>

# **R.T.M. NAGPUR UNIVERSITY NAGPUR**

## **PHILOSOPHY B. A. I**

### **Semester I**

#### **Paper : 1 T 1**

#### **ETHICS (INDIAN)**

##### **Unit I: Indian Ethics**

- Definition, nature & Scope of Indian Ethics.
- Four stages of development. Characteristics of Indian Ethics
- Philosophical & Religious Postulates.
- Importance of Indian Ethics

##### **Unit II: Dharma: Introduction**

- Definition, kinds of Dharma- Sadharan Dharma, Swadharma ( Ashram & Varna vyavastha) Importance of Dharma.
- Buddha Ethics: Introduction, Four noble truths, eight fold path.

##### **Unit III: Karma & Yoga**

- Theory of Karma (Karmasidhanta)
- Nishkam karmayoga
- Yoga Ethics: Definition, i) Chittabhumi 2) Chitta Vrutti 3) Panchaklesh 4) Ashtangmarga.

##### **Unit IV: Purushartha : Definition, kinds, Importance of Purushartha.**

- Jaina Ethics
- Assignment for 20 Marks based on whole syllabus.

##### **Books recommended:**

- डॉ. रामनाथ केदारनाथ शर्मा : नीतिशास्त्र की रूपरेखा
- श्रीनिवास हरी दीक्षित : नीतिमीमांसं
- श्रीनिवास हरी दीक्षित : भारतीय नीतिशास्त्र
- यदुनाथ सिन्हा : नीतिशास्त्र
- रत्ना देव : नीतिशास्त्र की रूपरेखा
- दिवाकर पाठक : भारतीय नीतिशास्त्र
- भारतीय नीतिशास्त्रा : डॉ.वृशाली कुलकर्णी
- Ethical Philosophies of India by I. C. Sharma
- The Ethics of the Hindus By S. K. Maitra
- Bhartiya Darshan By Datta &Chatterjee

**R.T.M. NAGPUR UNIVERSITY NAGPUR**  
**PHILOSOPHY B. A. I**  
**Semester II**  
**Paper : 2 T 1**  
**ETHICS (WESTERN)**

**Unit I:**

- Introduction, Definition, nature & Scope of western Ethics.
- Moral concepts: Good, Right, Duty and Obligation.
- Kinds of Action: Voluntary actions, Non-voluntary actions, In-Voluntary actions.
- Object of Moral judgments: Motive & Intention ( हेतू आणि उद्देश्य ) Means & ends (साधन, साध्य)

**Unit II:**

- Hedonism: Introduction, Definition, Kinds, Psychological Hedonism, Ethical Hedonism, Egoistic Hedonism.
- Altruistic Hedonism.
- Utilitarianism: Bentham and J.S. Mill.

**Unit III:**

- Rationalism: Introduction, Definition
- Difference between Hedonism & Rationalism, Kant's Rationalism.
- Meta ethics: Subjectivism, Objectivism, Descriptivism, Prescriptivism, Emotivism.

**Unit IV:**

Theories of Punishment: Introduction, Types & Importance

Applied Ethics: Introduction, Definition, nature & Scope

**Assignment for 20 Marks based on whole syllabus.**

**Books recommended:**

1. सु. वा. बखले : नीतिशास्त्राची रूपरेशा
2. पी. डी. चौधरी : सबुध नीतिशास्त्रा
3. डॉ. रामनाथ केदारनाथ शर्मा : नीतिशास्त्रा की रूपरेखा
4. श्रीनिवास हरी दीक्षित : नीतिमीमांसा
5. यदुनाथ सिन्हा : नीतिशास्त्रा
6. सरुन्द्र गायधने: मुल्यनिवेदन : एक अतिनीतिशास्त्रीय चिकित्सा
7. दि. य. देशपांडे : नीतिशास्त्राचे प्रज्ञ
8. Ethics by Mcenzee
- 9- An Introduction to Ethics by William Lillie
- 10- A Manual of Ethics by Dr. J. N. Sinha

**R.T.M. NAGPUR UNIVERSITY NAGPUR**  
**PHILOSOPHY B. A. II**  
**Semester III**  
**Paper : 3 T 1**  
**LOGIC (INDIAN)**

**UNIT -I**

Theories of inference in Nyaya: Definition, Constituents, Process and Types;  
Pakshata.

**UNIT-II**

Paramarsa, Lingaparamarsa, Vyaptigrahopaya, Hetvabhasa.

**UNIT -III**

Theories of inference in Buddhism: Definition, Constituents, Process and Types;  
Paksata, Paramarsa, Lingaparamarsa, Vyaptigrahopaya, Hetvabhasa.

**UNIT-IV**

Theories of inference in Jainism: Definition, Constituents, Process and Types; Paksata,  
Paramarsa, Lingaparamarsa, Vyaptigrahopaya, Hetvabhasa.

**SUGGESTED READINGS:**

1. Annambhatta: Tarkasangraha
2. C. Bhattacharyya: Elements of Indian Logic and Epistemology
3. S.S. Barlingay: A Modern Introduction to Indian logic
4. S. Chatterjee: Nyaya Theory of Knowledge.
- 5- श्रीनिवास हरी दिक्षित : भारतीय तत्त्वज्ञान
- 6- डॉ. वृशाली कुलकर्णी : भारतीय तर्कशास्त्र
7. डॉ. वृशाली कुलकर्णी : भारतीय तर्कशास्त्रा में अनुमान
8. दत्त एवं चटर्जी: भारतीय दर्शन
- 9- शांतीप्रसाद अत्रोय : भारतीय तर्कशास्त्रा
10. डॉ. राजबीर सिंह शेखावत : न्याय दर्शन में व्याप्ति की अवधारणा
11. बलीराम शुक्ल: अनुमान प्रमाण
- 12- ब्रजनारायण शर्मा: भारतीय दर्शन में अनुमान

# **R.T.M. NAGPUR UNIVERSITY NAGPUR**

**PHILOSOPHY B. A. II**

**Semester IV**

**Paper : 4 T 1**

**LOGIC (WESTERN)**

**(Traditional Logic)**

## **UNIT-I**

1. Nature of logic- definition of logic, importance and scope.
2. Introductory topics: Sentence, Propositions, Argument: Truth, Validity,
3. Difference between deductive and inductive inference.
4. Term and classification of terms: connotation, denotation.
5. Difference between Proposition and sentence, classification of proposition.

## **UNIT-II**

1. Aristotelian classification of propositions.
2. Immediate inference: Square of opposition, conversion, obversion.
3. Categorical syllogism: Figure, Mood, Rules of validity,(8 rules) and its related fallacies.

**(Symbolic logic)**

## **UNIT-III**

1. Symbolic Logic: use of symbols
2. Truth functions: Negation, Conjunction, Disjunction, Implication, and Equivalence.

## **UNIT-IV**

1. Tautology, Contradiction, Contingency
2. Decision procedure: Truth table
3. Veen diagram
4. Soundness

## **SUGGESTED READINGS:**

1. K. T. Basantani : Introduction to symbolic logic
2. I. M. Copy: Symbolic logic
3. डॉ. सन्तुता इंगळे व प्रा. वंदना घुशेः तर्कशास्त्र
4. दि. य. देशपांडे: सांकेतिक तर्कशास्त्रा आणि उद्गमन

**R.T.M. NAGPUR UNIVERSITY NAGPUR**  
**PHILOSOPHY B. A. III**  
**Semester V**  
**Paper : 5 T 1**  
**EPISTEMOLOGY & METAPHYSICS (INDIAN)**

**EPISTEMOLOGY (INDIAN)**

**UNIT -I**

- Knowledge: Nature and scope.
- Prama and Aprama: definition and kinds.

**UNIT -II**

- Pramana, definition and kinds,
- Pramanyavada definition and kinds,

**METAPHYSICS (INDIAN)**

**UNIT –III**

- Vaisesika (Padartha), Concept of Soul, Liberation and ultimate reality according to Carvaka, Vaisesika.

**UNIT –IV**

- Concept of Soul, Liberation and ultimate reality according to Sankhya and Vedanta (Shankaracharya).

**SUGGESTED READINGS:**

1. C. Bhattacharyya: Elements of Indian Logic and Epistemology
2. S. Chatterjee: Nyaya Theory of Knowledge.
3. Frank Thilly: A History of Philosophy
4. Dr. J. N. Sinha: Outlines of Indian Philosophy
5. M. Hiriyanna: Outlines of Indian Philosophy
6. Dr. J. N. Sinha: Outlines of Western Philosophy
7. श्रीनिवास हरी दिक्षित : भारतीय तत्त्वज्ञान
8. डॉ. वृशाली कुलकर्णी: भारतीय व पाश्चात्य तत्त्वज्ञानातील समस्या
9. दत्त एवं चटर्जी: भारतीय दर्शन
10. डॉ. रामनाथ शर्मा: भारतीय दर्शन के मूलतत्त्व

**R.T.M. NAGPUR UNIVERSITY NAGPUR**  
**PHILOSOPHY B. A. III**  
**Semester VI**  
**Paper : 5 T 1**  
**EPISTEMOLOGY & METAPHYSICS (WESTERN)**

**EPISTEMOLOGY (WESTERN)**

**UNIT-I**

- Knowledge: Nature and kinds of knowledge.
- Russell Theory of Knowledge: Knowledge by acquaintance and Knowledge by description.

**UNIT-II**

- Sources of Knowledge: Empiricism and Rationalism, Kant's theory.
- Hume's Scepticism: Definition of Scepticism.

**METAPHYSICS (WESTERN)**

**UNIT- III**

- Concept of Substance. (Special reference to Descartes, Spinoza and Leibnitz)

**UNIT-IV**

- Theory of causation –Hume, Mill and Aristotle.
- God: Nature and proofs for the existence of God. ②

**SUGGESTED READINGS:**

1. C. Bhattacharyya: Elements of Indian Logic and Epistemology
2. S. Chatterjee: Nyaya Theory of Knowledge.
3. Frank Thilly: A History of Philosophy
4. Dr. J. N. Sinha: Outlines of Indian Philosophy
5. M. Hiriyanna: Outlines of Indian Philosophy
6. Dr. J. N. Sinha: Outlines of Western Philosophy
7. श्रीनिवास हरी दिक्षित : भारतीय तत्त्वज्ञान
8. डॉ. वृशाली कुलकर्णी : भारतीय व पाश्चात्य तत्त्वज्ञानातील समस्या
9. दत्त एवं चटर्जी: भारतीय दर्शन
10. डॉ. रामनाथ शर्मा: भारतीय दर्शन के मूलतत्त्व
11. डॉ. विनोदकुमार कटारे एवं प्रदीपकुमार खरे: आधुनिक पाश्चात्य दर्शन
12. पा. दा. चौधरी : पाश्चात्य दर्शन



## **RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

“(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Universities Act, 1994.)”

### **Directions, Subject Scheme and Syllabus**

**For**

### **Bachelor of Commerce**



**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**

**Direction No. 59 of 2016**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF  
BACHELOR OF COMMERCE (CREDIT BASE SEMISTER PATTERN) FACULTY OF  
COMMERCE**

(Issued under section 14(8) of the Maharashtra University Act 1994)

**WHEREAS**, Maharashtra University act No. xxxv of 1994 has come into force with effect from 22<sup>nd</sup> July 1994 and has been amended from time to time,

AND

**WHEREAS**, the University Grants Commission, New Delhi vide letter no. D.O. No. F-2/2008/(XI Plan), Dated 31<sup>st</sup> January 2008 regarding new initiatives under the XI Plan-Academic reforms in the University has suggested for improving quality of higher education and to initiate the Academic reform at the earliest.

AND

**WHEREAS**, faculty of commerce act its meeting held 14.3.2016 has decided to update the existing syllabus for award of the degree of Bachelor of Commerce commensurate with the curricula existing in the various universities in India and with a view to include the latest trends in the commerce stream as well as to design it to suit to the needs of the industries and corporate houses,

AND

**WHEREAS**, University Grants Commission, New Delhi has prescribed the Model Curriculum for award of the Bachelor degree in the Faculty of commerce and directed to implement the same from the academic session 2016-2017

AND

**WHEREAS**, Chairman of all the Board of Studies in the Faculty of Commerce in their meeting held on 5.4.2016 prepared the Scheme of Credit Based Semester pattern for conduct of the BCom. Examination,

AND

**WHEREAS**, Board of Studies viz. (1) Business Administration and Business Management, (2) Commerce, (3) Accounts and Statistics, (4) Business Economics and (5) Ad-hoc Board in Computer Application in its meetings held on 8.2.2016 respectively updated the existing Syllabi and recommended some modifications in the scheme of examination for graduate courses,

AND

**WHEREAS**, Coordinator of Task Force, Faculty of Commerce has consented to the changes in the syllabus and the scheme of examination for the award of B.Com Degree,

AND

**WHEREAS**, the Vice-Chancellor, Nagpur University, Nagpur approved the recommendations so made by the Special Task Committee in the Faculty of Commerce duly concurred by the Coordinator, Faculty of Commerce as required under Section 38 (a) of the Act on

AND

**WHEREAS**, As per the Advice of the Vice Chancellor, Coordinator, Faculty of Commerce & Coordinator, Special Task Committee in the meeting held on 14.3.2016 constituted sub-committee for syllabus restructuring of B.Com with CBCS pattern.

The Sub-committee submitted the Draft Syllabus of B.Com with CBCS pattern in meeting held on 5.4.2016

AND

**WHEREAS**, ordinance making involve a time consuming process, Now, therefore, I, Dr. S. P. Kane, Vice-Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of the powers vested in me under Section 14(8) of the Maharashtra University Act of 1994 do hereby issue the following direction:

This direction shall be called "**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF BACHELOR OF COMMERCE (CREDIT BASED SEMESTER SYSTEM) FACULTY OF COMMERCE RASHTRASANT TUKDOJI MAHARAJ NAGPURUNIVERSITY,NAGPUR**".

- The Direction shall come into force with effect from the date of its issuance by Honorable Vice-Chancellor.

- The duration of the course shall be of **three** academic years consisting of the **six** semesters with university examination at the end of each semester namely
  - B.Com Semester I Examination
  - B. Com Semester II Examination
  - B. Com Semester III Examination
  - B.Com Semester IV Examination
  - B.Com Semester V Examination
  - B.Com Semester VI Examination

The examination shall be held at such places and on such dates which are notified by the University.

#### **I. ELIGIBILITY TO THE COURSE**

- The duration of B. Com. Course shall be of Three years consisting Semester-I &II in first year ,Semester-III &IV in second year and Semester-V &VI in third year
- Subject to compliance with the provisions of this direction and of other ordinances in force from time to time, an applicant for admission to this course shall have passed the XII Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education, with English at Higher or Lower level and any Modern Indian Language at higher or lower level with any combination of optional subjects;

#### **OR**

- XII Standard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only; OR any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed Minimum Competition vocation course (MCVC).
  -

#### **OR**

#### **Any other Equivalent Examination of any State in (10+2) pattern with English & any combination of subjects**

- The Examinations for Semesters I,II,III,IV , V and VI shall be held twice a year at Such places and on such dates as notified by the University.
- The fees for examination shall be as prescribed by the Rashtrasant Tukdoji Maharaj Nagpur University from time to time.

- Applicant for the examination pursuing the regular course of study leading to the Bachelor Degree in Commerce shall not be permitted to join any other course in this University or any other University simultaneously.
  - **ATKT Rules** for Admission for the B.Com. Course -An unsuccessful examinee at the any semester examination shall be **ALLOWED TO KEEP TERM in accordance to the following table:**

<b>Admission to Semester</b>	<b>Candidate should have filled in the examination form of the R.T.M. Nagpur University</b>	<b>Candidate should have passed at least 50% of the passing heads of following examinations</b>
I Semester	As provided eligibility to the course, as above in the direction.	-
II Semester	of semester I	-
III Semester	-	Semester I and II taken together i.e. 6 heads clear
IV Semester	of semester III	-
V Semester	-	Semester I & II all heads clear& semester III & IV together i.e. 6 heads clear
VI Semester	of semester V	-

**Note- The consideration of passing heads in respect of all the subjects, including languages, includes the University Theory Examination and Internal Assessment/Practical marks taken together for all subjects.**

**For providing teaching facility in the subjects of Foundation and Elective Groups minimum requirement of student is 5.**

## **II. CREDIT SYSTEM OF EVALUATION**

- The B. COM. programme shall consist of **Thirty Six** Papers/Subjects in old terminology

With the issuance of this Direction, The Direction No 46 of 2016 shall stand repealed.

Nagpur:

Sd/-  
( Dr. S.P. Kane )

Dated : 2/9/2016

Vice-Chancellor

**Subjects offered, contact hours, credits attached and allocation of marks shall be as follows:**

## **APPENDIX-I**

**Scheme of teaching and examination under credit based semester system for B.Com Course.**

### **Semester-I**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
1T1	Financial Accounting-I	Uni.	60	80	20	100	4
1T2	Business Organization	Uni.	60	80	20	100	4
1T3	Company Law	Uni.	60	80	20	100	4
1T4	Business Economics-I	Uni.	60	80	20	100	4
1T5	Compulsory English	Uni.	60	80	20	100	4
1T6	Second Language 1T6.1- Supplementary English 1T6.2- Marathi 1T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses : Semester -I**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
1T7	Entrepreneurship Development	60	80	20	-	40	100	4
1T8	2T8.1- Computer Application-II <b>or</b> 2T8.2- Principles and Practice of Insurance-II <b>or</b> 2T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

**Semester-II**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
2T1	Statistics and Business Mathematics	Uni.	60	80	20	100	4
2T2	Business Management	Uni.	60	80	20	100	4
2T3	Secretarial Practice	Uni.	60	80	20	100	4
2T4	Business Economics-II	Uni.	60	80	20	100	4
2T5	Compulsory English	Uni.	60	80	20	100	4
2T6	Second Language 2T6.1- Supplementary English  2T6.2- Marathi  2T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses : Semester -II**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni) Marks	Internal (College) Theory Paper	Practical (Uni) Marks	Practical (PR) Marks		
2T7	Entrepreneurship Development	60	80	20	-	40	100	4
2T8	2T8.1- Computer Application-II <b>or</b> 2T8.2- Principles and Practice of Insurance-II <b>or</b> 2T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

### **Semester-III**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
3T1	Financial Accounting -II	Uni.	60	80	20	100	4
3T2	Business Communication & Management	Uni.	60	80	20	100	4
3T3	Business Law	Uni.	60	80	20	100	4
3T4	Monetary Economics -I	Uni.	60	80	20	100	4
3T5	Compulsory English	Uni.	60	80	20	100	4
3T6	Second Language 3T6.1- Supplementary English  3T6.2- Marathi  3T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi** will be as per the Commerce Language Board.

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin** will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.

**Vocational Courses :Semester-III**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni) Max Marks Theory Paper (TH)	Internal (College) Max Marks (IM)	Practical (Uni) Max Marks Practical (PR)	Min Passing Marks		
3T7	Entrepreneurship Development	60	80	20	-	40	100	4
3T8	3T8.1- Computer Application-II <b>or</b> 3T8.2- Principles and Practice of Insurance-II <b>or</b> 3T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

#### **Semester-IV**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
4T1	Financial Accounting -III	Uni.	60	80	20	100	4
4T2	Skill Development	Uni.	60	80	20	100	4
4T3	Income Tax	Uni.	60	80	20	100	4
4T4	Monetary Economics-II	Uni.	60	80	20	100	4
4T5	Compulsory English	Uni.	60	80	20	100	4
4T6	Second Language 4T6.1- Supplementary English  4T6.2- Marathi  4T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-1. For rest of Indian Languages the code is as per syllabus of B.A. Semester –I**

**2. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Guajarati, Telgu, Bengali, Persian, Arabic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses :Semester-IV**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
4T7	Entrepreneurship Development-IV	60	80	20	-	40	100	4
4T8	4T8.1- Computer Application-IV <b>or</b> 4T8.2- Principles and Practice of Insurance-IV <b>Or</b> 4T8.3- Advertising, Sales Promotion and Sales Management-IV	60	80	20	-	40	100	4

**Semester-V**

Course Code	Subjects	Internal /Uni. Examination	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
5T1	<b>Core Group</b> 1. Financial Accounting- IV 2.Cost Accounting 3.Management Process 4. Indian Economics- I	Uni.	60	80	20	100	4
5T3	5T2	Uni.	60	80	20	100	4
5T4	5T3	Uni.	60	80	20	100	4
5T5	<b>Elective Group -I</b> 5T5.1 Marketing Management <b>OR</b> 5T5.2 Computerized Accounting	Uni.	60	80	20	100	4
5T6	<b>Foundation Group- I</b> 5T6.1 Business Finance -I <b>OR</b> 5T6.2 Auditing	Uni.	60	80	20	100	4
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Vocational Courses :Semester-V**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
5T7	Entrepreneurship Development-V	60	80	20	-	40	100	4
5T8	5T8.1  Computer Application-V  <b>Or</b>  5T8.2  Principles and Practice of Insurance-V  <b>Or</b>  5T8.3  Advertising, Sales Promotion and Sales Management-V	60	80	20	-	40	100	4

**Semester-VI**

Course Code	Subjects	University Examination	Total Interna l /Hours	Marks			Credits
				Semester End Exam.	Internal Assessm ent	Total Marks	
6T1	<b>Core Group</b>  1. Financial Accounting -V	Uni.	60	80	20	100	4
6T2	2.Management Accounting	Uni.	60	80	20	100	4
6T3	3.Advanced Statistics	Uni.	60	80	20	100	4
6T4	4. Indian Economics - II	Uni.	60	80	20	100	4
6T5	<b>Elective Group-II</b> 6T5.1 Human Resource Management <b>OR</b> 6T5.2- Indirect Tax	Uni.	60	80	20	100	4
6T6	<b>Foundation Group- II</b> 6T6.1 Business Finance - II <b>OR</b> 6T6.2 Industrial Law	Uni.	60	80	20	100	4
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Vocational Courses :Semester-VI**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
6T7	Entrepreneurship Development-VI	60	80	20	-	40	100	4
6T8	6T8.1  Computer Application-VI  <b>Or</b>  6T8.2  Principles and Practice of Insurance-VI  <b>Or</b>  6T8.3  Advertising, Sales Promotion and Sales Management-VI	60	80	20	-	40	100	4

### **III Choice of Vocational Courses :**

Apart from doing General B.Com, students can opt for vocational courses in B. Com as under :

- **Vocational subjects:** The various vocational courses (mainly sponsored by UGC) which can be chosen by the students are given below. As per the UGC letter no. F.9-3/95 (Desk-VE) dated 23.12.1999 a course for **Entrepreneurial Development is compulsory** for students opting for vocational subjects. Thus with every vocational subject there will be one paper of Entrepreneurship Development.

#### ***Group -I - Computer Applications***

- I. Entrepreneurship Development- Paper-I
- II. Computer Applications  
(2 papers in each year i.e. 6 papers in 3 years)

#### ***Group -II - Principles and Practice of Insurance***

- I. Entrepreneurship Development- Paper-I
- II. Principles and Practice of Insurance  
(2 papers in each year i.e. 6 papers in 3 years)

#### ***Group -III - Advertising, Sales Promotion And Sales Management***

- I. Entrepreneurship Development- Paper-I
- II. Advertising, Sales Promotion And Sales Management  
(2 papers in each year i.e. 6 papers in 3 years)

#### **NOTE :**

Students opting for UGC Vocational subject (any one group of the two mentioned above) may select the same in lieu of following mentioned subjects in the respective Semester.

#### **B.Com. Semester-I :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Company Law

#### **B.Com. Semester-II :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Secretarial Practice

#### **B.Com. Semester-III :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Business Communication and Management

#### **B.Com. Semester-IV :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Skill Development

#### **B.Com. Semester-V :**

- a. Core Group-I
- b. Elective Group-I

#### **B.Com. Semester-VI :**

- a. Core Group-II
- b. Elective Group-II

### **Summary of the Total Marks and Credits**

<u>Sr. No.</u>		<u>Instruction Hours</u>	Total Marks ) Semester End Exam.	Credits
1	Semester—I	360	600	24
2	Semester—II	360	600	24
3	Semester—III	360	600	24
4	Semester—IV	360	600	24
5	Semester—V	360	600	24
6	Semester—VI	360	600	24
<b>Total</b>		2160	3600	144

- The Semester End written examination of all subjects shall be conducted by the University.

### **B.COM. Examination Semester—I**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting – I	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
2. Business Organization	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
3. Company Law	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
4. Business Economics-I	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	<i>University Theory Examination</i>	80	
	Internal Assessment	20	

	Total	100	40
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

### B.COM. Examination Semester-II

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Statistics &.Business mathematics	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Business Organization	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Company Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4. Business Economics-II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

**B..COM. Examination Semester-III**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting -II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Business Communication and Management	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Business Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4. Monetary Economics-I	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

**B..COM. Examination Semester-IV**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting – III	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Skill Development	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Income Tax	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4. Monetary Economics-II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

## B.COM. Examination Semester-V

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
<b>Group</b> <b>1. Financial Accounting-IV</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>2. Management Accounting</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>3. Management Process</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>4. Indian Economics- I</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>5. Elective Group-I</b> Marketing Management <b>OR</b> Computerized Accounting.	University Theory Examination	<b>80</b>	40
	Internal Assessment	20	
	Total	100	
<b>6. Foundation Group- I</b> Business Finance -I <b>OR</b> Auditing	University Theory Examination	<b>80</b>	40
	Internal Assessment	20	
	Total	100	
<b>Total</b>		<b>600</b>	<b>240</b>

## B.COM. Examination Semester–VI

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks ( Combined)
<b>Group</b>	University Theory Examination	80	
1.Financial Accounting -V	Internal Assessment	20	40
	Total	100	
2.Cost Accounting	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
3. Advanced Statistics	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
4. Indian Economics-II	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
<b>3. Elective Group-II</b> Human Resource Management <b>OR</b> Indirect Tax	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>4. Foundation Group- II</b> Business Finance –II <b>OR</b> Industrial Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>Total</b>		<b>600</b>	<b>240</b>

## **APPENDIX-II**

### **I. GENERAL RULES AND REGULATIONS**

The scope of the subject, percentage of passing in theory will be governed as per following rules:

- In order to pass at the Semester I, II, III & IV examinations an examinee shall obtain not less than 40% marks in each paper. This is to say that out of total 100 marks student should score 40 marks jointly in university examination (80 Marks) and internal examination (20 marks).
- The results of successful candidates at the end of semester-VI shall be classified on the basis of aggregate marks obtained in all the six semesters.
- The candidates who pass all the semester examinations in the first attempt are eligible for ranks.
- The results of the candidates who have passed the Semester-VI examination but not passed the lower semester examinations shall be declared as NCL (not completed lower semester examinations). Such candidates shall be eligible for the Degree only after successful completion of all the lower semester examinations.
- Percentage of marks for declaring class:  
Distinction- 75% and above (First Class With Distinction).  
First Class- 60% and above  
Second Class 45% and above but less than 60%.  
Third Class 40% but not less than 45%
- An unsuccessful examinee at the any semester wise end examination shall be eligible for re-examination on payment of a fresh Examination fee prescribed by the University.

### **II.TEACHING NORMS FOR THEORY PAPERS**

- For all Theory Papers there shall be **FIVE Periods Per week per Subject of 48 Minutes duration** each. Each Theory Paper must cover minimum 60 Clock Hours of Teaching and 360Clock Hours for semester I, II, III IV, V & VI form awl the 6 papers and One Credit, subject of Theory will be of 1 Clock Hour
- No person shall be admitted to this Programme, if he has already passed the same Programme or an Programme of any other statutory University (which has been recognized as equivalent to this programme.)
- A candidate who fails in any of the semester examinations may be permitted to take the examinations again at a subsequent appearance as per the syllabus and scheme of

examination in vogue at the time the candidate took the examination for the first time. This facility shall be limited to the following two years i.e. 4 more attempts.

- Examinee successful at the Semester I, II, III, IV, V and VI examinations shall, on payment of the prescribed fee, receive a Degree in the prescribed form signed by the Vice-Chancellor.
- Qualification of Teacher shall be as per U.G.C. and State Government norms.

**APPENDIX- III**  
**Rashtrasant Tukdoji Maharaj Nagpur University**

**I. SUBJECTS FOR B.Com. EXAMINATION**

**Semester-I**

1. 1T1-Financial Accounting-I
2. 1T2- Business Organization
3.1T3 Company Law
4. 1T4 Business Economics -I
5.1T5 Compulsory English
6.1T6 Second Language

**Semester-II**

1. 2T1 Statistics and Business Mathematics
2. 2T2 Business Management
3. 2T3 Secretarial Practice
4. 2T4 Business Economics -II
5.2T5 Compulsory English
6.2T6 Second Language

**Semester-III**

1. 3T1 Financial Accounting-II
2. 3T2 Business Communication and Management
3. 3T3 Business Law
4. 3T4 Monetary Economics -I
5.3T5. Compulsory English
6. 3T6 Second Language

**Semester-IV**

1. 4T1 Financial Accounting-III
2. 4T2 Skill Development.
3. 4T3 Income Tax
4. 4T4 Monetary Economics -II
5. 4T5 Compulsory English
6.4T6 Second Language

**Semester-V**

<b>Core Group</b>	1. 5T1 Financial Accounting IV
	2.5T2 Management Accounting
	3. 5T3 Management Process
	4. 5T4 Indian Economics-I
<b>Elective Group-I</b>	5. 5T5 .1 Marketing Management <b>OR</b> <b>5T5.2 Computerizes Accounting</b>
<b>Foundation Group I</b>	6. 5T6.1 Business Finance 1 <b>OR</b> 5T6.2 Auditing

**Semester-VI**

<b>Core Group</b>	1.6T1 Financial Accounting -V
	2. 6T2 Cost Accounting
	3.6T3 Advanced Statistics
	4. 6T4 Indian Economics-II
<b>Elective Group-II</b>	5. 6T5.1 Human Resource Management <b>OR</b> 6T5.2 Indirect Tax
<b>Foundation Group II</b>	6. 6T6.1 Business Finance-II <b>OR</b> 6T6.2 Industrial Law

## Workload

**Workload Chart (70 periods per week) (Odd Semesters) ( July to November )**

B. Com. Semester - I			B. Com. Semester – III			B. Com. Semester – V		
S. No.	Subjects	N/o. of Periods	S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods
1.	Financial Accounting-I	5	1.	Financial Accounting-II	5	1.	Core Group 1. Financial Accounting IV	5
2.	Business Organization	5	2.	Business Communication and Management	5	2 3 4.	Management Accounting Management Process Indian Economics	5
3	Company Law	5	3.	Business Law	5	5.	Elective Group - I Marketing Management <b>OR</b> Computerized Accounting	5
4.	Business Economics -I	5	4.	Monetary Economics -I	5	6.	Foundation Group - I Business Finance -I <b>OR</b> Auditing	5
<b>Total Periods</b>		<b>20</b>	<b>Total Periods</b>		<b>20</b>	<b>Total Periods</b>		<b>30</b>

**Workload Chart (70 periods per week)(Even Semesters)**

**( December to April)**

B. Com. Semester - II			B. Com. Semester – IV			B. Com. Semester – VI		
S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods
1.	Statistics and Business Mathematics	5	1.	Financial Accounting-III	5	1.	Core Group Financial Accounting-V	5
2.	Business Management	5	2.	Skill Development.	5	2.	Cost Accounting	5
						3.	Advanced Statistics	5
						4.	Indian Economics-II	5
3.	Secretarial Practice	5	3.	Income Tax	5	5.	Elective Group-I Human Resource Management OR Indirect Tax	5
4.	Business Economics – II	5	4.	Monetary Economics –II	5	6.	Foundation Group- I Business Finance-II OR Industrial Law	5
<b>Total Periods</b>		<b>20</b>			<b>20</b>			<b>30</b>

**WEEKLY Workload Chart ( LANGUAGES ) ( For Semesters I, II, III & IV)**

<b>SUBJECT(S)</b>		<b>PERIODS</b>
<b>1.</b>	<b>Compulsory English</b>	<b>5 PERIODS OF THEORY</b> + <b>1 PERIOD OF TUTORIAL FOR A BATCH OF 20 STUDENTS</b>
<b>2.</b>	<b>Second Language - Supplementary English/ Hindi/ Marathi/ Sanskrit etc.</b>	<b>5 PERIODS OF THEORY</b>

**II. CONVERSION OF MARKS TO GRADES AND CALCULATIONS OF GPA (GRADE**

**POINT AVERAGE) AND CGPA (CUMULATIVE GRADE POINT AVERAGE) :**

In the Credit and Grade Point System, the assessment of individual Subjects in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grades by some mechanism wherein the overall performance of the Learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of Grade. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviations and formulae used are as follows:-

**Abbreviations and Formulae Used**

G : Grade

GP : Grade Points

C : Credits

CP : Credit Points

CG : Credits X Grades (Product of credits & Grades)

SGPA =  $\Sigma CG / \Sigma C$ : Sum of Product of Credits & Grades points /  $\Sigma C$ : Sum of Credits points

SGPA : Semester Grade Point Average shall be calculated for individual semesters. (It is also designated as GPA)

CGPA : Cumulative Grade Point Average shall be calculated for the entire Programme by considering all the semesters taken together.

While calculating the CG the value of Grade Point 1 shall be consider Zero (0) in case of learners who failed in the concerned course/s i.e. obtained the marks below 40. After calculating the SGPA for an individual semester and the CGPA for entire programme, the value can be matched with the grade in the Grade Point table as per the Five (05) Points Grading System and expressed as a single designated GRADE such as O,A,B,C, F. (Fail).

Marks	Grade	Grade Points
75& above	O (Outstanding)	10
60-74	A (Very Good)	09
45-59	B (Good)	08
40-44	C (Average)	07
39& Below	F (Fail)	00

CGPA	Grade	Division
<b>10</b>	O (Outstanding)	<b>Distinction</b>
<b>9-10</b>	A(Very Good)	<b>First</b>
<b>8-9</b>	B (Good)	<b>Second</b>
<b>7-8</b>	C (Average)	<b>Third</b>

**Note:** -

- Consider Grade Points equal to Zero for (C x G) calculations of failed Learner/s in the concerned course/s.

#### **The illustration for the conversion of marks into grades in a course and semester Illustrations of Calculation:- Pass**

Subjects	Total Maximum Marks	Total Minimum Marks	Total Marks Obtained	Grade(G)	Grade points (GP)	Credit of the Course(C)	(Credit) X (Grade points)( CX GP)	SGPA=ΣCG/ΣC
C-11	100	40	60	A	9	4	36	<b>SGPA</b> $=208/24$ $=8.67$ <b>Grade B</b> <b>RESULT</b> <b>=PASS</b>
C-12	100	40	50	B	8	4	32	
C-13	100	40	75	O	10	4	40	
C-14	100	40	70	A	9	4	36	
C-15	100	40	48	B	8	4	32	
C-16	<b>100</b>	<b>40</b>	<b>52</b>	<b>B</b>	<b>8</b>	<b>4</b>	<b>32</b>	
<b>Total</b>	<b>600</b>	<b>240</b>	<b>355</b>	--	<b>48</b>	<b>24</b>	<b>208</b>	

#### **Illustrations of Calculation:- Fail**

Subjects	Total Maximum Marks	Total Marks Obtained	Grade(G)	Grade points(GP)	Credit of the Course(C)	(Credit) X (Grade points)( CX GP)	SGPA=ΣCG/ΣC
C-31	100	32	F	0	4	00	<b>SGPA</b> $=102/24$ $=4.24$ <b>Grade</b> <b>FRESUL</b> <b>T</b> <b>-F A II</b>
C-32	100	34	F	0	4	00	
C-33	100	60	B	8	4	32	
C-34	100	75	O	10	4	40	
C-35	100	33	F	0	4	00	
<b>C-36</b>	<b>100</b>	<b>55</b>	<b>B</b>	<b>8</b>	<b>4</b>	<b>32</b>	
<b>Total</b>	<b>600</b>	<b>304</b>	--	<b>26</b>	<b>24</b>	<b>102</b>	

Provision of Direction No.44 of 2001 governing the award of grace marks for passing an examination, securing higher Grades shall apply to the examination

### **III. GUIDELINES FOR SETTING QUESTION PAPERS:**

- .The question paper should be set in such a manner so as to cover the complete syllabus as prescribed by the University.
- .The numerical questions in any of the subjects shall be set in ENGLISH only and the candidate shall have to answer such questions in ENGLISH only. The candidate may answer non-numerical questions in ENGLISH, MARATHI or HINDI.
- The duration of the Semester wise End Examination shall be **3.00** Hours per course.

## **ABSORPTION SCHEME –I**

### **Bachelor of Commerce (B.Com)(Old Course Before 2013-2014)**

It is notified for general information of all concerned that the failure students of **Bachelor of Commerce (B.Com) OLD course** shall be absorbed in the **New course** introduced from the session 2014-2015 examination with the following scheme.

1. Those who have completed & passed **B.Com Part - I as per Old course** are eligible for admission in the **B.Com Part - II New course**.
2. Failure students of **B.Com Part - I old course** and having ATKT as per rules are eligible to take admission in **B.Com Part-II New course**. They should clear their **B.Com Part - I old course backlog** papers in next **three attempts (Last Chance Winter 2016)**. If they fail to pass in **Winter-2016** attempt they will have to appear in parallel papers of **New course**

**Scheme** as per absorption scheme indicated in Appendix- I.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheetofB.Com Part - I**.

3. Those who have completed & passed **B.Com Part - I & B.Com Part -II as per Old course** are eligible for admission in the **B.Com Part - III**

**New course.**

4. Failure students of **B.Com Part - II old course** and having ATKT as per rules are eligible to take admission in **B.Com Part-III New course**. They should clear their **B.Com Part - II old course backlog** papers in next **three attempts (Last Chance Winter 2017)**. If they fail to pass in **Winter-2017** attempt they will have to appear in parallel papers of **New course**

**Scheme** as per absorption scheme indicated in Appendix- II.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheetofB.Com Part - II**.

5. Failure students of **B.Com Part-III old course** are having chances up to **Winter 2018** examination (**Last Chance**). So they should appear**B.Com Part-III old course examination &are required to clear their backlog**. After that those who will have backlog in the **B.Com Part-III old course** will have to appear in parallel papers of **New course scheme** as per the absorption scheme indicated in Appendix- III.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in old course mark sheet of **B.Com Part-III.**

6. The students opted for UGC vocational subjects in **B.Com (old course)** & failed will have to appear in respective vocational paper of **B.Com (new course)** as indicated in Appendix – IV.

#### Appendix- I B.Com Part- I

Sr. No	<b>Old course Before 2013-2014</b>	<b>Max. Marks</b>	Sr.No.	<b>New Course from 2014-2015</b>	<b>Max. Marks</b>
				<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – I	100	3	Financial Accounting - I	100
4	Basics of Computer & Statistical Techniques	100	4	Fundamentals of Statistics & Computer	100
5	Principles of business Management	100	5	Principles of Management	100
6	Business Economics	100	6	Business Economics	100
7	Optional Paper - I (Any Group)	100	7	Company Law & Secretarial Practice (CLSP)	100

**Appendix- II B.Com Part-II**

Sr.N o.	Old course Before 2013-2014	Max. Marks	Sr.No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – II	100	3	Financial Accounting - II	100
4	Cost & Management Accounting	100	4	Cost & Management Accounting	100
5	Company Law & Secretarial Practice	100	5	Business and Industrial Law	100
6	Monetary Economics	100	6	Monetary Economics	100
7	Optional Paper - II (Any Group)	100	7	Business Communication	80

**Appendix- III B.Com Part-III**

Sr.No . .	Old course Before 2013-2014	Max. Marks . .	Sr.No	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Financial Accounts & Auditing – III	100	1	Financial Accounting – III	100
2	Income Tax	100	2	Income Tax & Auditing	100
3	Business Law	100	3	Business Finance	100
4	Business Communication & Management	100	4	Functional Management	100
5	Indian Economics	100	5	Indian Economy	100
6	Optional Paper - III (Any Group)	100	6	Computerized Accounting	80

## Appendix- IV

### B.Com Part- I ( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Marks	Sr No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70
4	Group IV. Computer Applications MIS & IT – I	70	4	Group IV. Computer Applications Information Technology & MIS (IT & MIS)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70
6	Entrepreneurship Development – I	70	6	Entrepreneurship Development – I	70

B.Com Part- II ( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Mark s	Sr No.	New Course from 2014-2015	Max. Mark s
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice-II	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- II	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70
4	Group IV. Computer Applications MIS & IT – II	70	4	Group IV. Computer Applications Visual Basic & DBMS (VB & DBMS)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70
6	Entrepreneurship Development – II	70	6	Entrepreneurship Development – II	70

B.Com Part-III  
( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Marks	Sr No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70
4	Group IV. Computer Applications MIS & IT – III	70	4	Group IV. Computer Applications E-Commerce & Web Development (EWD)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70
6	Entrepreneurship Development – III	70	6	Entrepreneurship Development – III	70

## **ABSORPTION SCHEME –II (Old Course 2014-2015 & New Course 2016-2017)**

Bachelor of Commerce (B.Com)(Old Course 2014-2015) The students of B. Com course of 2014-2015 who are not eligible for getting admission in B. Com part- II from B. Com part-I as per prevailing ATKT rules shall have to pass in the subjects given in the absorption scheme as below.

After becoming eligible they will be admitted in Semester III of CBCS2016-2017

Similarly, those students who are not eligible for getting admission in B. Com part-III from B. Com-II shall have to pass in the subjects given in the absorption scheme II as below. After becoming eligible they will be admitted in semester V of CBCS 2016-2017.

Only three attempts of successive examination shall be given to such students

For example- If the student fails in B. Com part –I in summer 2016 shall get winter 2016, Summer 2017, and Winter 2017 attempts only

### **Appendix- I B.Com Part- I**

Sr. No	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
				Theory	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – I	100	3	Financial Accounting - I	100
4	Fundamentals of Statistics & Computer	100	4	Statistics & Business Mathematics	100
5	Principles of business Management	100	5	Business of Management	100
6	Business Economics	100	6	Business Economics-I	100
7.	Company Law & Secretarial Practice(CLSP)	100	7	Company Law	100

**Appendix- II B.Com Part-II**

Sr.N o.	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II nd Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II nd Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting - II	100	3	Financial Accounting - II	100
4	Cost & Management Accounting	100	4	Cost Accounting	100
5	Business Communication	100	5	Business Communication & Management	100
6	Monetary Economics	100	6	Monetary Economics-I	100
7.	Business & Industrial Law	100	7	Business Law	100

**Appendix- III B.Com Part-III**

Sr.No.	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Financial Accounts – III	100	1	Financial Accounting – III	100
2	Income Tax& Auditing	100	2	Auditing	100
3	Functional Management	100	3	Management Process	100
4	Indian economy	100	4	Indian Economics -I	100
5	Business Finance	100	5	Business Finance - I	100
6	Computerized Accounting	80	6	Computerized Accounting	100

## Appendix- IV

### B.Com Part- I (Vocational Subjects)

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70	1	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70	2	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70
4	Group IV. Computer Applications MIS & IT – I	70	4	Group IV. Computer Applications Fundamentals of Information Technology (FIT )	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
6	Entrepreneurship Development – I	70	6	Entrepreneurship Development – I	70

B.Com Part- II \_\_\_\_\_ ( Vocational Subjects )

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70	1	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice-II	70	2	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70	3	<b>Advertising, Sales Promotion and Sales Management.</b> <b>Advertising, Sales Promotion and Sales Management – II</b>	70
4	Group IV. Computer Applications MIS & IT – II	70	4	Computer application- Software Packages (Word & Excel)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70	5	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
6	Entrepreneurship Development – II	70	6	Entrepreneurship Development – II	70

B.Com Part-III  
(Vocational Subjects)

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	Theory			Theory	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70	1	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70	2	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70	3	<b>Advertising, Sales Promotion and Sales Management.</b> <b>Advertising, Sales Promotion and Sales Management. III</b>	70
4	Group IV. Computer Applications MIS & IT – III	70	4	Group IV. Computer Applications Web Designing using HTML (WD)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70	5	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
6	Entrepreneurship Development – III	70	6	Entrepreneurship Development – III	70

The students of old course shall be given 03 attempts to pass their examination with old course starting from implementation of New Course.

***Proposed New syllabus For B. Com***  
From the Academic session 2016-2017  
**B.Com. – First Year**  
**Semester-I**  
**1T1: Financial Accounting-I**

**Unit – I Financial Accounting**

Meaning, objectives and principles of Accounting, Accounting concepts & Conventions, Accounting Standards- AS 1 to AS 10. Final accounts of Sole Traders. (**Theory & Numerical**)

**Unit – II Hire Purchase Accounts**

Meaning of Hire Purchase Accounts, Features, Merits and Demerits of Hire Purchase System, Distinction between Hire Purchase and Instalment System.

(**Theory & Numerical Excluding Instalment System and Repossession of Assets**)

**Unit – III**

**Final Accounts of Co - Operative Societies:** ( As per Maharashtra Co-Operative Societies Act 1960)- Introduction, Types of Co-operative societies Preparation of Trading & Profit and Loss A/C and Balance Sheet. (**Theory & Numerical**)

**Unit – IV**

**Joint Venture Accounts**

Meaning, Distinction between Joint venture and Partnership, Methods of joint venture accounting. (**Theory & Numerical on Centralized & Decentralized Method**)

**The Financial year ends on 31<sup>st</sup> March.**

**Reference Books :**

- S. N. Maheshwari :- Financial Accounting – Vikas Publishing House, New Delhi.
- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons.
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House.
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi).
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana).
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata).
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers).
- M. A. Arulnandam :- Advance Accounting – Himalay Publication
- Gulhane, Navghare And Others- Financial Accounting –I, Sheth Publishers Pvt. Ltd. Mumbai.
- Prof. PradeepWath, Dr. R. D. Mehta, Dr. DilipGotmare :- Financial Accounting– Payal Pakashan.
- Advanced Accounts (volume –I), M. C. Shukla, T.S. Grewal, Revised by S. C. Gupta. S, Chand Publishing.

## **1T1-Financial Accounting – I**

# Paper Pattern

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

OR

## **Q. No. 2 – Unit II**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

OR

### **Q. No. 3 – Unit III**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

OR

## **Q. No. 4 – Unit I**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

OR

### **Q. No. 5**

- a) Unit- I Problem 04 Marks
  - b) Unit -II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

## **1T2: Business Organization**

### **Unit – I**

Nature and scope of business: Meaning and definition of business, characteristics, objectives of business, classification of business activities, Industry, Service, Commerce & Trade. Social Responsibility of Business towards different groups.

### **Unit – II**

**Forms of Business Units:** Meaning, Characteristics, Advantages and Disadvantages of Sole Trader, Partnership, One Person Company, Private Company, Joint Stock Company- Concept, Classification, Service sector business: - meaning, types including BPO and KPO, advantage its role in economy

### **Unit - III**

**Organization:** Meaning, Definition ,Concept and functions of Organization, Principles of Organization, Types of Organization- Line and Staff, Modern types of organizations- Project, Matrix, Formal and Informal Organization, Advantages and Disadvantages.

### **Unit IV**

**Recent Trends in Business Organization:** Internal constituents of the Business Organization; key managerial personnel (KMP); chairman- qualities of a chairman, powers, responsibilities and duties of a chairman; chief executive officer (CEO), role and responsibilities of the CEO; E-commerce, E-business, E-banking.

### **Suggested Books:**

1. Jain, Khushpat S : Business Organisation,Mumbai
2. C.P Bose: Business Organisation & Management
3. Sekhri, Arun : Organisation, MUMBAI, Himalaya Publishing House, 2014
4. P.C.Jain: Government and business policy,Galgotia Publishing Com.New Delhi
5. Gulhane, Chopade Choudhary- Business Organization, Sheth Publishers Pvt. Ltd. Mumbai.
6. 'kekZ] ,l-y- % O;kolkf;d laxBu] jes'k cwd fMiks] ubZ fnYyh
7. oekZ] ;ksxsUnzizlkn % O;kolkf;d laxBu izca/k ,oa iz'kklu] ,l-pkUn ,aM da-
8. Dr. A. Shende, Dr. M Dixit& Dr. D. Mohture, Business Organization, Anuradha Prakashan Nagpur.

**QUESTION PAPER PATTERN**  
**BCOM – I : SEMESTER I**  
**1T2-Business Organisation**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **1T3: Company Law**

**Level of Knowledge:** - Basic Conceptual Knowledge.

**Objective:** To make aware the students with basic concept of company law  
[The Company Act 2013 with Amendments up to June 2016]

### **UNIT - I**

- (i) Background of New Company Act 2013.
- (ii) Corporate Personality – Company, Meaning of Company, Characteristics of a Company, Lifting of Corporate Veil
- (iii) Kinds of Company- Private Company, Public Company, Company limited by Share, Company Limited by guarantee, Unlimited Company, Association not for profit, Government Company, Foreign Company, Holding and Subsidiary and associate company with features of all kinds of company.
- (iv) Promotion and incorporation of company- stages in formation and incorporation of company, registration and commencement of business, Certificate of Incorporation

### **UNIT - II**

- (i) Memorandum of Association- Meaning, Definition, Importance and Content of Memorandum of Association.
- (ii) Articles of Association – Meaning, Definition, Importance and content of Articles of association.
- (iii) Private Placement and Prospectus: Meaning and definition of private placement and prospectus, public offer, types of prospectus- Deemed prospectus, Shelf prospectus, Red Herring Prospectus, Abridge prospectus.
- (iv) Misrepresentation in prospectus, Consequences of misrepresentation and remedies for misrepresentation in prospectus.

### **UNIT- III**

- (i) Share and share capital- Meaning and nature of capital and share capital, kinds of share- equity, preference, sweat equity, bonus, employee stock option scheme, and Right issue.
- (ii) Debt Capital (Borrowing and Debenture)- Meaning and nature of debt and debt capital, Types of different types of borrowing
- (iii) Difference between- Share and debenture, owned capital and debt capital.
- (iv) Depositories and dematerialization of securities- meaning and nature of depositories, procedure of dematerialization of securities.

### **UNIT - IV**

- (i) Membership in a company – Meaning of shareholder and member, distinction between shareholder and member, kinds of member.
- (ii) Procedure to become member and shareholder of a company, Concept of Transfer and Transmission of Securities (Share and Debenture)
- (iii) Directors – Meaning, Appointment, Power and Duties, Managing Director and Whole Time Director – Appointment and Qualification.

(iv) Concept of Small Shareholders Director, Women Director, Resident Director and Independent Director,Auditor – Meaning, Appointment and Removal

**Reference Books:**

- Company Law By Ashok K. Bagrial; Vikas Publication House
- Company Law And Practice, Ratan Nolakha: Vikas Publication House
- Business Law Including Company Law, Gulshan, S S and Kapoor, G K , New Age International (P) Ltd., Publishers.
- Company Law - A comprehensive Textbook on New Companies Act 2013 , Kapoor G.K. and Dhamija Sanjay: Tazman Publication
- Company Law & Secretaria lPractice- Appannaian Reddy, Prabhudev, Himalaya Publishing House
- Faroq Haque Company Law., Sheth Publishers Pvt. Ltd. Mumbai
- Company Law Dr. A . Shende, Dr. R. Ingole, Anuradha Prakashan, Nagpur
- Company Law and Secretarial Practice- Dr. R.K. Nelakha, Ramesh Book Depot, Jaipur, New Delhi.
- Secretarial Practice & Company Law- Arunkumar, Rachana Sharma- Atlantic Publishers and Distributors
- A Text Book of Company Law & Corporate Law) P.P.S.Gogna, S. Chand Publishing.

**QUESTION PAPER PATTERN**  
**1T3-COMPANY LAW**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **1T4: Business Economics – I**

### **Unit I: Nature and Scope of Business Economics**

Business Economics-Meaning, scope and objectives of business economics. Nature and types of business decisions. Role and social responsibility of business & business economist. Micro and Macro Economics- Definition, scope, merits and demerits.

### **Unit II: Theory of Consumption**

Law of Demand, Demand determinants, Changes in demand, Indifference Curve Concept- Definition, properties, importance of indifference curves. Elasticity of Demand- Concept, definition, kinds, measurement of elasticity of demand, Factors influencing elasticity of demand, Importance of elasticity of demand. Demand Forecasting- Meaning, need, importance, methods of demand forecasting.

### **Unit III: Theory of Production**

Concept of Production Function- Concept, definition, Types of Products, Total Production, Average Production, Marginal Production. Law of Variable Proportions- Assumptions, significance & limitations. Isoquant Curves- Definition, general properties of Isoquant curves, Expansion Path. Law of Returns to Scale, Internal and External Economies and Diseconomies of Scale, Ridge Lines. Theories of Population - Malthusian Theory of Population, Optimum Theory of Population, Demographic Transition Theory of Population and Criticisms. Law of Supply.

### **Unit IV- Theory of Cost and Revenue**

Law of Supply & Criticisms, Factors influencing supply. Concept of Cost in the Short & Long Run- Accounting Cost, Economic Cost, Opportunity Cost, Fixed Cost, Variable Cost, Direct and Indirect Costs, Real Cost, Explicit & Implicit Costs, Money Cost, Total Cost, Average Cost, Marginal Cost, Selling Costs. Revenues - Total Revenue, Average Revenue, Marginal Revenue and their Relationship.

### **Books Recommended:**

1. Business Economics ,V.G. Mankar, Himalaya Publication House.
2. Business Economics, H.L.Ahuja, S.Chand Publishing
3. Business Economics, Dr. A. shende, Dr. D. Mohture, Dr. Dixit,  
Dr. R. Gan, Anuradha Prakashan Nagpur
4. Micro Economics, P.N.Chopra, Kalyani Publishers.
5. Micro Economics, D.D.Chaturvedi, Galgotia Publishing Company.
6. Principles of Economics, D.M.Mithani, Himalaya Publishing House.
7. Advance Micro Economic Theory, M.Maria John Kennedy, Himalaya Publishing House.
8. Business Economics, Rashi Arora, Sheth Publishers, Mumbai
9. Business Economics, Dr. Samudra, Sai Jyoti Prakashan

**QUESTION PAPER PATTERN**  
**BCOM – I : SEMESTER I**  
**1T4-Business Economics- I**

**TIME:- 3 Hours]**

**[Full Marks:-80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Financial Accounting**
- 2. Business Organization**
- 3. Company Law and**
- 4. Business Economics-I**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10marks</b>
<b>1</b>		<b>Internal assessment Total marks</b>
<b>2</b>	<b>Unit- I            20 marks</b>	<b>20 marks</b>
	<b>Unit-II          20 marks</b>	
	<b>Unit-III       20 marks</b>	
	<b>Unit-IV       20 marks</b>	
		<b>Semester wise End Examination marks</b>
		<b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

## **1T5-Compulsory English**

### **Unit –I Short Stories:**

1. The Gifts by O Henry
2. The Quality by J. Galsworthy
3. The Axe by R. K. Narayan

### **Unit –II Poems:**

1. You turned away yourself by Kabir
2. Mending wall by Robert Frost
3. Unknown Citizen by W.H. Auden

### **Unit –III Essays:**

1. Tolerance by E.M. Forster
2. The Philosophy of Pleasure by Fulton J. Sheen
3. On Painted Face by A. G. Gardiner

### **Unit –IV**

A) I ) Synonym/Antonym of Given words (Match the following format)

II ) One Word Substitute

B) Business Correspondence:

Job Application Letter, Interview Call Letter, Job Offer Letter

C) Comprehension of an Unseen Passage

D) Precis Writing

**Prescribed Textfor UNITS I, II & III:** Swan and Pearls (Raghav Publishers)

### **Reference Books :**

#### **For UNIT IV(A) (Grammar /Vocabulary items)**

1. Learner's English Grammar & Composition by Dr. N.D.V.Prasada Rao (S.Chand)  
For Unit IV (B)
2. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan  
(Tata McGraw-Hill)
3. Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

**Question Paper Pattern  
1T5:- Compulsory English  
SEMESTER – I**

**N.B. LAO - Long Answer Question to be answered in about 150 words.**

**SAQ - Short Answer Question to be answered in about 75 words.**

VSAQ – Very Short Answer Question to be answered in one or two sentences.

Total Marks- 80

- |      |   |                          |
|------|---|--------------------------|
| Q 1. | A. One LAQ out of Two based on Short Stories (Unit I)                                   | 08 Marks                 |
|      | B. Two SAQs with internal choice based on Short Stories (Unit I) 2 x 4 Marks - 08 Marks |                          |
| Q 2. | A. One LAQ out of Two based on prescribed poems (Unit II)                               | 08 Marks                 |
|      | B. One LAQ out of Two based on the prescribed Essays (Unit III)                         | 08 Marks                 |
| Q 3. | A. Two SAQs with Internal Choice from Unit III  | (2 x 4 Marks) = 08 Marks |
|      | B. (i) Synonyms/Antonyms - Match the following – 4 items against 6 options              | 04 Marks                 |
|      |   | (4 x 1 Marks)            |
|      | (ii) One word substitute – 4 out of 6 (4 x 1 Marks)                                     | 04 Marks                 |
| Q 4. | A. One out of Two items based on Business Correspondence (Unit IV)                      | 08 Marks                 |
|      | B. Comprehension of Unseen Passage – 4 VSAQs – 4 x 2 Marks                              | 08 Marks                 |
| Q 5. | A. Make a Precis of the given passage and give it a suitable Title                      | 08 Marks                 |
|      | B. Five VSAQs based on Unit I and Unit III  | (4x2 Marks) = 08 Marks   |

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

## **2 Assignments – 6+6 = 12 Marks**

## **Performance & Conduct – 4 Marks**

## **Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Semester - I**  
**1T6.1- Supplementary English**

**Unit 1- Prose**

1. A New Star Rises- Jawaharlal Nehru
2. Mahatma Gandhi- Louis Fischer
3. Jagdish Chandra Bose- Aldous Huxley
4. My Greatest Olympic Prize- Jesse Owens
5. Eating for Health- Rajkumari Amrit Kaur

**Unit 2 - Poetry**

1. Virtue- George Herbert
2. Solitude- Alexander Pope
3. How Sleep the Brave- William Collins

**Non-Textual portion-**

**Unit 3 – Writing Skills**

**(A) Social Correspondence:**

Letter of Congratulations, Letter of Condolence, Informal Invitation

**(B) Writing Classified Advertisements**

**Unit 4 – Grammar**

Spotting errors in the use of - (1) Articles (2) Subject-Verb Agreement

**Prescribed Text- Zenith- An Anthology of Prose and Poetry (Raghav Publishers)**

**Reference books**

1. Macmillan Foundation English - R.K. Dwivedi, A. Kumar (**for Unit IV**)
2. Developing Communication Skills -- Krishna Mohan & Meera Banerji (Macmillan Publishers) (**for the topic of ‘Social Correspondence under Unit III’**)
3. Write Right – Sarita Manuja (Macmillan) (**For the topic ‘Writing Classified Advertisements’ given under Unit III**)

## **1T6.1- Supplementary English Question Paper Pattern**

### **Semester - I**

Q1.

(A) Unit 1 Prose - LAQ 150 words ( 2 out of 4) $2 \times 08 = 16$  marks

Q 2.

(B) Unit 1 Prose - SAQ 75 words( 4 out of 5) $4 \times 4 = 16$  marks

Q 3.

(A) Unit 2 Poetry- LAQ 150 words (1 out of 2)  $1 \times 08 = 08$  marks

(B) Unit 2 Poetry - SAQ 75 words ( 2 out of 3)  $2 \times 4 = 08$  marks

Q 4.

Non-textual portion

(A) Social Correspondence:  $1 \times 08 = 08$ Marks

(B) Writing Classified Ads  $1 \times 08 = 08$  Marks

Q 5. (A)i. Correct the error in the use of Articles (4)  $04 \times 1 = 04$  Marks

ii. Correct the error in the subject-verb agreement (4) $04 \times 1 = 04$ Marks

(B)VSAQs Units 1 & 2

Answer each of the following in one or two lines  $04 \times 2 = 08$  Marks

### **Total Marks of Theory Examination- 80**

### **INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

## 1T6.2 - विषय : मराठी

सत्र पहिले २०१६

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	समकालीन राष्ट्रीय, सामाजिक समस्यावर आधारित ( चार पर्यायांपैकी एका विषयावर, शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक	३५	
		१. लोकशाहीचे भवितव्य (डॉ. बाबासाहेब आंबेडकर) २. नौका ( प. भा. भावे ) ३. अस्पृश्यांचा आधारवड ( शिवाजी सावंत ) ४. बेगड ( योगीराज वाघमारे ) ५. उमा ( वि. स. जोग )		
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक	३५	
		१. ज्ञानेश्वरांच्या विराण्या ( संत ज्ञानेश्वर ) २. मन ( बहिणाबाई चौधरी ) ३. गणपतवाणी ( बा. सी. मर्ढकर ) ४. गिरणीची लावणी ( नारायण सुर्वे ) ५. माऊली भुकेले बेट ( सुधाकर गायधनी )		
४	४	व्यावहारिक मराठी	१०	
		१. पत्रलेखन २. इतिवृत्त लेखन		

## **1T6.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप  
सत्र : पहिले**

(वेळ: ३ तास)

(एकूण गुण-80)

प्रश्न: १ समकालीन राष्ट्रीय, सामाजिक समस्यावर आधारित निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा-४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागावर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

### **एकूण गुण विभागणी**

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण
३. व्यावहारिक मराठी 08 गुण
४. निबंध 16 गुण

एकूण गुण : 80

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्यांची वर्गातील उपस्थिती (०५ गुण ), परीक्षार्थ्यांचा वर्गातील सक्रीय सहभाग ( ०५ गुण) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

**1T6.3-fo"k;%& fgUnh  
izFke l=% SSSSemester I**

<b>le;%&amp; rhu ?kaVs</b> (Units)	bdkb;ksa Units)dk ikB~;Øe Øekuqlkj	<b>dqy vad%&amp;80</b> Vad
<b>bdkbZ 1</b> <b>(Unit-1)</b>	<b>Lkedkyhu jk"Vªh;] Ikekftd rFkk vkfFkZd leL;kvksa ij vk/kkfjr fuca/k A</b> 1/4fdUgh pkj esa ls,d fo"k; ij & 'kCn lhek 400 rd1/2	
<b>bdkbZ 2</b> <b>(Unit-2)</b>	<b>Xk  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b> 1 1/2 xi'ki& fuca/k&ukeoj flag 2 1/2 IPph ohjrk& fuca/k&ljnkj iw.kZflag 3 1/2 dQu & dgkuh &izsepan 4 1/2 phQ dh nkor& dgkuh & Hkh"e lkguh 5 1/2 'kj.kkxr& dgkuh& o`Unkouyky oekZ <b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>	
<b>bdkbZ 3</b> <b>(Unit-3)</b>	1 1/2 dchj ds nksgs & dchjnkl 2 1/2 cky yhyk & lwjnkI 3 1/2 HkfDr] uhfr ds nksgs &fcgkjh 4 1/2 oj ns] oh.kkokfnuh oj ns& lw;ZdkUr f=ikBh fujkyk 5 1/2 fgekfnz rqax Ja`x ls & t;`kadj izlkn <b>vU; ikB~; Ikexzh%&amp;</b>	
<b>bdkbZ4</b> <b>(Unit-4)</b>	1 1/2 ikfjHkkf"kd 'kCnkoyh&ikB~;iqLrd esa layXu okf.kT; ls lcaf/kr ikfjHkkf"kd 'kCnksa dk vaxzsth ls fgUnhrFkk fgUnh ls vaxzsth esa v/;u visf{kr gSA <b>2 1/2 dYiuk foLrkj&amp;ikkB~;iqLrd esa layXu mfDr;ksa dh lwph ls gh dYiuk foLrkj dk v/;u visf{kr gSA</b>	

**iz'u&i= dk izk:lk ,oa vad foHkktu**

**izFke l=**  
**1T6.3-fo"k;%& fgUnh**

le;%& rhu ?kaVs dqy vad%&80

iz'u&1Lkedkyhu jk"V<sup>a</sup>h;] lkekftd rFkk vkfFkZd leL;kvksa ij vk/kkfjr fuca/kA  
**vad&16**

¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½

iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
**vad&16**

¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½

iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
**vad&16**

¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½

iz'u&4 rhu x|&foHkkx lss o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa ls fdUgha  
pkj iz'uksa dsmRrj visf{kr gSA 4 x 4vad =vad&16

iz'u&5 blds vUrXZr lEiw.kZ ikB~;Øe ls pkj y?kqRjh iz'u gksaxsaA **izFke** **iz'u x| ls] f}rh;**

**iz'u i| ls] r'rh;** **iz'u ikfjHkkf"kd** 'kCnkoyh ls vksj prqFkZ iz'u dYiuk foLrkj ls

**iwNs tk;saxsa A** lKhkh iz'uksa ds mRrj visf{kr gSA

**4 x 4 vad = vad&16**

vkUrfjd ewY;kdau & 20 vad  
**dqy vad foHkktu%&**

fucU/k&16 vad

x| foHkkx&28 vad

i| foHkkx&28 vad

vU; ikB~; lkexzh&08vad

dqy vad&80 vad

## **Vocational Course**

## Semester I

**(Same syllabus for all vocational group subjects in B. Com. – I)**

## **1T7-Entrepreneurial Development-I**

**Time : 3 Hours**

Full Marks: 80

### **Internal Assessment: 20**

### **Level of knowledge: Basic knowledge**

**Objective:** To provide an introductory knowledge about entrepreneurship and its development process.

---

### **Unit-I**

Entrepreneurship – Evolution of the concept of entrepreneur, Definitions of Entrepreneurship & Entrepreneur, Types of Entrepreneurship, Function of Entrepreneur, Characteristics of Entrepreneur, Socio-economic origins of Entrepreneurship.

### **Unit-II**

Stages in the Entrepreneurial process, Barriers to Entrepreneurship, Environmental factors affecting Entrepreneurship, Entrepreneurial Structures.

### **Unit-III**

Qualities of a successful Entrepreneur. Distinction between an Entrepreneur and a Manager, role of Entrepreneurship in Economic development. Theories of Entrepreneurship- Theory of Achievement Motivation, Conceptual Model of Entrepreneurship.

### **Unit-IV**

Women Entrepreneurship- Concept of Women Entrepreneurs, Functions of Women Entrepreneurs, Growth of women Entrepreneurship and problems of women Entrepreneurs, Development of women Entrepreneurship, Recent Trends.

#### **Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

## **Group – I : Computer Applications**

### **1T8.1 : Fundamental of Information Technology (FIT)**

**Unit-I:** Definition of Computer, Block diagram of computer, generations of computer, classification of computers, characteristics, advantages & limitations of computer. Computer organization: Central processing Unit - speed of processor, computer memory: primary & secondary, Storage devices: floppy disk, Hard disk, magnetic tapes, optical disk (CD/ DVD), pen drive. Input devices: keyboard, mouse, joystick, light pen, scanners, OCR, MICR, Touch Screen, Bar code reader. Output devices: monitor, printers, classification of printers, impact & non-impact printers, dot matrix, ink jet, laser, thermal printers, plotters.

**Unit-II :** Hardware & software, Software and programming languages.

Computer networks – LAN, WAN, MAN

Internet, WWW, E-Mail, education, financial service, e-Commerce, banking, shopping, advertising, e-governance. Virus, Types of Viruses, Anti-Virus, Firewall and Anti-Spy ware Utilities

### **UNIT – III :**

#### **Introduction to Disk Operating System (DOS) :**

-File types, Directory Structure, Booting - Warm and Cold Booting, Types of DOS commands (Internal and External)

-Directory commands: DIR, MD, RD, TREE, PATH, SUBST ETC., Wild card Definitions, Commands related to file management: COPY, DEL, ERASE, REN, ATTRIB, XCOPY, BACKUP and RESTORE , General commands: TYPE DATE, TIME, PROMPT etc., batch commands, wild card characters & its use.

### **UNIT – IV :**

#### **Introduction to Windows Operating System :**

Advantages of windows operating system, operating with windows, GUI, use of help features, starting an application, essential accessories, windows explorer, control panel, my computer, my documents, recycle bin, finding folders and files, system tools, new features in windows-7/8/10 versions.

**Practical : Practical will be based on Unit-III & IV i.e. MS-DOS and Windows**

#### **BOOKS RECOMMENDED:**

1. I.T. Today (Encyclopedia) By S. Jaiswal (Test Book)
2. Computer Today By Donald Senders
3. Computer Applications In Management – Ushadahiya, Sapnanagpal(Taxmann's)
4. Information Technology - Dr. Sushilamadan (Taxmann's)
5. Understanding Computer By Dineshkumar
6. Computer Fundamentals By P. K. Sinha
7. Office Automation By K.K. Bajaj (Macmillan)
8. Business On The Net An Introduction To The Whats And Hows Of E-Commerce By K. N. Agarwala & Others (Macmillan)
9. Dos/Unix & Windows: I.T. Today (Encyclopedia) By S. Jaiswal
10. Msdos; Manual

**Vocational Course**  
**Semester – I**  
**Group - II : Principles & Practice of Insurance**  
**1T8.2-Life Insurance – Paper I**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Life Insurance.

**Unit - I**

Concept of Risk, Meaning ,Definition, Classification of Risk

Risk management : Meaning and Definition, Objectives, Importance, Classification of Risk,

Methods of Handling Risk, factors affecting Risk Management, Principles of Insurance Management, Process of Risk Insurance Management

**Unit - II**

Concept of Insurance: Meaning, Definition, Need, Importance and Scope of Insurance, Benefits of Insurance

History of Insurance, Meanings of Terms used - Premium, Compensation, Cover note, Claim, Peril, actor affecting premium calculation

Reinsurance : Important concepts, characteristics, types of reinsurance, double cover, external and internal insurance.

**Unit - III**

Life Insurance: Meaning and definition of Life Insurance, Organization , Management , regulation , role and functions of life insurance

Insurance Contract, Essentials of Insurance Contract

Principles of Life Insurance, Classification of Life Insurance Policies.

**Unit - IV**

Policy conditions of Life Insurance ,

Insurance document – Proposal form, policy form, cover note, certificate of Insurance, endorsement, co-insurance and renewal receipt, procedure of taking Life Insurance Policy.

Settlement of Claim on Maturity of Policy, Death of Policy holder,

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication
- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल– हिमालया पब्लिशिंग हाउस

**Group III.**  
**Advertising, Sales Promotion and Sales Management**  
**Semester-I**  
**1T8.3 -Advertising, Sale Promotion and Sales Management - I**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

**Objectives:** The aim of the paper is to acquaint the students with concepts, techniques and give experience in the application of concepts for developing an effective advertising programme.

**Unit-1**

- Advertising Role in the Marketing Process: Legal Ethical and social Aspects of Advertising. Functions and types of advertising.

**Unit- 2**

Integrated Marketing communication .Brand management , Brand Image, Brand Equity and Brand Building. Ethics of advertising

**Unit- 3**

The major players in advertising, Advertising agency, Brand manager, market research firms, Media, Type of agencies. Structure of an agency and its functions. The process of developing an ad.

**Unit-4**

Objective Setting and market Positioning; Dagmar Approach in Determination of Target Audience and understanding them. Assumptions about consumer behavior.

**Recommended books:**

- Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968) □
- Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981) □
- Stanton, William J & Buskrit, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- Russell, Frederic A. Beach, Frank H & Buskrit, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982) □
- David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi) □
- Kazmi & Batra, Advertising & Sales Promotion - Excel Books. □
- Belch & Belch, Advertising & Promotion - Tata McGrow Hill. □
- Jethwaney & Jain - Advertising Management, Oxford Univ. Press □□

**SEMESTER I**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development**

**TIME:- 3 Hours]** **[Full Marks:- 80**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

**Q.1.(a)**      UNIT – I    8 Marks

     (b)     UNIT – I    8 Marks

OR

     (c)     UNIT – I    8 Marks

     (d)     UNIT – I    8 Marks

**Q.2. (a)**     UNIT – I    8 Marks

     (b)     UNIT – I    8 Marks

OR

     (c)     UNIT – I    8 Marks

     (d)     UNIT – I    8 Marks

**Q.3. (a)**     UNIT – I    8 Marks

     (b)     UNIT – I    8 Marks

OR

     (c)     UNIT – I    8 Marks

     (d)     UNIT – I    8 Marks

**Q.4. (a)**     UNIT – I    8 Marks

     (b)     UNIT – I    8 Marks

OR

     (c)     UNIT – I    8 Marks

     (d)     UNIT – I    8 Marks

**Q.5. Answer in Brief**

     (a)     UNIT – I    4 Marks

     (b)     UNIT – II    4 Marks

     (c)     UNIT – III    4 Marks

     (d)     UNIT – IV    4 Marks

**B.Com. – First Year**  
**Semester-II**  
**2T1: Statistics and Business Mathematics**

**Unit – I Statistics & Measures of Central Tendency**

Meaning, Scope, Importance, Functions and Limitations of Statistics. Collection of data, Tabulation and Classification, Frequency distribution.  
Mean, Median, Mode, Geometric Mean and Harmonic Mean (**Theory & Numericals**)

**Unit – II**

**Dispersion-** Meaning and significance of dispersion, Methods of measuring dispersion, Mean Deviation, Standard Deviation, Quartile Deviation, co-efficient of variation (**Theory & Numericals**)

**Unit – III**

Skewness-Absolute Measures of Skewness, Relative Measures of Skewness, Karl Pearson's Coefficient of Skewness, Bowley's Coefficient of Skewness. (**Numericals**)

**Unit – IV**

**Business Mathematics**:- Ratio Proportion, Percentages, Simple & Compound Interest, Profit/ Loss. (**Numericals**)

**Reference Books:**

- Fundamentals of statistics : D. V. Elhance&VeenaElhance
- Statistics : V. K. Kapoor – S. Chand & Sons
- Statistics : B. New Gupta – SahityaBhavan Agra
- Fundamentals of statistics and Computer, Dr. M. Datalkar & Mrs. Sindhu Ghate, Sai Jyoti Prakashan, Nagpur
- Business Statistics A Self Study Text Book, Dr. P. C. Tulsian & Bharat Jhunjhunwala, S. Chand Publishing
- Fundamental of Statistics : S. C. Gupta – Himalaya Publishing House
- Business Mathematics & Statistics : NEWK Nag & S.C. Chanda – Kalyani Publishers
- Gulhane, Chopade – Statistics and business mathematics, Sheth Publishers Pvt. Ltd. Mumbai
- Business Mathematics and Statistics- Dr. M. Datalkar & Mrs. S. Ghate, Sai Joyti Publication, Nagpur.
- Problem in statistics : Y. R. Mahajan - Pimplapure Publisher Nagpur

## **Question Paper Pattern Semester-II**

### **2T1-Statistics and Business Mathematics Paper - I**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 3 – Unit III**

- a) Problem 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

O. No. 4 – Unit I

- a) Problem                            08 Marks  
b) Problem                            08 Marks

**OR**

c) Problem                            08 Marks  
d) Problem                            08 Marks

Q. No. 5

- a) Unit- I Problem 04 Marks
  - b) Unit -II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

## **2T2: Business Management**

### **Unit I**

**Introduction:** Meaning, Definition ,concept and types of management. Principles of business Management. Scope and significance of business management.

Process of business management. Function of business Management. Management as a science or art.

### **Unit II**

**Planning:** - Meaning, Nature and Characteristics, Importance, Types & Components of Planning. **Decision Making:** Meaning, characteristics & importance of decision making. Traditional and Modern techniques of Decision-Making.

### **Unit – III**

**Delegation of Authority:**-- Meaning, Elements, Advantages, & Obstacle of Delegation of Authority. Centralization and decentralization of authority and its merits and demerits.

**Co-ordination & Controlling:** Meaning, Concept and principles of Coordination, Internal & External Coordination. Meaning, concept and elements of control.

### **Unit IV**

#### **Recent trends in management:**

Management of Change Management of Crisis, Total Quality Management, Stress Management, International Management.

#### **Suggested Books:**

1. Bajaj: Management Processing and Organization, Excel Publications.
  2. Tripathy and Reddy – Principles of Management – Tata McGraw Hill.
  3. A. Pardhasaradhy & R. Satya Raju: Management Text and Cases, Prentice Hall of India.
- Gulhane, Chopade Choudhary- Business Management, Sheth Publishers Pvt. Ltd. Mumbai
- 4- lq/kk] th-,l- Jhekjh fot;% O;kofk;d izcaU/k ds fl/nkar] jes'k cwd fMisk]ubZ fnYyh  
5- 'kekZ] th-Mh-lwukuk] th-lh-% izcaU/k ds fl/nkar] jes'k cwd fMiks]ubZ fnYyh  
6- ns'keq[k] izHkkdj% O;olk; O;oLFkkiukph ewy rRos] fiaiGkiwjs vaM da- ukxiqjs

**Question Paper Pattern  
Semester-II  
2T2-Business Management**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal mark

Time :- 3 hours Marks-80

**Q.1.**

(a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

OR

(c) UNIT – I 16 Marks

**Q.2.**

(a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

(c) UNIT – II 16 Marks

**Q.3.**

(a) UNIT – III 08 Marks

(b) UNIT – III 08 Marks

OR

(c) UNIT – III 16 Marks

Q.5.

a)	UNIT – I	04 Marks
b)	UNIT – II	04 Marks
c)	UNIT – III	04Marks
d)	UNIT – IV	04 Marks

## **2T3 : Secretarial Practice**

**Level of Knowledge:** - Book Conceptual Knowledge.

**Objective:** To make aware the student with various function, duties and responsibilities of company secretary and Secretarial Practice

[The Company Act 2013 with Amendments up to June 2016]

### **UNIT – I**

- (i) Procedure for Incorporation of Companies, Conversion of Companies – Private Limited to Public Limited and Public Limited to Private Limited
- (ii) Procedure for Alteration of Memorandum of Association and Article of Association
- (i) Company Secretary – Meaning, Qualification and Functions/ Role
- (ii) Directors – Procedure for Appointment of Directors and Director's Identification Number (DIN)- allotment and surrender

### **UNIT- II**

- (i) Types and characteristics of company meeting, statutory, board, general and extra ordinary meeting, and meetings of committee of director.
- (ii) Agenda, Notice and provision regarding quorum of Board meeting, Annual General Meeting and Extra ordinary General Meeting
- (iii) Voting and resolution- Meaning of poll, postal ballot and E-Voting, Meaning of ordinary and Special Resolution.
- (iv) Circular Resolution, Explanatory statement, Ordinary and special Business to be transacted in meetings.

### **UNIT – III**

- (i) Report Writing - Essential and content of Board Report and Annual Report.
- (ii) Concept of secretarial audit, Secretarial standards, corporate social responsibility and corporate governance, National Financial Reporting Authority.
- (iii) E-Governance and E-Filing- Meaning, features and procedure of E-Governance and E-Filing, MCA-21

### **UNIT – IV**

- (i) Key managerial personnel- Appointment and function of managing director, whole time director and manager.
- (ii) Procedure for appointment of Additional Directors, Alternate Directors, Nominee Directors.
- (iii) Managerial Remuneration - Remuneration of managing director, whole time director or manager.
- (iv) Provisions regarding resignation, removal of directors, Casual vacancy.

Reference Books:

- Company Law, Ashok K. Bagrial: Vikas Publication House
- Ratan Nolakha: Company Law And Practice, Vikas Publication House
- Gulshan, S S and Kapoor, G K: Business Law Including Company Law , New Age International (P) Ltd., Publishers
- Dr. Arvind shende, Dr. Asha Tiwari, Company Law & Secretarial Practice, Anuradha prakashan, Nagpur.
- Faroq Haque Secretarial Practice., Sheth Publishers Pvt. Ltd. Mumbai
  
- Kapoor G.K. and Dhamija Sanjay: Company Law -A comprehensive Textbook on New Companies Act 2013 , Tazman Publication
- Secretarial Practice & Company Law- Arunkumar, Rachana Sharma- Atlantic Publishers and Distributors
- Secretarial Practice, M. C. Kuchhal, S. Chand Publishing.

**QUESTION PAPER PATTERNS**  
**SEMISTER II**  
**2T3-SECRETARIAL PRACTICE**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |          |
|-----|----------|----------|
| (c) | UNIT – I | 16 Marks |
|-----|----------|----------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |           |          |
|-----|-----------|----------|
| (c) | UNIT – II | 16 Marks |
|-----|-----------|----------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |            |          |
|-----|------------|----------|
| (c) | UNIT – III | 16 Marks |
|-----|------------|----------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |           |          |
|-----|-----------|----------|
| (c) | UNIT – IV | 16 Marks |
|-----|-----------|----------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04 Marks |
| d) | UNIT – IV  | 04 Marks |

## **2T4 : Business Economics – II**

### **Unit I: Market Structure**

Meaning, Definition, Classification of Market Structures. Firm & Industry- Meaning, Difference between Industry and Firm. Pricing of Products-Types, Cost-based pricing, Customer-based pricing, Competitor-based pricing.

### **Unit II: Perfect & Imperfect Competition Markets**

Definition, Features, Price-output determination under Perfect Competition Market. Monopoly - Definition, Features, Types, Price determination under Monopoly. Concept of Price Discrimination .Monopolistic Competition- Meaning, Features, Price determination under Monopolistic Competition.

### **Unit III: Theories of Distribution**

Theory of Distribution -Modern Theory of Distribution. Theories of Rent- Ricardian theory of Rent, Modern theory of Rent, Concept of Quasi Rent. Theory of Wages- Marginal Productivity theory of Wages with Criticisms, Nominal & Real wages. Theories of Interest-Loanable Funds Theory of Interest, Liquidity Preference Theory of Interest, Criticisms, Concept of Gross Interest & Net Interest. Theories of Profit- Dynamic Theory of Profit, Innovation Theory of Profit, Criticisms of the Theories, Gross Profit & Net Profit.

### **Unit IV- Business Cycles & National Income**

Business Cycles-Concept, Features, Types, Phases of Business Cycles. National Income - Meaning, Concepts, Methods of Measuring National Income, Difficulties in National Income Accounting.

### **Books Recommended:**

1. Business Economics , V.G. Mankar, Himalaya Publication House
2. Modern Economics, H.L.Ahuja, S.Chand & Co Ltd.
3. Micro Economics P.N.Chopra, Kalyani Publishers.
4. Micro Economics, D.D.Chaturvedi, Galgotia Publishing Company.
5. Modern Economic Theory, K.K.Dewett, S.Chand & Co Ltd.
6. Business economics, Dr. Arvind Shende, Dr. R. Ingole, Dr. P. Kothiwale, Anuradha Prakashan, Nagpur
7. Managerial Economics,D.N.Dwivedi, Vikas Publishing House Pvt Ltd.
8. Managerial Economics-Theory & Applications, D.M.Mithani, Himalaya Publishing House.
9. Business Economics by Ms. V. Karkare, Mrs. S Ghate, Anuradha Prakashan Nagpur.
10. Business Economics, Rashi Arora, Sheth Publishers, Mumbai

## **Question Paper Pattern**

### **Semester- II**

### **2T4-Business Economics - II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |
| OR  |          |          |
| (c) | UNIT – I | 16 Marks |

Q.2.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |
| OR  |           |          |
| (c) | UNIT – II | 16 Marks |

Q.3.

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |
| OR  |            |          |
| (c) | UNIT – III | 16 Marks |

Q.4.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |
| OR  |           |          |
| (c) | UNIT – IV | 16 Marks |

Q.5.

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04 Marks |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Statistics and Business Mathematics**
- 2. Business Management**
- 3. Secretarial Practice and**
- 4. Business Economics-II**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I           20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-II**  
**2T5-Compulsory English**

**Unit -I Short Stories**

1. Some Day by Issac Asimov
2. Marriage is a private affair by Chinua Achebe
3. The Taxi Driver by Kartar Singh Duggal

**Unit -II Poems**

1. Art of Life by Tukadoji from Gramgeeta ( Translation by Dr. Bhelkar)
2. Horses Graze by Gwendolyn Brooks
3. Swan and Shadow by John Hollander

**Unit -III Essays**

1. Knowledge and Wisdom by Bertrand Russell
2. On education by Albert Einstein
3. What is Indianess? by Shelia Dhar

**Unit -IV**

A)a. Degrees of Comparison    b. Words often Confused

B) Business Correspondence:

Sales Letter, Inviting Quotations, Placing Orders

C) Comprehension of an Unseen Passage

D) Essay in about 300 words on any one Topics out of the Four Given Topics [Social issues, Economic issues, Environmental issues, Personal (Reflective) essays]

**Prescribed Textfor UNITS I, II & III:** Swan and Pearls (Raghav Publishers)

**Reference Books :**

**For UNIT IV (A) (Grammar /Vocabulary items)**

1.Learner's English Grammar & Composition by Dr. N.D.V.Prasada Rao (S.Chand)

For Unit IV (B)

2. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan  
(Tata McGraw-Hill)

3 Developing Communication Skills – Krishna Mohan & Meera Banerji

**2T5-Compulsory English**  
**SEMESTER – II**  
**Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Short Stories (Unit I)	08 Marks
	B. Two SAQs with internal choice based on Short Stories (Unit I) 2 x 4 Marks -	08 Marks
Q 2.	A. One LAQ out of Two based on prescribed poems (Unit II)	08 Marks
	B. One LAQ out of Two based on the prescribed Essays (Unit III)	08 Marks
Q 3.	A. Two SAQs with Internal Choice from Unit III	(2 x 4 Marks) = 08 Marks
	B. (i) Degrees of Comparison – 4 out of 6 - 4 x 1 Marks	08 Marks
	(ii) Words often confused – 4 out of 6 - 4 x 1 Marks	04 Marks
Q 4.	A. One out of Two items based on Business Correspondence (Unit IV)	04 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs – 4 x 2 Marks	08 Marks
Q 5.	A. Essay in about 300 words (1 out of 4 topics)	08 Marks
	B. Four VSAQs based on Unit I and Unit III	(4x2 Marks) = 08 Marks

**Total = 80 Marks**

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Question to be answered in one or two sentences.

**INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline. Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

## **2T8.1-Supplementary English**

### **Semester - II**

#### **Unit 1- Prose**

1. Using the Dictionary- Albert Walker and Mary R. Parkman
2. On the Rule of the Road- A.G. Gardiner
3. How I became a Public Speaker- George Bernard Shaw
4. Seeing People Off- Sir Max Beerbohm
5. The Postmaster- Rabindranath Tagore

#### **Unit 2 - Poetry**

1. The Daffodils- William Wordsworth
2. Stopping by Woods on a Snowy Evening- Robert Frost

#### **Unit 3 Non-Textual Portion**

##### **(A) Social Correspondence:**

- Letter of Recommendation
- Letter of Introduction
- Making reservations in hotels for accommodation

##### **(B) Note making :**

- Serial or sequential format
- Tree diagram

#### **Unit 4 – Grammar**

Spotting errors in the use of- (1) Prepositions s (2) Tenses

**Prescribed Text- Zenith- An Anthology of Prose and Poetry (Raghav Publishers) For Unit I and II**

#### **Reference books**

1. Macmillan Foundation English - R.K. Dwivedi, A. Kumar (**For Unit IV**)
2. Developing Communication Skills -- Krishna Mohan & Meera Banerji (Macmillan Publishers) (**For the topic ‘Social Correspondence’ under Unit III** )
3. Write Right by Sarita Manuja ( Macmillian Publication) (**For the topic ‘Note Making’ under unit III)**

**2T8.1-Supplementary English  
Question Paper Pattern**

**Semester - II**

Q 1.

(C) Unit 1 Prose - LAQ 150 words ( 2 out of 4)                     $2 \times 08 = 16$  marks

Q 2.

(D) Unit 1 Prose - SAQ 75 words( 4 out of 5)                     $4 \times 4 = 16$  marks

Q 3.

(A) Unit 2 Poetry- LAQ 150 words (1 out of 2)                     $1 \times 08 = 08$  marks

(B) Unit 2 Poetry - SAQ 75 words ( 2 out of 3)                     $2 \times 4 = 08$  marks

Q 4.

Non-textual portion

(A) Social Correspondence:     $1 \times 08= 08$ Marks

(B) i. Correct the error in the use of prepositions (4 out 5)  $04 \times 1= 04$  Marks

ii. Correct the error in the use of the tense                            (4 out 5)     $04 \times 1= 04$  Marks

Q 5.

(A) Note Making     $1 \times 08 = 08$  Marks

(B) VSAQs Units 1 & 2

Answer each of the following in one or two lines     $4 \times 2$  Marks = 08 Marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The**

**concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

## 2T8.2-विषय : मराठी

### सत्र दुसरे

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	आत्मवृत्तपर, वर्णनपर, विषयांवर आधारित निबंध ( चार पर्यायांपैकी एका विषयावर शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक  १ जेट युगातील मराठी माणूस ( शंतनू किलोस्कर ) २ विड्ल तो आला आला ( पु. ल. देशपांडे ) ३ नवसमाजनिर्मितीचे प्रणेते: महात्मा ज्योतीबा फुले ( गंगाधर पानतावणे ) ४ भरती ( वसंत वळडपांडे ) ५ महालूट ( संदानंद देशमुख )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक  १ तुकारामांचे अभंग ( संत तुकाराम ) २ प्रेमाचा गुलकंद ( केशव कुमार ) ३ पृथ्वीचे प्रेमगीत ( कुसुमाग्रज ) ४ स्वप्न ( ग्रेस ) ५ दोन कामागारांच्या गोष्टी ( लोकनाथ यशवंत )	३५	
४	४	ट्यावहारिक मराठी ३. मुलाखत तंत्र ४. म्हणी व वाक्प्रचार	१०	

## **2T8.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप**

**सत्र : दुसरे**

वेळ:३ तास)

(एकूण गुण- 80

प्रश्न:१ आत्मवृत्तपर, वर्णनपर निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

### **एकूण गुण विभागणी**

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण
३. व्यावहारिक मराठी 08 गुण
४. निबंध 16 गुण

एकूण गुण : 80

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षाथर्थाची वर्गातील उपस्थिती (०५ गुण ), परीक्षाथर्थाचा वर्गातील सक्रीय सहभाग ( ०५ गुण) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण) या निकषांवर एकूण २० गुणांपैकी विद्याथर्थाचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

### 2T8.3-fo"k;%& fgUnh

### f}rh; I= % Semester II

le;%& rhu ?kaVs

dqy vad%&100

bdkbZ Øekad ( Units)	bdkb;ksa ( Units) dk ikB~;Øe Øekuqlkj	vad
<b>bdkbZ 1 (Unit-1)</b>	<b>Tkhouh ] o.kZukRed rFkk 'kS{kf.kd fo"k;ksa ij vk/kkfjr fuca/kA</b> 1/4 fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd1/2	<b>20</b>
<b>bdkbZ 2 (Unit-2)</b>	<b>Xk  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>  1½ âf"kds'k eq[kthZ ds lkFk <kbZ fnu & laLej.k& euks gj ';ke tks'kh 2½ lk;kZoj.k vkSj ge & fuca/k & jktho xxZ 3½ lkbcj dkSrqd & ,dkadh & e/kq /kou 4½ jkr dk jgL; & ,dkadh & MkW- jkedqekj oekZ 5½ baLisDVj ekrknhu pkjn ij & O;aX; & gfj'kadji lkbZ  <b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>	<b>35</b>
<b>bdkbZ 3 (Unit-3)</b>	  1½ Bqdkj nks ;k l;kj djks & lqHknzkdqekjh pkSgku 2½ dye vkSj ryokj & jke/kkjhflag ^fnudj* 3½ /kwi pedrh gS pkjnh dh lkMh igus & dsnkjukFk vxzoky 4½ chrs fnu dc vkus okys & gfjoa'kjk; cPpu 5½ i`Foh fdlfy, ?kwerh jgh & v#.k dey	<b>35</b>
<b>bdkbZ 4 (Unit-4)</b>	  <b>vU; ikB~; Ikexzh%&amp;</b>  1½ eqgkojs vkSj yksdksfDr;kj &ikB~;iqLrd esa lyaXu eqgkojs vkSj yksdksfDr;ksa dk vFkZ ,oa okD; iz;ksx dk v/;u visf{kr gSA  2½ i= ys[ku& izdkj]xq.k] fo'ks"krk,j] izk:i] dk;kZy;hu i=]	<b>10</b>

	dk;kZy; Kkiu] dk;kZy; vkns'k] ifji=d] v/kZljdkjh i=¼blesa vkosnu]fu;qfDr] chek] cSad] Kkiu] fufonk oLrqvksa dsa Ø;]&foØ;] izkfIr ,oa lwpuk i=] vkns'k i=½ bR;kfn lkexzh v/;;u vkSj v/;kiu ds ek;/e ls rS;kj dh tk;sA	
--	---	--

**f}rh; I= % Semester II**

**2T8.3-fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%- 80**

**iz'u&1 Tkhouh ] o.kZukRed rFkk 'kS{kf.kd fo"k;ksa ij vk/kkfjr fuca/kA  
vad&16**

**¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½**

**iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
vad&16**

**¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx ls o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gS A 4 x  
4vad =vad&16**

**iz'u&5blds vUrxZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA **izFke iz'u**  
**x| ls] f}rh; iz'u i| ls] r`rh; iz'u eqgkojs vkSj yksdksfDr;ksa ls vkSj**  
**prqFkZ iz'u i=&ys[ku ls iwNs tk;saxsAIHkh iz'uksa ds mRrj visf{kr**  
**gSA****

**4 x 4vad =vad&16**

**vkUrfjd ewY;kdau & 20 vad**

**dqy vad foHkktu%&**

**fucU/k&16 vad**

**x| foHkkx & 28 vad**

**i| foHkkx &28 vad**

**vU; ikB~; lkexzh& 08 vad**

**dqy vad & 80 vad**

**Vocational Course**  
**Semester II**  
**(Same syllabus for all vocational group subjects in B.Com – I)**  
**2T7:Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide an introductory knowledge about rural entrepreneurship and its development process.

---

**Unit I**

Rural entrepreneurship-meaning and need of Rural entrepreneurship, problems of Rural entrepreneurship and how to develop Rural entrepreneurship?, rural marketing potential marketing of agricultural inputs-warehousing, cold storage-importance and problems,

**Unit II**

NGO's and Rural entrepreneurship, entrepreneurship in agriculture, organization and management of agro-based industries, development strategy for Rural entrepreneurs, entrepreneurial development in backward areas.

**Unit III**

Entrepreneurial growth before and after independence, Factors determining the growth of entrepreneurs, Source of entrepreneurship in India, Causes of slow growth

**Unit IV**

The concept and need of Entrepreneurial development programmes in India, Phases and contents of Entrepreneurial development programmes in India, the target group, special agencies and schemes for Entrepreneurial Development Institutions conducting Entrepreneurship development programmes.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I : Computer Applications**  
**2T8.1 : Software Packages (SP)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I : Introduction to Word Processing**

Introduction, Starting word, Creating document, Structure of Ms-word window and its application, Mouse & keyboard operations, designing a document; formatting-selection, cut, copy, paste, Toolbars, operating on text;

**Unit –II : Word Processing Tools**

Printing, Saving, Opening, Closing of document; creating a template; Tables, borders, textbox operations; Spelling and Grammar check,

Mail Merge, Envelope and Label, Protection of document, Change the view of document.

**Unit-III : Introduction to Excel**

Introduction To Ms-Excel, Navigating, Excel Toolbars and Operations, Formatting Features-Copying Data Between Worksheets; Entering and Editing Cell Entries,

**Unit-IV : Advance Features of Excel**

Creation of Charts, Editing and Formatting Charts, Goal Seek, Auditing, Linking, Workbook, Database in Excel (Auto Filter, Advanced Filter, Sort, Form), Mathematical, Statistical and Financial Functions in MS-Excel.

**Practical : Practical will be based on MS-Word and MS-Excel**

**Books Recommended:**

1. Microsoft Office –2000 – Gini Courier , Annelte Marquis BPB
2. IT Today (Encyclopaedia) – S.Jaiswal
3. A First Course In Computers – Sanjay Saxena
4. First Text Book On Information Technology – Srikant Patnaik

**Group -: Principles & Practice of Insurance**  
**2T8.2-Life Insurance – Paper II (Semester – II)**

Time : 3 Hours]

Theory : 80 Marks

Internal Assessment: 20

Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Life Insurance.

**Unit - I**

**Insurance Agent** – Meaning and Definition of agent as per Insurance Act, Qualification and Disqualification for Appointment of Life Insurance Agent Training, duties, rights, code of conduct for agents, essential qualities for a successful agent.

**Unit -II**

**Life Insurance Corporation of India(LIC)** – History and Development and Establishment, Objectives, Organization structure , working of LIC Accounting procedure in life insurance business, analysis and interpretation of financial statement of life insurance organization

**Unit -III**

Role of IRDA – Insurance regulatory and development authority – Constitution, objectives, duties and powers, Role of IRDA in appointing agents. Progress of Life Insurance Business, Privatisation of Life Insurance Business, effect of globalization on insurance sector

**Unit - IV**

Silent features of Insurance Act 1938  
Silent features of Life Insurance Corporation Act 1956  
Marketing strategies of Life Insurance Products, insurance funds, investment of life, insurance funds

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
  - Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
  - Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication
  - Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल– हिमालया पब्लिशिंग हाउस
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Semester - II**  
**2T8.3-Advertising, Sale Promotion and Sales Management - II**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

**Unit-1**

Building of Advertising Programme-Message, Headlines, Copy, Logo, Illustration, Appeal, layout Campaign Planning. Creative Strategies. Production and execution of TVCs and print ads.

**Unit-2**

Sales Promotion – Introduction to Sales Promotion; Role and growth of Sales Promotion; its Features and Purpose; Tools and Techniques of Sales promotion, Sales promotion campaign, Developing a logic for sales promotion programmes.

**Unit-3**

- Role of selling in planed economy, selling as a career, Acquiring skills and developing new qualities for salesmen and to improve growth chances,

**Unit-4**

Tips and suggestions to improve personal ability, skills for salesmen, product knowledge, planned selling system.

**Recommended books:**

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
- ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
- ✓ Stanton, William J & Buskrit, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskrit, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)
  - ✓ Kazmi & Batra, Advertising & Sales Promotion - Excel Books.
  - ✓ Belch & Belch, Advertising & Promotion - Tata McGraw Hill.
  - ✓ Jethwaney & Jain – Advertising Management, Oxford Univ. Press

**SEMESTER II**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**      **[Full Marks:- 80**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B. Com. Second Year**  
**Semester- III**  
**3T1 – : Financial Accounting – II**

**Unit – I**

**Consignment Accounts.**

Meaning, Needs, Advantages and Formalities in consignment, Difference between a consignment and a sale, Performa invoice, Account Sales, Accounting Procedure of Consignment, Valuation of Consignment Stock. (**Theory & Numerical**)

**Unit – II**

**Branch Accounts (Excluding Foreign Branch)**

Meaning of Branch, Objectives of Branch Accounting, Maintenance of Accounting Records , Transactions relating to Branch. Accounting Procedure of Branch(**Theory & Numerical** )

**Unit – III**

**Flotation of Joint Stock Companies and their Capital Structure.**

Types of Shares, Methods of issue of shares, Accounting for Issue, Forfeiture of shares & reissue of forfeited shares(**Theory & Numerical**)

**Unit – IV**

**Final Accounts of Joint Stock Companies**

Introduction, Statutory provisions regarding preparation of companies final accounts. Provision for interest on debentures, Proposed Dividends, Interim Dividend (**Theory & Numerical**)

**The financial year ends on 31<sup>st</sup> March.**

**Reference Books:**

- Corporate Accounting:-Maheshwari S N, Vikas Publishing house Pvt. Ltd.
- Advanced Financial Accounting, Gupta R. L. ,S. Chand Publishing
- Advanced Accounts Shukla and Grewal : (S. Chand & Ltd. New Delhi)
- Advanced Accounts , Jain and Narang : (Kalyani Publishers, Ludhiana)
- Accountancy, Volume –I and II ,Sr. K. Paul : (New Central Book Agency,Kolkata)
- Accounting Theory, R. K..Lele and Jawaharlal : (Himalaya Publishers)
- Accounting Theory, Dr. L. S. Porwal : (Tata McGraw Hill)
- Corporate Accounting Dr. S. N. Maheshwari : (Viakas Publishing House Pvt. Lit. New Heldi)
- Advanced Financial Accounting ,Dr. Ashok Sehgal& Dr. Deepak Sehgal : (Taxmann, New Delhi)
- Advanced Financial Accointing Dr. R. D. Mehta, Prof. P. Wath & Dr. D. C. Gotmare ,Payal Prakashan, Nagpur.

## **Question Paper Pattern**

### **Semester-III**

#### **3T1 -Financial Accounting – II**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

Time :- 3 hours

Marks-80

Q. No. 1 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

Q. No. 2 – Unit II

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 3 – Unit III

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 4 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 5

- |    |          |                  |
|----|----------|------------------|
| a) | Unit- I  | Problem 04 Marks |
| b) | Unit –II | Problem 04 Marks |
| c) | Unit-III | Problem 04Marks  |
| d) | Unit-IV  | Problem 04 Marks |

## **3T2 : Business Communication & Management**

### **Unit – I: Introduction**

Meaning, Definition and concept of Communication, Objectives of Communication, Functions of communication Written Communication, Oral Communication, Visual Communication, Audio Visual Communication, interpersonal communication, supervisory communication, grapevine communication, barrier in communication

### **Unit – II: Business communication**

Business communication: concept, objective, elements, purpose, importance, salient feature, principles of effective business communication.

#### **customer care communication In business**

Types of business communication-company manual, house journal, placement brochure, leaflets, E MAIL . Public Relations Management- Role of public relations officer in business, group discussion,

### **Unit-III: Technology and business communication**

Concept of Management Information System, Role of Computer in communication, Barriers of computerized Communication –Use of internet, website and electronic media in business communication. **Social media as a mean of communication.**

### **Unit-IV:**

**MS-office aided communication:** MS Word and its application in business communication , Role of MS-Excel and MS-Power point in communication skill, MS-excel and financial presentation, MS-power point and business communication, Use of MS-power point in business meeting as a tools of effective communication.

### **Suggested Books:**

1. A guide to business correspondence- Kapoor A- S Chand & Co
- 2.. Urmila Rai & S.M. Rai, Business Communication, Himalya Publishers,
3. Lesikar I Flatley, Basic Business Communication, Tata McGraw Hill.
4. Microsoft office-2000/2007- Gini courter, annelte Marquis BPB
5. Business Communication, Dr. Arvind Shende, Dr. Asha Tiwari,  
Anuradha Prakashan, Nagpur.
5. Business Communication , Pooja Khanna, S. Chand Publishing.
5. dwekj] fojsUnz % O;kolkf;d lapkj] dY;k.kh ifCy'klZ]ubZ fnYyh  
6-pwMkor] nfj;ko flag] O;olkf;d lapkj] jes'k cwd fMiks]ubZ fnYyh  
7-fkans] ih-,e-% ekfgrh ra=Kku vkf.k O;olk; mi;kstuk]dSyk'k ifCyds'kUl]vkSjkaxkckn

**3T2-Business Communication & Management  
Paper - II  
Question Paper Pattern**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

- |      |                |          |
|------|----------------|----------|
| Q.1. | (a) UNIT – I   | 08 Marks |
|      | (b) UNIT – I   | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – I   | 16Marks  |
| Q.2. | (a) UNIT – II  | 08 Marks |
|      | (b) UNIT – II  | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – II  | 16Marks  |
| Q.3. | (a) UNIT – III | 08 Marks |
|      | (b) UNIT – III | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – III | 16Marks  |
| Q.4. | (a) UNIT – IV  | 08 Marks |
|      | (b) UNIT – IV  | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – IV  | 16Marks  |
| Q.5. | a) UNIT – I    | 04 Marks |
|      | b) UNIT – II   | 04 Marks |
|      | c) UNIT – III  | 04Marks  |
|      | d) UNIT – IV   | 04 Marks |

### **3T3– III: Business Law**

**Level of Knowledge:** Basic Conceptual Knowledge

**Objective:** To make students aware about various Laws relating to Business [with amendments up to June 2016 in respective Acts]

#### **Unit-I**

(i)Business law : Meaning, evolution and significance

- (ii) Law relating to Contract – (Indian Contract Act-1872): important definitions, nature and kinds of contract, essentials of a valid contract, offer and acceptance, consideration, capacities of parties to contract, free consent.
- (iii) Void Agreement, Contingent Contract, Quasi Contract
- (iv) Contract of Indemnity and Guarantee, Law of Agency.

#### **Unit-II**

- (i) Law relating to Sale of Goods- (Sale of Goods Act- 1930): contract of sale of goods, Essentials of a contract of sale, concept of goods, sale distinguished from agreement to sell, difference between conditions and warranties; transfer of ownership and delivery of goods, unpaid seller - his rights against the goods and the buyer.
- (ii) Law relating to Partnership- (the Indian partnership act 1932): concept of partnership and partnership firm, types of partner, types of partnership.
- (iii) Registration of partnership firm, effect of non registration, partnership deed, duties and liabilities of partners including those of newly admitted partners, dissolution of partnership firms.

#### **Unit-III**

- (i) Law relating to Negotiable Instruments -(Negotiable Instrument Act-1881): Meaning and Definition of Negotiable instruments, Promissory Notes, Bills of Exchange and its Types, Cheques and Its types, Crossing of Cheques.
- (ii) Endorsements: Meaning and Types, Holder and Holder in due course and its rights, Discharge of Negotiable Instruments.
- (iii) Parties to a Negotiable Instrument - duties, rights, and liabilities
- (iv) Prevention of Money Laundering Act-2002: Objectives, Important Definitions and Salient Features.

#### **Unit-IV**

- (i) Law relating to Consumer protection in India - (Consumer Protection Act-1986): Definition of Consumer, Importance of Consumer, Problems faced by Consumers, Consumer Protection- Need & Importance, Rights & Responsibilities of Consumer

(ii) Definitions: Complaints, Services, Defects & Deficiency, Relief available to consumer, Procedure to file complaints, ways and means of consumer protection, consumer dispute redresser agencies and procedure followed by redresser agencies.

(iv) Law Relating to Information Technology- (Information Technology Act-2000): Objectives, scope and Important Terms, Digital Signature & Electronic Records, Certifying Authority, Digital Signature Certificates, offense and Penalties.

(iv) Cyber Law: Meaning, Important Definitions, Features, Need and Importance of cyber Law in India

### **Reference Books:**

- Gulshan, S S and Kapoor, G K: Business Law Including Company Law , New Age International (P) Ltd., Publishers
- M.C. Kuchhal and Vivek Kuchhal : Business Law, Vikas Publishing House, New Delhi
- V.S. Datey: Business and Corporate Laws, Taxman, New Delhi
- N.D. Kapoor: Mercantile Law, Sultan Chand & Sons, Educational Publishers, New Delhi.
- Dr. V. K. Jain: Mercantile Law, Seth Publications, Nagpur.
- Business Law R.S. N. Pillai& V. Bhagavathi, S. Chand Publishing.
- Sen & Mitra: Cinnercuak Kawn, The World Press Pvt. Ltd., Kolkata.
- C.K. Kapoor: Lectures on Business and Corporate Laws, Vidya Sadan, Delhi.
- K.R. Bulchandani, Business Law Himalaya P. House, Mumbai-2006.
- Business Law, Dr. Arvind shende, Dr. Vijay Upgade, Anuradha Prakashan, Nagpur.

# **Question Paper Pattern**

## **3T3-Business Law**

### **Paper - III**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

**Q.1.**

(a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

**Q.2.**

(c) UNIT – I 16Marks

OR

(a) UNIT – II 08 Marks

(b) UNIT – II 08 Marks

OR

(c) UNIT – II 16Marks

(c) UNIT - III OR 16Marks

**Q.4.**

(a)      UNIT – IV	08 Marks
(b)      UNIT – IV	08 Marks
OR	
(c)      UNIT – IV	16Marks

**Q.5.**

- a) UNIT – I 04 Marks
- b) UNIT – II 04 Marks
- c) UNIT – III 04Marks
- d) UNIT – IV 04 Marks

## **3T4 MONETARY ECONOMICS-I**

### **Unit I: Money**

Evolution, Meaning, Definition, Nature and Functions of Money. Quantity Theory of Money and Criticisms. Paper Currency & Methods of Note Issue- Fixed Fiduciary Method, Proportionate Reserve Method, Minimum Reserve Method.

### **Unit II: Inflation & Deflation**

Inflation- Meaning, Nature, Causes, Effects, Impact of Inflation. Deflation - Meaning, Nature, Causes, Effects, Impact of Deflation. Role of Monetary Policy and Fiscal Policy in controlling Inflation & Deflation.

### **Unit III: Money Market & Policies**

Money Market- Concept of Money Market, Objectives, Importance of Money Market, Instruments of Money Market. Monetary Policy and Fiscal Policy Concept-Meaning, Objectives, Need, Importance, Impact, Recent Changes/Trends.

### **Unit IV: Public Finance**

Concept, Meaning, Importance of Public Finance, Principles of Public Finance, Theory of Maximum Social Advantages & Criticisms. Taxation – Definition, Characteristics& Cannons. Types of Taxation- Proportional, Progressive and Regressive Taxation System .Direct and Indirect Taxes- Merits & Demerits.

### **Books Recommended:**

1. Monetary Economics, RR Paul, Kalyani Publishers.
2. Money,Banking,Trade & Public Finance, M.V.Vaish, New Age International Pvt.Ltd.
3. Money, Banking and International Trade, K.P.M. Sundaram , Sultan Chand,New Delhi.
4. Public Finance, Tyagi , Jai Prakash Nath Publishers.
5. Money and Financial System P.K. Deshmukh, Phadke Prakashan.
6. Monetary Economics, Rashi Arora, Sheth Publishers, Mumbai
7. Modern Macroeconomics(Theory & Policy ),B.N.Ghosh, Ane Books Pvt Ltd, 2<sup>nd</sup> Edition, 2012.
8. Macro Economics, D.D.Chaturvedi, Galgotia Publishing Company,1999.

**Question Paper Pattern**  
**Semester -III**  
**3T4-Monetary Economics – I**  
**Paper - IV**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.	(a) UNIT – I	08 Marks
	(b) UNIT – I	08 Marks
OR		
	(c) UNIT – I	16Marks
Q.2.		
	(a) UNIT – II	08 Marks
	(b) UNIT – II	08 Marks
OR		
	(c) UNIT – II	16Marks
Q.3.		
	(a) UNIT – III	08 Marks
	(b) UNIT – III	08 Marks
OR		
	(c) UNIT – III	16Marks
Q.4.		
	(a) UNIT – IV	08 Marks
	(b) UNIT – IV	08 Marks
OR		
	(c) UNIT – IV	16Marks
Q.5.		
	a) UNIT – I	04 Marks
	b) UNIT – II	04 Marks
	c) UNIT – III	04Marks
	d) UNIT – IV	04 Marks

**Allocation of marks for the subjects-**

- 1. Financial Accounting -II**
- 2. Business Communication and Management,**
- 3. Business Law and**
- 4. Monetary Economics-I**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10 marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10 marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-III**  
**3T5-Compulsory English**

**Unit -I PROSE ITEMS FROM “BLOSSOMS”**

- 1.The Portrait of a Lady - Khushwant Singh
- 2.Youth and the Tasks Ahead – Karan Singh
- 3.The Verger - W.S.Maugham
- 4.*The Eyes are not Here* - Ruskin Bond

**Unit -II POEMS FROM “BLOSSOMS”**

- 1.*Money Madness* – D.H.Lawrence
- 2.*The Felling of the Banyan Tree* – Dilip Chitre
3. *A River* - A.K.Ramanujan

**Unit -III**

(A)Comprehension of UnseenPassage

(B)Transformation of Sentences:

- a.Affirmative –Negative and vice-versa
- b.Interrogative – Assertive and vice-versa

**Unit -IV**

(A) Business Correspondence:

*Claim and Adjustment Letters* – Making Claims/Offering Adjustments

(B)Drafting Agenda/Minutes of a Meeting

**Prescribed Text :***Blossoms* (Raghav Publishers)

**Reference Books (For Sem III & IV) :**

For Unit III – Learner’s English Grammar and Composition – N.D.V.Prasada Rao  
(S.Chand)

For Unit IV – 1. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan (Tata  
2.Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan) (Tata McGraw-Hill)

### **3T5-Compulsory English**

#### **Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Prose items (Unit I: Lesson No. 1 & 2)	08 Marks
	B. One LAQ out of Two based on Prose items (Unit I: Lesson No 3 & 4)	08 Marks
Q 2.	Four SAQs with internal choice based on prescribed Prose items (Unit I) (4 x 4 Marks)	16 Marks
Q 3.	A. One LAQ out of Two from prescribed poems (Unit II)	08 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs –4 x 2 Marks	08 Marks
Q 4.	A. (i) Four items based on Unit III B (a) – 4 x 1 Mark - (ii) Four items based on Unit III B (b) – 4 x 1 Mark -	04 Marks
	B. One out of Two Questions based on Business Correspondence [Unit IV (A)]	08 Marks
Q 5.	A. One out of Two Questions based on UNIT IV (B)	08 Marks
	B. Four VSAQs based on Unit I and Unit III - (4×2 Marks)	08 Marks
		Total = 80 Marks

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Questions to be answered in one or two sentences.

#### **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance – 4 Marks**

**TOTAL – 20 MARKS**

## **3T6.1 - Supplementary English**

### **Semester - III**

#### **Unit 1 – Prose**

1. The Thief- Ruskin Bond
2. Three Hermits – Leo Tolstoy
3. The Power of Prayer- A.P.J. Abdul Kalam
4. A Tryst with Destiny- Jawaharlal Nehru

#### **Unit 2 - Poetry**

1. Still I Rise- Maya Angelou
2. Ulysses - Alfred, Lord Tennyson
3. Telephone Conversation- Wole Soyinka

#### **Non-Textual Portion-**

#### **Unit 3- Writing Skills**

##### **A) Report Writing**

- Inquiry Report
- Progress Report

##### **(B) Expansion of an Idea**

#### **Unit 4 - Vocabulary**

(A) Business Terminology - Ad Valorem, Authorized Capital, Blue Chip, Benchmark, Credit Rating, Corporation, Debenture, Dividend, Excise Duty, Face Value, Fringe Benefits, Goodwill, Gross Profit, Inventory, Inflation, Joint Venture, Kickback, Lease, Mortgage, Patent, Portfolio, Running Costs, Surety, Social Security, Voucher

(Students to give the appropriate business term for the definition/ explanation given)

Prescribed Text- *Reflections*- A Supplementary English Coursebook for Undergraduates (Raghav Publishers)( **for unit I & II** )

#### **Reference Books-**

1. Professional Communication - Roshan Lal Raina, Iftikhar Alam, Falzia Siddiqui. (Himalaya Publishing House)( **For the topic ‘Report Writing’ under unit III**)
2. Macmillan Foundation English - R.K. Dwivedi, A. Kumar( **for the topic ‘Expansion of an Idea’ under Unit III**)
3. Business Correspondence & Report Writing- A practical approach to Business & Technical Communication- R.C. Sharma & Krishna Mohan Fourth Edition (McGraw Hill) ( **for the topic ‘Business Terms’ under Unit IV** )

**3T6.1 - Supplementary English**  
**Question Paper Pattern**

Q1.

(E) Unit 1 Prose - LAQ 150 words (2 out of 4)                   $2 \times 08 = 16$  marks

Q 2.

(F) Unit 1 Prose - SAQ 75 words (4 out 5)

$4 \times 04 = 16$  marks

Q 3.

(C) Unit 2 Poetry- LAQ 150 words- 1 out of 2                   $1 \times 08 = 08$  marks

(D) Unit 2 Poetry - SAQ 75 words- 2 out of 3                   $2 \times 04 = 08$  marks

Q4.

(A) Unit 3- Report Writing                   $1 \times 08 = 08$  marks

(B) Unit 3- Expansion of an idea (1out of 2)                   $1 \times 08 = 08$  marks

Q 5.

(A) Business Terms (4 out of 6)                   $4 \times 02 = 08$  marks

(B) VSAQs from Unit 1 and Unit 2                   $4 \times 02 = 08$  marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

### 3T6.2-विषय : मराठी

#### सत्र तिसरे

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	पर्यावरण, आधुनिकज्ञानविज्ञान आणि प्रसार माध्यमे ह्या विषयांवर आधारित निबंध ( चार पैकी एक ; शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन १ दुखःक्रांत लेंकी येणे (म्हाइंभट) २ माझे दत्तक वडील ( चि. वि. जोशी) ३ सांगावा ( शंकरराव खरात ) ४ शेवटची माती ( आनंद यादव ) ५ जनसामान्यांच्या प्रबोधनाचं गतिचक्र ( बा. ह. कल्याणकर )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन १ संतवाणी ( चोखामेळा, सेना न्हावी, नरहरी सोनार ) २ लटपट लटपट तुझे चालणे ( होनाजी बाळा ) ३ माझी कन्या ( बी. ) ४ आभाळाची आम्ही लेकरे ( वसंत बापट ) ५ इथेच ( यशवंत मनोहर ) ६ जहर खाऊ नका ( जानेश वाकुडकर )	३५	
४	४	व्यावहारिक मराठी १ प्रसारमाध्यमांसाठी वृत्तलेखन २ कल्पना विस्तार	१०	

### **3T6.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप  
सत्र : तिसरे**

वेळ: ३ तास)

(एकूण गुण-80)

प्रश्न: १ पर्यावरण आधुनिक ज्ञानविज्ञान आणि या विषयावर आधारित निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

#### **एकूण गुण विभागणी**

१. गद्य विभाग २८ गुण
२. पद्य विभाग २८ गुण
३. व्यावहारिक मराठी ०८ गुण
४. निबंध १६ गुण

एकूण गुण : ८०

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्यांची वर्गातील उपस्थिती (०५ गुण ), परीक्षार्थ्यांचा वर्गातील सक्रीय सहभाग ( ०५ गुण ) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण ) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण  
एकूण गुण : १००

3T6.3-fo"k;%& fgUnh  
r`rh; I= % Semester III

le;%& rhu ?kaVs		dqy vad%&80
bdkbZ Øekad (Units)	bdkb;ksa (Units) dk ikB~;Øe Øekuqlkj	vad
<b>bdkbZ 1 (Unit-1)</b>	<b>Toyar leL;kvksa] vk/kqfud Kku&amp;foKku rFkk izlkj ek;/e vkfn fo"k;ksa ij vk/kkfjr fuca/k A</b> ½ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½	20
<b>bdkbZ 2 (Unit-2)</b>	<b>Xk  foHkkx %&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk &amp;Hkkx&amp;2**</b> 1½ fgEer vkSj ftanxh & fuca/k& jke/kkjh flag ^fnudj* 2½ thou dh fdrkc & fuca/k& vuar xksiky 'ksomS 3½ lk;kZoj.k& iznw"k.k % leL;k eukstxr dh & fuca/k& foosdh jk; 4½ xkSjk & laLej.k & egknsoh oekZ 5½ izfr'kks/k & ,dakdh & MkW- jkedqekj	35
<b>bdkbZ 3 (Unit-3)</b>	<b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk&amp;Hkkx&amp;2**</b> 1½ fou; if=dk & rqylhnkl 2½ ehjk ds in & ehjkckbZ 3½ jghe ds nksgs & jghe 4½ fiz; izokl & v;ks;/kflag mik;/k; ^gfjvks/k* 5½ ckny dks f?kjrs ns[kk gS & ukxktqZu	35
<b>bdkbZ 4 (unit-4)</b>	<b>vU; ikB~; lkexzh %&amp;</b> 1½ thou o`Rr (Bio-Data)ifjHkk"kk] lkekU; ifjp;] izk:i]fo'ks"krk,j] izdkjA	10

2½ lk{kkRdkj (Interview)ifjHkk"kk]lhek, i] mls';] fl)kar]  
izdkj]egRRoA

fVli.kh%& bdkbZ& 4 dh lkexzh v/;u vkSj v;/kiu ds ek/;e  
ls rS;kj dh tk;sA

**3T6.3-fo"k;%& fgUnh  
r`rh; I= % Semester III  
fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%&80**

**iz'u&1 Toyar leL;kvksa] vk/kqfud Kku&foKku rFkk izlkj ek;/e vkfn  
fo"k;ksa ij vk/kkfjr fuca/kA  
¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn e;kZnk 400 'kCnksa rd½  
vad&16**

**iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½**

**iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx lss o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gSSA 4  
x4vad =vad&16**

**iz'u&5 blds vUrxZr IEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA izFke iz'u  
x| ls] f}rh; iz'u i| ls] r`rh; iz'u eqgkojs vkSj yksdksfDr;ksa ls vkSj  
prqFkZ iz'u i=&ys[ku ls iwNs tk;saxsa A lHkh iz'uksa ds mRrj  
visf{kr gSA 4 x4vad =vad&16**

**vkUrfjd ewY;kdau & 20 vad  
dqy vad foHkktu%&**

**fucU/k&16 vad  
x| foHkkx & 28 vad  
i| foHkkx &28 vad  
vU; ikB~; lkexzh& 08 vad  
dqy vad &80 vad**

**Vocational Course**  
**Semester III**  
**(Same syllabus for all vocational group subjects in B.Com – I)**  
**3T7-Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge regarding assisting institutions and preparation of project.

---

**Unit-I**

Institutions Assisting Entrepreneurs- District Industries Centres (DICs), State Small Industries Corporations (SSIC), Small Industries Services Institute (SISI), Small Industry Development Corporations (SIDCO), Khadi & village Industries Commission (KVIC)

**Unit-II**

Commercial Bank & Entrepreneurial Development: State Bank of India (SBI), Punjab National Bank (PNB), Indian Bank (IB), Bank of Baroda, Bank of India (BOI), Canara Bank, Syndicate Bank, Export Import Bank of India (Exim Bank).

**Unit-III**

Concept of project and classification of project, project identification, project selection, elements of project formulation - project report, contents of project report- project design - project appraisal

**Unit-IV**

Methods of project appraisal-- Ratio analysis - Break even analysis - Profitability analysis, average rate of return, overrun analysis,

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I : Computer Applications**  
**3T8.1 : Application Software**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit-I : Introduction to PowerPoint**

Working with PowerPoint Window, Standard Toolbar, Formatting Toolbar, Drawing Toolbar, Moving the Frame, Inserting Clip Art, Picture, Slide; Text Styling, Send to Back, Entering Data to Graph,

**Unit-II : Features of PowerPoint**

Organization Chart, Table, Design Template, Master Slide, Animation Setting, Saving and Presentation, Auto Content Wizard, Package for CD (Pack & Go Feature).

**Unit-III : Introduction to MS-Access**

Introduction to database management system, DBMS vs RDBMS, Database Administrator (DBA) and its role.

Introduction to Microsoft Access, creating a database in access, using database wizards and blank database, creating table, database view and design view,

**Unit-IV : Introduction to MS-Access**

Creating queries, forms, reports and macros in MS-Access, Relationship in MS-Access

**Practical : Practical will be based on MS-PowerPoint and MS-Access**

**Books Recommended:**

1. Microsoft Office –2000 – Gini Courter , Annelte Marquis BPB
2. IT Today (**Encyclopedia**) – S.Jaiswal
3. A First Course In Computers – Sanjay Saxena
4. First Text Book On Information Technology – Srikant Patnaik
5. Guide To Microsoft Access – Carl Townsand
6. An Introduction To Database Management System – Bipin C. Desai (Galgotia Pub.)

7. Database Management Design – CSV Murthy ( Himalaya)

(Semester - III)

**Group - II : Principles & Practice of Insurance**

**3T8.2:General Insurance – Paper I**

Time : 3 Hours]

Theory : 80 Marks

Internal Assessment: 20 Marks

---

### **Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about General Insurance.

#### **Unit - I**

- General Insurance : Meaning Definition ,Functions, Importance of General Insurance
- Principle of General Insurance ,History and Development of Insurance

#### **Unit - II**

- Types of Insurance, Life Insurance Vs.General Insurance
- Silent features of General Insurance Business ( Nationalisation ) Act,1972
- Concept of Reinsurance ,Double Insurance and Over insurance and its features

#### **Unit-III**

- Fire Insurance : Meaning, features and policy conditions for Fire Insurance, premium calculation, fire insurance contracts.
- Procedure of Taking of Fire Policy, Types of Fire insurance, Settlement of Claim of Fire Insurance, rate of fixation in fire insurance

**Unit IV-** Introduction to miscellaneous insurance, nature and utility of miscellaneous insurance, progress of miscellaneous insurance, general insurance business in India.

- Introduction to National Agricultural Insurance Scheme, property, motor vehicle, health, cattle and engineering insurance, public liability insurance

#### **Recommended books:**

Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.

Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House

Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिधांत एवं व्यवहार – भगवती प्रकाळ अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

### Group-III

#### 3T8.3- Advertising, Sales Promotion and Sales Management - III

Full Marks : 80

Time : 3 Hours

Internal Assessment : 20

- Level of knowledge: basic knowledge
- Objectives: to acquaint students with the theory and practice of advertising as well also management of a firm's sales operation.

## CONTENTS

### Unit-I

- **Introduction:** meaning of advertising, importance of advertising from the viewpoint of marketing and communication, role of advertising in the marketing mix – inter-relationship with product decisions, Pricing Decision, Channels Decision. Personal Selling, Sales Promotion and Publicity.

### Unit-II

- **Scope of advertising:** How advertising works (a few case studies), Stimulating, Expanding and sustain scale: secure sales lead, Increasing profits, Demarketing, Supporting other promotion tools etc.

### Unit - III

**Various forms of advertising:** National, Retail, Trade, Cooperative, Industrial, Corporate/Institutional, Financial, Public Service, Political, Primary and Selective demand Ad; Push and Pull Ad.

### Unit - IV

- **Advertising objectives:** Meaning and importance, Difference between objective, goals and strategy, possible Ad objectives, Sales as an objective, communication objectives, DAGMAR Approach of RH Colley.

### Recommended books:

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
  - ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
  - ✓ Stanton, William J & Buskirk, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskirk, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)

✓ Rajiv BAtra, Myers, David Aaker, Advertising Management (Prentice Hall India Pvt. Ltd., New Delhi)

**SEMESTER III**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours] [Full Marks:- 80**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B.Com. – Second Year  
Semester-IV  
4T1:- Financial Accounting – III**

**Unit – I**

**Final Accounts of Banking Companies**

Meaning of Banking Companies, Functions of Banking, Restrictions for a Banking Company, Provision of the Banking Companies Regulation Act 1949, Preparation of Annual accounts as per Banking Companies Regulation Act 1949 as per amendment by RBI.

( Theory & Numericals)

**Unit – II**

**Final Accounts of General Insurance Companies**

Introduction, Types of General Insurance, Important Terms- Reserve for unexpired Risk, Reinsurance Claims, Reinsurance Premium, Commission, Bonus in Reduction of Premium and preparation of final accounts

( Theory & Numericals)

**Unit – III**

**Valuation of Goodwill**

Meaning, Characteristics of Goodwill, Factors influencing the value of goodwill, Need for Valuation of goodwill , Valuation of goodwill as per -Average Profit Method, Weighted Average Profit Method, Super Profit Method, Capitalization Method. ( Theory & Numericals)

**Unit – IV**

**Liquidation of Company.**

Meaning, Types of Liquidation, Steps in Voluntary Liquidation, Functions of Liquidator, Liquidators remuneration/Commission. Preparation of Liquidator's Final Statement of Account only. (Theory & Numericals)

**The Financial year ends on 31<sup>st</sup> March.**

**Books Recommended**

- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya PublicationHouse
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency,Kolkata)
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- Dr. L. S. Porwal : Accounting Theory (Tata McGraw Hill)

- Robert Anthony, D. F. Hawkins & K. A. Merchant : Accounting Text & Cases(Tata McGraaw Hill)
- Dr. S. N. Maheshwari : Corporate Accounting (Viakas Publishing House Pvt.Lit. New Heldi)
- Dr. Ashok Sehgal& Dr. Deepak Sehgal : Advanced Accounting (Taxmann,New Delhi)

**Question Paper Pattern  
Semester IV  
4T1-Financial Accounting – III  
Paper - I**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours		Marks-80
Q. No. 1 – Unit I		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16Marks	
Q. No. 2 – Unit II		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 3 – Unit III		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 4 – Unit I		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 5	a) Unit- I	Problem 04 Marks

b)	Unit –II	Problem 04 Marks
c)	Unit-III	Problem 04Marks
d)	Unit-IV	Problem 04 Marks

## **4T2- : Skill Development**

### **Unit I: Introduction:**

Basic of personality, Human growth and behavior, Motivation and morality, Meaning of Skill, types; soft and hard skill, need for developing skill, human skill and behavior, Motivation and morality, skill development and employment

### **Unit II: Communication skills and Personality Development:**

Intra-personal communication and Body Language, Inter-personal Communication and Relationships, Leadership Skills, Team Building and public speaking, Communication in English, Presentation Skills, and Quality required for good public speaker,

### **Unit III: Techniques in Personality development**

Self confidence, Mnemonics, Goal setting, Time Management and effective planning, Stress Management, Meditation and concentration techniques, Self Motivation Self acceptance and Self growth

### **Unit IV : Entrepreneurial skill development**

Skill development of rural industrial sectors - small scale - handloom - agro based industries, rural artisans - handicrafts and sericulture. Meaning of entrepreneurship, types skill required for entrepreneurship

### **Suggested Books:**

1. Personality Development –Transform yourself by Rajiv K Mishra.
2. Personality Development and Communication Skills – II by Dr.C.B.Gupta
3. Business Communication and Personality Development: Lessons for Paradigm Change in Personality by Biswajit Das and Ipseeta Satpathy.
4. Entrepreneurship development.

# **Question Paper Pattern**

## **Semester-IV**

### **4T2-Skill Development**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks

Time :- 3 hours Marks-80

**Q.1.** (a) **UNIT – I** **08 Marks**

OB

(c) UNIT - I 16Marks

Q.2.

(a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

(c) UNIT-II 16Marks

0.3.

(a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

(c) UNIT – III 16Marks

Q.4.

(a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

(c) UNIT – IV 16Marks

**Q.5.**

- a) UNIT – I 04 Marks
- b) UNIT – II 04 Marks
- c) UNIT – III 04Marks
- d) UNIT – IV 04 Marks

## **4T3-: Income Tax**

### **Unit I: Introduction of Income Tax**

- i) Basic Concepts of Income Tax, Meaning & Definition of Assesses, Assessment Year, Previous Year, Gross Total Income, Types of Assesses, Income Exempt from tax, Capital & Revenue Expenditure. Agricultural Income.

### **Residential Status**

- ii) Residential Status and its effects on Tax incidence: Residential status of Individual, HUF, Firm & Association of Person, Company, Basic Conditions & Additional Conditions.(**Theory**)

### **Unit II: Income from Salary**

- i) Definition of Salary, Allowances, Types of Allowances, Taxable Allowances, Tax Free Allowances, Partly Taxable Allowances,  
ii) Perquisites, Types of Perquisites, Taxable Perquisites, Tax Free Perquisites,  
iii) Types of Provident Fund, Tax treatment of P.F, E.P.F., Superannuation Fund and Computation of Salary Income/Taxable Salary and tax liability. (**Theory & Numericals**)

### **Unit II Income from House Property**

- i) Meaning of Annual Value, Fully exempted income of house property, deemed owner.  
ii) Deduction from income from house property, unreleased rent, computation of income from house property. (**Theory & Numericals**)

### **Unit IV : i)Income Tax Slab Rates, Rebates, Income which do not form part of total Income**

- ii)Deduction under section 80C, 80CCC, 80CCD, 80D, 80DDB, 80E, 80G, 80GG, 80U

### **iii) Income from Other Sources**

Income specifically included under the head of other sources, specified income, casual income, deduction allowed from the income of other sources, computation of income from other sources. (**Theory & Numericals**)

### **Books Recommended :**

Ahuja G. K. and Ravi Gupta :- Systematic Approach to Income and Central Sales tax, Bharat law house, New Delhi.

- Singhania V. K. :- Direct taxes :- Law and Practice, Taxman's publication, Delhi.

- Jain K. C., Gour V. P., Narang D. B. :- Direct taxes Kalyani Publishers, Delhi.
  - Datey V. S. :- Indirect taxes law and Practice, Taxman, New Delhi, customs and excise Law Time - various issues.
  - Dr. V. Upgade and Shende Dr. A. K. Income Tax, Anuradha publication, Nagpur.

## **Question Paper Pattern**

**Semester-IV**

## 4T3-Income Tax

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

## Q. No. 1 – Unit I

a) Theory 08 Marks  
b) Theory 08 Marks

**OR**

c) Theory 08 Marks  
d) Theory 08 Marks

Q. No. 2 – Unit II	a) Theory	08 Marks
	b) Problem	08 Marks
	<b>OR</b>	
	c) Problem	16 Marks

Q. No. 3 – Unit III	a) Theory b) Problem	08 Marks 08 Marks
		<b>OR</b>
	c) Problem	16 Marks

Q. No. 4 – Unit I	a) Theory b) Problem	08 Marks 08 Marks
		<b>OR</b>
	c) Problem	16 Marks

Q. No. 5	a)	Unit- I	Problem 04 Marks
	b)	Unit –II	Problem 04 Marks
	c)	Unit-III	Problem 04Marks
	d)	Unit-IV	Problem 04 Marks

## **4T4-: MONETARY ECONOMICS-II**

### **Unit I: Commercial Banking**

Evolution, Meaning, Functions of Commercial Banks. Role commercial banks in a developing economy. Process of Credit Creation by Commercial Banks & its Limitations, Investment Policy of Commercial Banks. Non-Performing Assets- Meaning, Criteria and Causes.

### **Unit II: E-Banking & Core Banking**

Meaning, Features, Advantages & Disadvantages of ATM (Automated Teller Machines.) Meaning, Features, Merits and Demerits of Credit cards, Plastic cards, Smart cards, e-purse, Laser cards. EFT (Electron Fund Transfer), ECS (Electronics clearing system).

### **Unit III: Banks and Customers Relationship and Services**

Introduction, Meaning of Customer. Bank & Customer Relationship- Debtor & creditor, Trustee and Beneficiary, Agent and Principal, Bailer and Bailee. Opening, operating and closing of various bank accounts. Demat Account -Advantages, Opening and Operation of Demat Account. Methods of Calculating Interest Rates on deposits and on loans.

### **Unit : IV Central Bank**

Meaning, Objectives, Functions, Role of Central Bank. Credit Control- Meaning, Objectives, Methods : Quantitative- Bank Rate, Open Market Operations, Cash Reserve Ratio(CRR), Statutory Liquidity Ratio(SLR), Repo Rate. Qualitative – Varying margin requirement, Regulation of consumer's credit, Issuing directives, Publicity measure, Moral suasion, Credit rationing and limitations.

### **Books Recommended:**

1. Monetary Economics, RR Paul, Kalyani Publishers.
2. Money, Banking and International Trade, K.P.M. Sundaram , Sultan Chand,New Delhi.
3. Macroeconomics, Mankiw, N. Gregory, Macmillan Worth Publishers New York, Hampshire U.K.

4. Financial Institutions and Markets , Agrawal & Gupta, Kalyani Publishers.
5. Modern Banking ,Vaish, M.C, Oxford & IBH Publishing Co.,New Delhi
6. Money and Financial System P.K. Deshmukh, Phadke Prakashan.
7. Monetary Economics, Rashi Arora, Sheth Publishers, Mumbai

### **Question Paper Pattern**

#### **Semester-IV**

#### **4T4-Monetary Economics- II**

- N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

Q.2.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |           |         |
|-----|-----------|---------|
| (c) | UNIT – II | 16Marks |
|-----|-----------|---------|

Q.3.

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |            |         |
|-----|------------|---------|
| (c) | UNIT – III | 16Marks |
|-----|------------|---------|

Q.4.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |           |         |
|-----|-----------|---------|
| (c) | UNIT – IV | 16Marks |
|-----|-----------|---------|

Q.5.

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Financial Accounting -III**
- 2. Skill Development**
- 3. Income Tax and**
- 4. Monetary Economics-II**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10 marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10 marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-IV**  
**4T5-Compulsory English**

**Unit –I PROSE ITEMS FROM “BLOSSOMS”**

PROSE ITEMS FROM “BLOSSOMS” :

- 1.** *Go! Kiss the World* - Subroto Bagchi
- 2.** *The Gold Frame* - R.K.Laxman
- 3.** *The Cabuliwallah* - Rabindranath Tagore
- 4.** *The Struggle for an Education* - Booker T. Washington

**Unit –II POEMS FROM “BLOSSOMS”**

POEMS FROM “BLOSSOMS” :

- 1.** *If* – Rudyard Kipling
- 2.** *Stay Calm* - Grenville Kleiser
- 3.** *Ballad of the Landlord* - Langston Hughes

**Unit –III**

(A)Comprehension of Unseen Passage

(B) Transformation of Sentences:

- a.** Exclamatory-Assertive and vice-versa
- b.** Change the Voice

**Unit –IV**

(A) Business Correspondence:

*Credit and Collection Letters* – Granting Credit/Refusing Credit, Reminders for payment

(B)Interoffice Memorandum/Office Order

**Prescribed Text :** *Blossoms* (Raghav Publishers)  
**Reference Books (For Sem III & IV) :**

For Unit III – Learner’s English Grammar and Composition – N.D.V.Prasada Rao  
(S.Chand)

For Unit IV – 1. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan (Tata  
2.Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan) (Tata McGraw-  
Hill)

## **4T5-Compulsory English**

### **Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Prose items (Unit I: Lesson No. 1 & 2)	08 Marks
	B. One LAQ out of Two based on Prose items (Unit I: Lesson No 3 & 4)	08 Marks
Q 2.	Four SAQs with internal choice based on prescribed Prose items (Unit I) (4 x 4 Marks)	16 Marks
Q 3.	A. One LAQ out of Two from prescribed poems (Unit II)	08 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs –4 x 2 Marks	08 Marks
Q 4.	A. (i) Four items based on Unit III B (a) – 4 x 1 Mark - (ii) Four items based on Unit III B (b) – 4 x 1 Mark -	04 Marks
	B. One out of Two Questions based on Business Correspondence [Unit IV (A)]	08 Marks
Q 5.	A. One out of Two Questions based on UNIT IV (B)	08 Marks
	B. Four VSAQs based on Unit I and Unit III - (4×2 Marks)	08 Marks
		Total = 80 Marks

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Questions to be answered in one or two sentences.

### **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

## **4T6.1-Supplementary English**

### **Semester - IV**

#### **Unit 1 - Prose**

1. The Last Salvation- R.P. Sisodia
2. The Romance of a Busy Broker- O' Henry
3. Playing the English Gentleman- M.K. Gandhi
4. My Financial Career- Stephen Leacock

#### **Unit 2 - Poetry**

1. Dulce et Decorum est- Wilfred Owen
2. At the Lahore Karhai- Imtiaz Dharker
3. Leisure- W.H. Davies

#### **Non-Textual Portion-**

#### **Unit 3 - Writing Skills**

##### **A) Report Writing**

- Recommendation Report
  - Situational Report about an event or function
- B) Writing a dialogue with minimum 5 exchanges**

#### **Unit 4 - Vocabulary**

##### **(A) Business Terminology**

(Advice Note, Arbitration, Boom, Brand, Buffer, Curriculum Vitae, Capital, Devaluation, Duty, Entrepreneur, Gilt-Edged Stock, Infrastructure, Internal Audit, Ledger, Petty Cash, Raw Data, Scrip, Social Audit, Stock Exchange, Tender, Trademark, Underwrite, Warranty, Wildcat Strike, Write-Off) (Students to give the appropriate business term for the definition/ explanation given)

#### **Prescribed Text:**

*Reflections* - A Supplementary English Coursebook for Undergraduates  
(Raghav Publishers) **(For Unit I & II)**

#### **Reference Books-**

1. Professional Communication - Roshan Lal Raina, Iftikhar Alam, Faizia Siddiqui (Himalaya Publishing House) (**For the topic ‘Report Writing’ under Unit III**)
2. English for Practical Purposes - Z.N. Patil, B.S. Valke, Ashok Thorat, Zeenat Merchant. (Macmillan) (**for the topic ‘Dialogue Writing’ under Unit III**)
3. Business Correspondence & Report Writing - A Practical Approach to Business & Technical Communication- R.C. Sharma & Krishna Mohan. (McGraw Hill Higher Education) (**for the topic ‘Business Terms’ under Unit IV**)

**4T6.1-Supplementary English  
Question Paper Pattern**

**Semester - IV**

**Q1.**

(G) Unit 1 Prose - LAQ 150 words (2 out of 4)  $2 \times 08 = 16$  marks

**Q 2.**

(H) Unit 1 Prose - SAQ 75 words (4 out of 5)

$4 \times 04 = 16$  marks

**Q 3.**

(E) Unit 2 Poetry- LAQ 175 words- 1 out of 2  $1 \times 08 = 08$  marks

(F) Unit 2 Poetry - SAQ 75 words- 2 out of 3  $2 \times 04 = 08$  marks

**Q 4.**

(A) Unit 3- Report Writing (1 out of 2)  $1 \times 08 = 08$  Marks

(B) Unit 3- Writing a dialogue  
(with minimum 4 exchanges)  $1 \times 08 = 08$  Marks

**Q 5. (A) Business Terms (4 out of 6)**  $4 \times 02$  Marks= 08 Marks

**(B) VSAQ from Unit 1 and Unit 2**  $4 \times 02$  Marks =08 Marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

#### **4T6.2-विषय : मराठी**

**सत्र चौथे**

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	साहित्यविषयक निबंध ( चार पैकी एक; शब्द मर्यादा- ४००)	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन  १ इंद्रायणीच्या वाळवंटात ( श्री. म . माटे ) २ मित्र ( ना. सी. फडके ) ३ माणसांत विरलेला माणूस ( दुर्गा भागवत ) ४ रामा मैलकुली (व्यंकटेश माडगुळकर ) ५ प्रेम ( मारोती चित्तमपल्ली) ६ विजान युगात भारत ( जयंत नारळीकर )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन  १ दोन भारुडे ( संत एकनाथ) २ विद्यार्थ्याप्रत ( केशवसुत) ३ आई ( यशवंत )	३५	

		४ विचार झाला पाहिजे ( वसंत आबाजी डहाके) ५ आता आम्ही (वैभव सोनारकर)		
४	४	व्यावहारिक मराठी १ स्मरणिका संपादन २. वाक्प्रचार	१०	

#### 4T6.2-विषय : मराठी

प्रश्न पत्रिकेचे स्वरूप  
सत्र : चौथे

वेळ: ३ तास)

(एकूण गुण-80

प्रश्न: १ साहित्य विषयक निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घोत्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घोत्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक

गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

#### एकूण गुण विभागणी

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण

३. व्यव्हारिक मराठी ०८ गुण

४. निबंध १६ गुण

एकूण गुण : ८०

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्याची वर्गातील उपस्थिती (०५ गुण), परीक्षार्थ्याचा वर्गातील सक्रीय सहभाग (०५ गुण) आणि लिखित स्वरूपातील गृह पाठ (१० गुण) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

### 4T6.3-fo"k;%& fgUnh prqFkZ I= %Semester IV

**le;%& rhu ?kaVs**

**dqy vad%&80**

bdkbZ Øekad(Units)	bdkb;ksa (Units) dk ikB~;Øe Øekuqlkj	Vad
<b>bdkbZ 1 (Unit-1)</b>	<b>IkfjfR;d fo"k;ksa] Hkkjr; R;kSgkjsarFkk LokLF; laca/kh fo"k;ksa ij vk/kkfjr fuca/kA ½ fdUgh pkj esa ls,d fo"k; ij &amp; 'kCn lhek 400 rd½</b>	20
<b>bdkbZ 2 (Unit-2)</b>	<b>XkJ foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk &amp;Hkkx&amp;2**</b>	35
<b>bdkbZ 3 (Unit-3)</b>	<b>1½ y{eh dk Lokxr&amp;,dakdh &amp;misUnzukFk ^v'd* 2½ vHkko&amp;dgkuh&amp;fo".kq izHkkdj 3½ vdsyh&amp;dgkuh&amp;eUuw HkaMkjh 4½ ?kj dh ryk'k&amp;dgkuh&amp;jktsUnz ;kno 5½ ydh &amp;dgkuh&amp;eerk dkfy;k</b>	35
<b>bdkbZ 4</b>	<b>ij foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk Hkkx&amp;2**</b>	
	<b>1½ xhr &amp;Qjks'k&amp;Hkokuhizlkn feJ 2½ Lof.kZe ijkx&amp;lqfe=kuUnu iar 3½ /kjrh LoxZ leku&amp;xksikynkl ^uhjt*</b>	
	<b>4½ [kksus dks ikus vk;s gks\&amp;ek[kuyky prqosZnh</b>	

<p>(unit-4)</p> <p><b>5½ &gt;k;jlh dh jkuh dh lekf/k ij&amp;lkHknzkdqekjh pkSgku</b></p> <p><b>vU; ikB~; lkexzh%&amp;</b>  <b>1½ izfrosnu ys[ku ¼Report Writing½&amp; vFkZ ,oa ifjHkk”kk] mn~Hko vkSj fodkl] fo’ks”krk,j] izdkj ,oa rRo] izfrosnu rS;kj djrs le; /;ku nsus ;ksX; ckrsaA</b>  <b>2½ lekpkj ys[ku ¼News Writing½&amp; lekpkj&amp;i= ds fy, lekpkj ys[ku] izeq[k vk;ke ,oa izk:lk rS;kjdjuk] foKku&amp;fopkj] laln lekpkj] lekpkj vkSj laln] vijk/k lekpkj] [ksy lekpkj] jkstxkkj lekpkj] lkekfd;d ,oa O;fDrxr lekpkj] ’kqHk voljksads lekpkj] e`R;q lekpkj] foKkiu lekpkj vkfnA</b>  <b>Lkekpkj ys[ku esa vko’;d ckrsa ij /;ku nsuk &amp;’kh”kZiafDr(Head line)] lekpkj ys[ku izfØ;k] vPNs lekpkj dhfo’ks”krk,j] Hkk”kk&amp;’kSyh] vPNs laoknnkrk dh ;ksX;rk,jA</b></p> <p><b>fVli.kh%&amp; bdkbZ&amp; 4 dh lkexzh v/;u vkSj v/;kiu ds ek;/e ls rS;kj dh tk;sA</b></p>	<p><b>10</b></p>
--	------------------

**iz'u&i= dk izk:lk ,oa vad foHkktu**

**prqFkZl=**

**4T6.3-fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%&80**

**iz'u&1 lkfgfR;d fo"k;ksa] Hkkjrh; R;kSgkjksa rFkk LokLF; laca/kh  
fo"k;ksa ij vk/kkfjr fuca/kAvad&16**

**¼ fdUgha pkj esa ls ,d fo"k; ij & 'kCn e;kZnk 400 rd½**

**iz'u&2 x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&3 ij& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh  
iz'uAvad&16**

**½nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx ls o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gSSA**

**4 x4vad=vad&16**

**iz'u&5 blds vUrXZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA **izFke iz'u  
x| ls] f}rh; iz'u i| ls] r`rh; iz'u lkzfrosnu ys[kuls vkSj prqFkZ iz'u  
Iekpkj&ys[ku ls iwNs tk;saxsa A lHkh iz'uksa ds mRrj visf{kr gSA****

**4 x 4vad=vad&16**

**vkUrfjd ewY;kdau & 20 vad**

**dqy vad foHkktu%&**

**fucU/k&16 vad**

**x| foHkkx & 28 vad**

**i| foHkkx &28 vad**

**vU; ikB~; lkexzh& 08 vad**

**dqy vad &80 vad**

### **Vocational Course**

#### **Semester IV**

**(Same syllabus for all vocational group subjects in B.Com – I)**

**4T7-- Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge about small business and environment consideration.

---

#### **Unit-I**

##### **Small Enterprises**

Definition, Characteristics, Relationship between Small and Large Units, Objectives, Scope, Role of Small Enterprises in Economic Development.

#### **Unit-II**

### **Selection of Types of Organisation**

Sole proprietorship, Partnership, Joint stock company, Factors influencing the choice of organization

### **Unit-III**

Legal Aspects of Small Business – Major provisions of Income Tax, Sales Tax, Patent Rules, Excise Rules – Factory Act and Payment of Wages Act.

### **Unit-IV**

Environmental considerations – Concept of ecology and environment – Factors contributing to Air, Water, Noise pollution – Air, Water and Noise pollution standards and control – regulatory bodies. Personal Protection Equipment (PPEs) for safety at work places.

### **Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

### **Group – I : Computer Applications**

#### **4T8.1 : Computerized Accounting (C/A)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

### **Unit-I :**

Introduction to Accounting, Advantages of accounting, Books of accounts, Classification of Accounts, Financial Statements, Inventory management, Computerized Accounting, Need of Computerized Accounting, Accounts Organization, Accounts group, Loans Liabilities, Assets and Budget.

### **Unit-II :**

Accounting Software's Introduction to tally Software, Features of Tally Screen, Company information, Creating new Company, Gateway, Selection of Company, selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features,

Configuration- General, Numeric Symbols, Voucher Entry, Creation of Voucher Screen, invoice Order Entry, Printing.

### **Unit-III :**

Accounts info menu, Account Groups- create new group, creation of primary group. Normal and advance information, Ledger Accounts, cost categories, Cost Centers. Creation of Budget, Types of budget. Voucher- Voucher Entry, creation of Vouchers Screen, types of Voucher, Selection of Voucher types, Post Dated Voucher, printing of Vouchers, Cheque Printing.

### **Unit-IV :**

Inventory info, Features of Inventory info. Configure- Inventory Info, balance Sheet, Audit Trail, Ratio Analysis. Display-Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export, Export of Data.

### **Practical : Practical will be based on Tally S/W**

Tally Software – All Accounting Problems Viz. Balance sheet, Profit & Loss, Cash Book, Loans, Cost Accounting, Vouchers, Budget, Sales and Purchase, Assets & Liabilities, Inventory Management, Financial Statements, Books of accounts, Ledger, etc.

### **Books Recommended:**

1. Accounting with Tally : K.K. Nadhani, BPB Publication
2. Tally Tutorial : K.K. Nadhani and A.K. Nadhani, BPB Publication.
3. Advances Accounts Vol-I: M.C. Shukla, T.S.Grewal and S.G.Gupta, S.Chand & Company, Delhi.
4. Accounting Principles: Anthony R.N. and J.S. Richard, Irwin Inc.
5. Advanced Accountancy By P.C. Tulsian, Tata McGraw HILL Publication.
6. Tally By S.B. Kishor (Dasganu)
7. Fundamentals of Computers – ITL Education Solutions Ltd. (Pearson)

**Group - II: Principles & Practice of Insurance**  
**4T8.2- General Insurance – Paper II (Semester – IV)**

Time : 3 Hours]

Theory : 80 Marks

---

Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about General Insurance.

**Unit - I**

- Nature of Marine Insurance, Marine insurance contract, Marine insurance policies, premium calculation, kinds of Marine insurance policies.

- Types of Marine losses, payment of claims, proximity clause, voyage warranties, progress of Marine insurance business in India.

### **Unit - II**

- Policy conditions for Marine Insurance, Procedure of taking out Marine Policy
- Settlement of claim of Marine loss, Growth of Marine Insurance Business

### **Unit -III**

- Nature of insurance benefits, insurers liability, resources to life and general table, value of benefits, basic plan of assurance.
- Temporary assurance and pure endowment.

### **Unit- IV**

- Fidelity Guarantee Insurance, Public liability, Health Insurance, Personal Accident and Sickness Insurance
- Growth of Miscellaneous Insurance business in India
- Growth of General Insurance Business after Privatisation.

#### **Recommended books:**

Fundamental<sup>□□</sup> Of Insurance, R.K. Gupta, Himalaya Publishing House.

Principles<sup>□□</sup> & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House

Insurance Principle and Practice, M.M. Mishra and Dr. S.B. Mishra, S. Chand Publication

Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House

बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल – हिमालया पब्लिशिंग हाउस

### **Group-III**

#### **4T8.3-Advertising, Sales Promotion and Sales Management - IV**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

### **Unit-I**

- **Advertising Budget:** Consideration to be kept in mind while deciding the budget, different methods. The budget-making process.

### **Unit-II**

- **Media planning:** Importance of the exercise, Evaluation of important media-print, audio-visual, outdoor, direct mail, advertising on internet misc. media, the media planning process, important considerations- cost, coverage, flexibility, impact etc. computerized media selection, current Ad. Media scene in India.

### **Unit-III**

- Role of selling in planned economy, selling as a career

- Acquiring skills and developing new qualities for salesmen and to improve growth chances.
- Tips and suggestions to improve personal ability, skills for salesmen, product knowledge, planned selling system.
- Practical suggestions to improve day to day field working, customer psychology, buying motives, trade relations, effective distribution network.
- Sales organizations- types, principles, aims and objectives.

#### **Unit-IV**

- Selection and training of sales force, latest techniques in training.
- Motivation and compensation plans
- Sales planning (forecasting) methods, budgets, implementation, review techniques.
- Communication, how to develop skills for effective communication, principles, objectives and methods.
- Sales managers/supervisors - their role, authority and responsibility

#### **Recommended books:**

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
- ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
- ✓ Stanton, William J & Buskrit, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskrit, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)
- ✓ Rajiv Batra, Myers, David Aaker, Advertising Management (Prentice Hall India Pvt. Ltd., New Delhi)

### **SEMESTER IV QUESTION PAPER PATTERN FOR All Vocational Subjects**

#### **Computer Application, Insurance & Entrepreneurial Development & ASM**

**TIME:- 3 Hours]** **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

#### Q.5. Answer in Brief

(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

### B.Com. – Third Year Semester-V **5T1- : Financial Accounting – IV**

#### **Unit – I**

##### **Amalgamation and Absorption of Companies**

Introduction, Meaning, Characteristics, Objectives, Methods of purchase Consideration, Accounting Procedure of Amalgamation and Absorption.

**(Theory & Numericals)**

#### **Unit – II**

##### **Reconstruction of Companies.**

(Internal and External Reconstruction of Companies)

Meaning, Characteristics, Objectives, Difference between Reconstruction and Reorganization, Accounting Procedure of Reorganization and Reconstruction.

**(Theory & Numericals)**

### **Unit – III**

**Accounts of Public Utility Companies (Electricity, Gas and Water Supply Companies)** According to Double Accounting System-  
 Meaning, Main features of Double Accounting system, Objective of Double Accounting System, Difference between Double Accounting System and Single Accounting System, Merits, Demerits of Double Accounting System, Preparation of Final Accounts.  
**(Theory & Numericals)**

### **Unit – IV**

#### **Valuation of Shares**

Meaning, Need of Valuation of Shares, Factors affecting the value of shares, Methods of valuation of shares, Net Assets Method/Intrinsic Value Method, Yield Method.  
**(Theory & Numericals)**

**The Financial year ends on 31<sup>st</sup> March.**

#### **Books Recommended**

- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya PublicationHouse
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency,Kolkata)
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- Dr. L. S. Porwal : Accounting Theory (Tata McGraw Hill)
- Robert Anthony, D. F. Hawkins & K. A. Merchant : Accounting Text & Cases (Tata McGraawHill)
- Dr. S. N. Maheshwari : Corporate Accounting (Viakas Publishing House Pvt.Lit. New Heldi)
- Dr. Ashok Sehgal& Dr. Deepak Sehgal : Advanced Accounting (Taxmann,New Delhi)

**Question Paper Pattern  
Semester -V  
5T1-Financial Accounting – IV**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours

Marks-80

Q. No. 1 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

Q. No. 2 – Unit II	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 3 – Unit III	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 4 – Unit I	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 5	a)      Unit- I b)      Unit –II c)      Unit-III d)      Unit-IV	Problem 04 Marks Problem 04 Marks Problem 04Marks Problem 04 Marks

## **5T2– :Cost Accounting**

### **Unit – I**

#### **Cost Accounting :-**

Meaning, Importance, Element of Cost, Cost-Absorption, Allocation of Overheads and Methods of costing, Difference between Cost Accounting and Financial Accounting. Simple Problems on Cost Sheet, Tender and Quotations. (**Theory & Numericals**)

### **Unit – II**

#### **Reconciliation of Profit /Loss shown by Cost and Financial Accounts:**

Need for reconciliation of profit, reason for the difference between cost accounts and financial accounts, objectives of reconciliation statement, methods of preparation of reconciliation statement. (**Theory & Numericals**)

### **Unit – III**

## **Process Cost Accounting :**

Methods of costing, advantages and limitations of process costing, difference between job costing and process costing, Normal loss, Abnormal loss and Abnormal effects, **(Theory & Numericals)**

Unit -IV

## **Contract Costing:**

Features of contract costing, Types of contracts, Elements of contract cost, Nature of contract-completed contract, incomplete contract(**Theory & Numericals**)

### - Books Recommended -

- S. N Maheshwari : Cost Accounting Theory and problems –Shri Mahavir Book Depot, New Delhi
  - V.K. Saxena : Cost Accounting Text Book- Sultan Chand and Sons New Delhi
  - M.C. Shukls – T.S. – Grewal, M.P. Gupta – Cost Accounting – S. Chand , NewDelhi
  - R. S. N. Pallai, V Bhagavathi – Cost Accounting – S. Chand, New Delhi
  - S. M. Shukla :- Cost Accounts (Hindi)
  - Nigam R. S. – Advanced Cost Accounting , S. Chand & Company
  - Jain S. P. – Advanced Cost Accounting – Kalyani Publication
  - Gawada, J Made – Advanced Cost Accounting – Himalaya Publication House

# **Question Paper Pattern**

## **Semester –V**

### **5T2-Cost Accounting**

### **Compulsory Paper- II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q. No. 1 – Unit I

a) Theory 08 Marks

b) Problem	08 Marks
<b>OR</b>	
c) Problem	16Marks

Q. No. 2 – Unit II

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 3 – Unit III

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 4 – Unit I

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 5 -	Unit- I	a)	Problem 04 Marks
	Unit –II	b)	Problem 04 Marks
	Unit-III	c)	Problem 04Marks
	Unit-IV	d)	Problem 04 Marks

## 5T3-MANAGEMENT PROCESS

**Objective:** To equip the students with the knowledge of Management Process and inspire them to acquire required quality to face the managerial challenges.

### **Unit I:-**

**Management and Administration:** - Management concept, levels of management, importance & functions of various levels of management. Administration- meaning, concept and functions of administration. Differences between Management and Administration.

### **Unit II:-**

**Managerial Development & Group Dynamics:** - Need for developing managerial skills, skills required of a manager, classification of managerial skill, methods of developing skills of managers, group dynamics ,meaning & significance, types of groups, group formation development, group composition.

### **Unit III:-**

**Managerial Style:** - Meaning and types of managerial styles X and Y Theory of Macgregor, factors' influencing managerial style, organization conflict- traditional and modern approaches to conflict, Management as a profession, significance of professional manager in current scenario,

### **Unit IV:-**

**Motivation:** Definition, Meaning and concept of motivation, kinds of motivation and its importance, Theories of motivation- Maslow's theory of need hierarchy, Herzberg's theory of motivation, relationship between motivation & productivity.

### **Refefence:**

1. Sherlekar "Management Value Oriented Holistic Approach" Himalaya Publishing.
2. Stephen Robbins : Organizational Behaviour, Prentice Hall of India.
3. Terry George: Principles of Management.
4. R.S.Dewedi "Human Relation and organizational behaviour.
5. Shejwalkar and Ghanekar : Principal and Practices of Management
6. Sharma, : Organisational behaviour
7. Saxena, Principal and Practices of Management

**QUESTION PAPER PATTERN**  
**BCOM – III: SEMESTER V**  
**5T3-Management Process**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **5T4: Indian Economy – I**

### **Unit I:**

#### **Indian Economy & Planning**

Economic Planning- Characteristics, Rationale, Features, Objectives of Economic Planning. Strategy of India's Development Plans. Objectives and Evaluation of 11<sup>th</sup> Plan. Objectives of 12<sup>th</sup> Plan. Resources allocation and financing of five years plans. Regional Planning in India- Aspects of regional planning , Conceptualization, Magnitude & Challenges. Achievements and shortcomings of India's Economics Planning. NITI Aayog-Aims, Objectives & Structure. From Economic Planning to NITI Aayog- Differences in the two Approaches.

### **Unit II:**

#### **Indian Economy & Policy**

Concept of Economic Growth & Economic Development. Characteristics of underdeveloped/ developing countries. Broad features of Indian economy. Natural resources- Land, soil, water, forest, mineral. Infrastructure - Sources of Energy in India. Power, Coal, Oil and Gas, Atomic, Non-conventional Sources, India's Energy Strategy. Transport System in India- Railways, Road, Water & Air Transport.

### **Unit III-**

#### **Population & Unemployment**

India's Population: Size and Growth Trends, Causes of Population Explosion, Consequences on Economic Development, Remedies, Population Policy. Employment and Unemployment- Trends, Structure of Employment in India. Nature & Estimates of Unemployment. Urban & Rural Unemployment- Causes, Effect, Government Policy for Removing Unemployment.

### **Unit IV:**

#### **India's Public Finance**

Public Expenditure-Classification, Role of Public Expenditure in India, Causes of increase in Public Expenditure. Public Revenue-Sources of Public Revenue in India. Public Debt- Meaning, Concept, Classification, Role, Problem and Remedies. India's Fiscal Deficit-Causes, Recent Policy Measures towards Controlling Fiscal Deficit.

### **Books Recommended:**

1. Indian Economy, Datt & Sundharam, S Chand
2. The Indian Economy: Problems and Prospects, D .R.Gadgil.
3. Globalization And Indian Economy, R.Chaddha, Sumit Enterprises.
4. Indian Economy : Problems of Development and Planning, A.N.Agrawal, New Age International.
5. Indian Economy, Misra & Puri, Himalaya Publishing House Pvt. Ltd.
6. Government of India- Five Year Plans.
7. Government of India- Economy Survey.
8. Reserve Bank of India- Annual Reports on Currency and Finance.
9. Indian Economics, Rashi Arora, Mumbai

**Question Paper Pattern**

**Semester –V**

**Elective–I**

**5T4- Indian Economics – I**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

OR

- (c) UNIT – I 16Marks

Q.2.

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT – I 16Marks

Q.3.

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT – I 16Marks

Q.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT – I 16Marks

Q.5.

- a) UNIT – I 04 Marks  
b) UNIT – II 04 Marks  
c) UNIT – III 04Marks  
d) UNIT – IV 04 Marks

## **5T5.1 : Marketing Management**

### **Unit – I**

**Introduction:** Meaning and Concept of Marketing and Marketing Management. Traditional and Modern concept of Marketing, Functions and importance of Marketing Management, Market segmentation: - evaluation, criteria's, advantages and disadvantages of market segmentation, types

### **Unit-II**

**Market and pricing policies:** Meaning, concept and characteristics of Consumer Market, Industrial Market and Service Market, their difference, government and reseller market, online market: - issues and challenges **Pricing policies:** - meaning, types and factors governing them.

### **Unit – III**

**Product Planning and Distribution:** Product Planning – New Product Development – Product Life Cycle – Branding and Packaging , Distribution Channels for Consumer Product, Industrial Product and Service Product, Function of Distribution of Channels, Factors Affecting Distribution of Channels.

### **Unit – IV**

#### **Consumer behavior and Promotion:**

Consumer behavior: - Meaning, concept and factors affecting consumer behavior, Customer Satisfaction, measurement of Customer Satisfaction, After Sales Services and its role in modern business, **Promotion:** techniques of promotion, Personal Selling; Advertising, Direct Marketing. E-marketing

#### **Suggested Books:**

1. Marketing Management, Philip Kotler and Kevin Lane Keller: Prentice Hall of India / Pearson Education, New Delhi.
2. Marketing Management, V. J. Ramaswami and S. Namakumari:, Macmillan Business Books, Delhi.
3. Principles of Marketing Management, Dr. Arvind Shende, Dr. Dilip Vairagade, Anuradha Prakashan, Nagpur.
4. Services Marketing; S M Jha; Himalaya Publishing House.
5. Industrial Marketing Practices in India- S.L. Gupta, Sanjeev Bahadur and Hitesh Gupta Excel Books, New Delhi.
6. [foi.ku O;oLFkkiu&MkW-es?kk ukusVdj&lkbZukFk izdk](http://www.foi.ku.O;oLFkkiu&MkW-es?kk ukusVdj&lkbZukFk izdk)ku]ukxiqj

**Question Paper Pattern**  
**Semester –V**  
**Elective Group–I**  
**5T5.1- Marketing Management**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **Elective Group-I**

### **5T5.2 : Computerized Accounting**

#### **Unit-I**

**Introduction** - Computerized Accounting, Advantages of Computerized Accounting, Manual Vs Computerized Accounting, Need of Computerized Accounting, Accounts Organization, Accounts group, Loans, Liabilities, Assets and Budget.

#### **Unit-II**

**Accounting Software's**, - Introduction to Tally Software, Features of Tally, Tally Screen, Company Information, Creating new Company, Gateway, Selection of Company, Selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features, Configuration – General, Numeric Symbols, Voucher Entry, Invoice Order Entry, Printing.

#### **Unit-III**

**Accounts Info Menu, Account Groups** – Create new group, creation of Primary group. Normal and Advance Information, Ledger Accounts, Cost Categories, Cost Centers. Creation of Budget, Types of Budget. Voucher – Voucher Entry, Creation of Voucher Screen, Types of Voucher, Selection of Voucher Types, Post Dated Voucher, Printing of Vouchers, Cheque Printing, advance Features of account Voucher.

#### **Unit-IV**

**Inventory Info, Features of Inventory Info. Configure** – Inventory Info, Balance Sheet, Audit trail, Ratio Analysis. Display – Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export of Data. Maintenance – Bank Reconciliation, House Keeping, Data Maintenance. Security – Users and Password, Security Controls, Types of Security, Creation New Security Levels and Tally Audit.

#### **Books Recommended:**

- Accounting with Tally : K.K. Nadhani, BPB Publication.
- Tally. ERP 9 : Prof. C. M. Tembhurnekar& Dr. D. N. Khadse , Saiyyoti publication , Nagpur.
- Tally Tutorail : K.K. Nadhani and A.K. Nadhani, BPB Publication.
- Advances Accounts Vol-I: M.c.Shukla, T.S.Grewal and S.G, Gupta, S. Chand& Company, Delhi.
- Accounting Principles: Anthony R.N. and J.S. Richard, Irwin Inc.
- Advanced Accountancy By P.C. Tulsian, Tata McGraw HILL Publication.
- Microsoft Office -2000/2007- Gini Courter, Annelte Marquis BPB.
- It Today (Encyclopaedia) - S.Jaiswal.
- Gulhane, Dr., Tiwari, Naidu Computerized Accounting, Sheth Publishers Pvt. Ltd. Mumbai
- A First Course In Computers - Sanjay Saxena.
- First Text Book On Information Technology – SrikantPatnaik.

**Question Paper Pattern**  
**Semester –V**  
**Elective Group-I**  
**5T5.2-Computerized Accounting**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **Foundattion Group—I**

### **5T6.1 : Business Finance -I**

**Unit –I Business Finance**-Meaning, Nature, Significance, Objects and Scope of Business Finance, Functions of Financial Executive in an Organization.

**Sources of Business Finance**-Long- Medium and Short Term Sources of Finance, Equity, Preference shares, Sweat equity shares, Shares with differential rights, debentures & Bonds .**(Theory)**

**Unit – II Project Financing**: Meaning, Steps involved in Project Financing, Appraisal of project, Means of Project finance, Aspect of Project Appraisal. **(Theory)**

**Inventory Management** : Need and Cost of Inventory , Economic Order Quantity under constant price and with varying price , Various inventory levels. **(Theory & Numericals)**

**Leverages** -Concept of Leverages, Operating and Financial Leverages. **(Theory & Numericals)**

### **Unit – III Management of Working Capital.**

Meaning & Concept ,Need or Objects of Working Capital, types, and Advantages of Working Capital , disadvantages of Excessive Working Capital, Determinant's , assessment of Working Capital requirements**(Theory & Numericals)**

**Unit – IV Debtors Management**.: Introduction to Debtors Management, Cost of extending credits, Credit / discount policy, Effective cost of bill discounting . **(Theory & Numericals)**

**Creditors Management**: Introduction, Cost of Credit, Accruals / expenses payable as source of finance. **(Theory & Numericals)**

**Venture Capital Financing**: Meaning, Methods of Venture Financing, Problem areas facing the Venture Capital Industry. **(Theory)**

### **Books Recommended:**

1. Financial Management Problems &Solutions :- Kishore Ravi M (Taxman Allied Service (p) Ltd.)
2. Fundamentals of Financial Management :- Chandra Prasanna (Tata McGraw Hill Publishing Co. Ltd.)
3. Management Accounting & Financial Management :-Arora M N (Himalaya Publishing House Pvt. Ltd.)
4. Business Finance : Dr.Jain V. K. ,And Sharma D.G. (Shethe publishers PVT. LTD.

**Question Paper Pattern  
Semester –V  
Foundattion Group-I  
5T6.1-Business Finance -I**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Theory 08 Marks

**OR**

c) Theory 08Marks  
 c) Theory 08Marks

## **Q. No. 2 – Unit II**

- a) Theory 08 Marks  
b) Theory 08 Marks

**OR**

c) Problem 08 Marks  
d) Problem 08 Marks

O. No. 3 – Unit III

- a) Theory 08 Marks  
 b) Theory 08 Marks

**OR**

c) Problem 08 Marks  
 d) Problem 08 Marks

## O. No. 4 – Unit I

- a) Theory                            08 Marks  
 b) Problem                        08 Marks

**OR**

c) Problem                        08 Marks  
 d) Problem                        08 Marks

**Q. No. 5 -** Unit- I  
Unit -II  
Unit-III  
Unit-IV

- a) Theory 04 Marks
  - b) Problem 04 Marks
  - c) Problem 04Marks
  - d) Problem 04 Marks

## **5T6.2 : Auditing**

### **UNIT- I: Basic of Auditing**

(i) **Audit, Auditing and Auditor:** Meaning, definition, object and scope of Audit and auditing, basic principles governing an audit, Advantage and Disadvantages of Audit, Difference between Internal Audit and External Audit, **Types of Audit:** Meaning, Objective and Importance of Continuous Audit, Annual Audit, Periodical Audit, Internal Audit.

(ii) **Internal Control and Internal Audit System:** Meaning, definition, advantages and disadvantages of Internal Control, Internal Check, Internal Audit, EDP Audit: Meaning of EDP audit, Control in EDP (Electronic Data Processing) Environment- General EDP Control, Application Control

### **UNIT- II: Audit Working and Procedure.**

i)**Audit Planning, Evidence** Audit programme: Meaning and Definition, Objective, Advantages and Disadvantages of Audit Programme, Formulation of audit programme, precaution to be taken for preparation of audit programme.

ii)**Audit Documentation and Evidence:** Meaning, definition, content, advantages of audit note book, audit working paper, essential of good audit working paper, Ownership and custody of audit working paper, Audit evidence, Method of obtaining audit evidence

### **UNIT-III**

(i) **Standard on Auditing:** Standard Auditing Policies- Introduction of auditing standard issued by ICAI (From AAS-1 to AAS -30 and AAS-34)

#### **ii) Vouching & Verification**

**Vouching:** Meaning and definition of vouching, objective, importance and limitation of vouching, Vouching procedure and precaution to be taken for vouching of - Cash book, purchase book, sales book.

iii) **Verification of Assets and Liabilities:** Meaning, object, importance and limitation of Verification. Audit of Fixed Assets, Current Assets, General principle regarding verification of assets, Audit of Liabilities, General principle of regarding verification of liabilities.

### **UNIT- IV: Company Audit & Audit Report**

(i) **Company Auditor:** Legal provision related with appointment of auditor under Companies Act 2013, Qualification and disqualification of auditor, Right, Power, and liabilities of company auditor, civil and criminal liabilities of company auditor, Legal provision related with remuneration, removal of company auditor.

(ii) **Company Audit :**Meaning, definition, feature, objective, advantages and criticism of Financial audit, Management audit, Special audit, Cost Audit, Difference between Financial audit and cost audit, Management audit and financial audit.

iii) **Audit report and Certificate:** Meaning, definition, content, scope and significance of audit report

### **Reference Books:**

- Aruna Jha: Students Guide to Auditing and Assurance, Taxman Publication, New Delhi
- S.D. Sharma: Auditing Principle and Practice, Taxman Publication , New Delhi
- Dr. Arvind shende, Dr. Dilip Vairagade; Auditing-Anuradha Prakashan, Nagpur.
- L. N. Chopde, D.H. Choudhari, Dr. Baban Taywade: Auditing – Sheth Publishers
- Dr. K. R. Dixit: Auditing – Vishwa Publishers & Distributors, Nagpur
- B. N. Tandon, S. Sudharsanam, S. Sundharabahu: Practical Auditing – S. Chand & Company Ltd.
- S. K. Mehta: Auditing , Diamond Publication Pune

**Question Paper Pattern**  
**Semester –V**  
**Foundattion –I**  
**5T6.2Auditing**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for all subjects-**

<b>1a</b>	<b>Two periodical class tests</b>	<b>08marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>08marks</b>
<b>1c</b>	<b>Overall conduct as a responsible learner</b>	<b>04marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I           20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Vocational Course: Semester V**  
**(Same syllabus for all vocational group subjects in B.Com - I)**  
**5T7:Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge regarding documentation franchising and business plan.

---

**Unit-I**

Documents:- Types of documents - Commercial, Regulatory and Assistance Document, procedure of processing of an export order.

**Unit-II**

Franchising and Financing:- Definition, Advantages, Disadvantages of franchising in India, Financing of new ventures – Types of finance – Short, Medium and Long Term.

**Unit-III**

Business Plan – Meaning of Business Plan, Importance and Preparation of Business Plan, Financial and Social aspects of Business Plan.

**Unit-IV**

Meaning and Concepts – Management, Marketing, Accounting, Inventory Management, Working Capital Management, Human Resource Management and Total Quality Management.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.

Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House

**Group – I : Computer Applications**  
**5T8.1 : Web Designing using HTML (WD)**  
**Paper - I**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I :**

**HTML** : Introduction, Designing web site, Advantages and Disadvantages of HTML, Flow of Web Information, Role of Web Browser and Web Server, Process of Web Publishing,

**Creating a Simple Static Web Page** : About HTML, Basic elements : <html>, <head>, <title>, <p>, <br>, <h1> to <h6>, <ol>, <ul>, <li>, <dl>, <pre>, <marquee>, <hr>, Physical and Logical tags **Path** : Relative and Absolute path, Comments, Special Characters, Text Formatting tags, <center>

**Unit –II :**

Hyperlinks <a href ...>, Creating links to web pages and URLs, Creating links within the same page, various types of URLs that can be used in links, Image tag and their related attributes, Inline images, Links to (external) images, Using Inline images, Using images as hyperlinks, Popular images formats for internet and HTML.

**Tables** : Basic table tags and their related attributes.

**Unit –III :**

**Frames, Image Map and Web Font Creator** : Frames and their creation, the <Frame> and <Frameset> tags, Frame linking, Floating or Inline Frames, Image Maps <map> and <area> tags, Client – Side and Server – Side image maps.

**Unit –IV :**

Form designs, Form Controls, Text controls, password fields, radio buttons, checkboxes, reset and submit buttons, form control selection, option processing and textarea.

**Practical** : The Practical will be based on HTML

**BOOKS RECOMMENDED :**

1. Web Publishing : Monic D'souza and J D'souza
2. Complete HTML : BPB
3. E-Commerce : Bhushan Dean – S. Chand
4. HTML – 4 Unleashed : SAMS
5. Dynamic HTML : O'RELLY (SPD)

(Semester – V)

**Group - II: Principles & Practice of Insurance  
5T8.2-Insurance and Actuarial Science – Paper I**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Insurance and Actuarial Science

**Unit - I**

- Investment of Insurance Funds
- Nature and Method of According procedure in Life Insurance and General Insurance
- Meaning of policy values, retrospective policy value, prospective policy value, symbols of policy value, calculation of policy value, progress of policy value

**Unit - II**

- Risk selection, Identification of Risk, Principles of Risk Management, Sources of Risk Information
- Rate Making, Types of Rate Making ,Principles of Rate Making

**Unit -III**

- Actuarial Science : Meaning ,Nature of actuarial science, scope of actuarial science in Finance, economics, statistics, Mathematics and computer science
- Concept of terms: Accumulated value and present value ,Nominal and effective rates of Interest, Discount and Discounted value, Redemption of Loan, Sinking fund.

**Unit- IV**

- Annuities : Meaning and classification of Annuities, perpetuities, immediate annuities
- Mortality ,Meaning, Nature of Mortality, Factors included in construction of Mortality Table I and II, Survival rate , Death rate

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळ अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

## **V - Semester**

### **5T8.3- Advertising, Sales Promotion and Sales Management – III**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

#### **OBJECTIVES:**

To expose students to the principles and practices of advertising and sales promotion and develop the conceptual abilities in this functional area of marketing.

To develop the skills of the students, which will help them to prepare effectively for a career in the advertising and sales promotion function of any company or in the advertising agency.

#### **CONTENT:**

##### **Unit-I**

- Communication Process - Communication models for rural communication and urban communication

##### **Unit-II**

- Advertising - Organizational structure of advertising agency and its functions. Evaluation of agency functioning, Creativity in Advertising including Message development, copy righting, layout; Media selection

##### **Unit-III**

- Advertising Research. Effectiveness of advertising- methods of measurement. Rationale of testing Opinion and Attitude Tests, Recognition, Recall

##### **Unit-IV**

- Message Strategy: Attention and comprehension, Associating Feelings with the Brand, Brand Equity, Image and Personality and Group Influence and word of month advertising

##### **Recommended books:**

- Advertising Management – Concepts and Cases, Manendra Mohan (Tata McGraw Hill)
- Sales Promotion and Advertising Management (6thEd.)Himalaya Publishing House
- Advertising Excellence by Bovee, Thill, Dovel and Wood (McGraw Hill)
- Advertising Management – Shelekar, Victor & Nirmala Prasad (Himalaya Publishing House)
- Foundations of Advertising – Theory & Practice – S.A. Chunawala
- Brand Positioning – Subroto Sengupta, Tata McGraw Hill

**SEMESTER V**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**      **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.2.(a)**

- |     |          |         |
|-----|----------|---------|
|     | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.3.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.4(a)** UNIT – I

8Marks

- |     |          |         |
|-----|----------|---------|
| (b) | UNIT – I | 8 Marks |
|-----|----------|---------|

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.5. Answer in Brief**

- |     |            |         |
|-----|------------|---------|
| (a) | UNIT – I   | 4 Marks |
| (b) | UNIT – II  | 4 Marks |
| (c) | UNIT – III | 4 Marks |
| (d) | UNIT – IV  | 4 Marks |

**B.Com. Third Year**

**Semester-VI**

**6T1-Financial Accounting- V**

**Unit-I-** Accounts of Holding Company-

Introduction, Meaning of Wholly-owned subsidiary, partly-owned subsidiary, preparation of Consolidated Balance Sheet and Profit and Loss Account, simple problem on involving two companies only.

**Unit-II-** Insurance Claims

Introduction,oss of stock Average clause practical problem on loss of stock.

**Unit-III-** Investment Accounts

Meaning , Need,Utility and objectives, Sales and Purchase of different types of Securities, Simple problem on Investment and Securities.

**Unit-IV-** Profit prior to incorporation-

Meaning Methods of ascertain the pre-incorporation profit, Issue and Redemption of preference shares Redemption out of new issue of shares Redemption at premium out of new issue of shares, Redemption out of profit.

**Books**

S. N. Maheshwar :- Financial Accounting – Vikas Publishing House, New Delhi

□□Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons

□□Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House

□□Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)

□□Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)

□□Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata)

□□R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)

□□M. A. Arulnandam :- Advance Accounting – Himalay Publication

24

□□Prof. PradeepWath, Dr. R. D. Mehta, Dr. DilipGotmare :- Financial Accounting– Payal Prakashan

**Question Paper Pattern  
Semester -VI  
6T1-Financial Accounting – V**

N.B. – 1) All questions are compulsory.  
           2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 3 – Unit III**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

## **Q. No. 4 – Unit I**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 5**

- a) Unit- I Problem 04 Marks
  - b) Unit –II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

**Semester-VI**  
**6T2-Management Accounting**

**Unit\_I**

**Management Accounting :-**

Meaning, Scope, Importance, and Limitations of Management Accounting. Difference between Cost Accounting and Management Accounting, Role of Management Accounting. Break -Even Point Analysis (**Theory & Numericals**)

,

**Unit – II**

**Business Budget & Budgetory Control:**

Meaning, Characteristics, Objectives ,Advantages, Limitations. Classification &Types of Budgets. Problems on Cash Budget and Flexible Budget Only (**Theory & Numericals**)

**Unit – III**

**Ratio Analysis:**

Meaning, Importance and Limitations of Ratio Analysis, Classification of Ratio, Computation of Profitability Ratio, Financial Ratio with special reference to Current Ratio, Acid Test/ Liquid Ratio, Inventory Turnover Ratio Debtors and Creditors Turnover Ratio, Fixed Assets Turnover Ratio, Debt-Equity Ratio, Working Capital Ratio, , Earnings per Share Ratio. (**Theory & Numericals**)

**Unit – IV**

**Fund Flow Analysis:**

Meaning, Sources of fund, Uses of fund, Distinguish between fund flow statement and Balance Sheet. Preparation of Statement showing Changes in Working Capital, Profit from operation, Fund flow Statement (**Theory & Numericals**)

**Books Recommended –**

- S. N Maheshwari : Cost Accounting Theory and problems –Shri Mahavir Book Depot, New Delhi
- V.K. Saxena : Cost Accounting Text Book- Sultan Chand and Sons New Delhi
- M.C. Shukls – T.S. – Grewal, M.P. Gupta – Cost Accounting – S. Chand , New Delhi
- R. S. N. Pallai, V Bhagavathi – Cost Accounting – S. Chand, New Delhi
- S. M. Shukla :- Cost Accounts (Hindi)
- Nigam R. S. – Advanced Cost Accounting , S. Chand & Company
- Jain S. P. – Advanced Cost Accounting – Kalyani Publication
- Gawada, J Made – Advanced Cost Accounting – Himalaya Publication House
- Pillai R. S. N. – Management Accounting – S. Chand & Co. Pvt. Ltd.
- Agrawal N. K. – Managements Accounting – Galgotia Publication
- Singh, Jagwant - Managements Accountings – KitabMahal
- Rathnam P. V. - Managements Accountings – KitabMahal
- Sharma R. K. - Managements Accountings – Kalyani Publication

**Question Paper Pattern**  
**Semester –VI**

## **6T2-Management Accounting**

**Time :- 3 hours**

**Marks-80**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q. No. 1 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16Marks  |

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16 Marks |

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16 Marks |

**Q. No. 4 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16 Marks |

- Q. No. 5 -**
- |          |    |                  |
|----------|----|------------------|
| Unit- I  | a) | Problem 04 Marks |
| Unit –II | b) | Problem 04 Marks |
| Unit-III | c) | Problem 04Marks  |
| Unit-IV  | d) | Problem 04 Marks |

**Semester VI**  
**6T3-Advanced Statistics**

**Unit I**

Correlation- Types of correlation, Karl Pearson's coefficient of correlation in Bivariate frequency table, probable error, interpretation of 'r', Rank Correlation Method.

**Unit II**

Regression Analysis- Lines of Regression/Regressions Equation, Coefficient of regression for a Bivariate frequency table.

**Unit III**

Index Number- Uses of I N, Types of I No. Methods of Index Number.Test of consistency of Index No.- unit test Time Reversed Test, Factor cost of living Index No.

**Unit IV**

. Time series Analysis-Introduction components of a Time series- a) Trend b)Short Term Variation c)Irregular variation d)Measurement of Trend- (Simple Problems)

Graphic Methods ,Methods of Seminar,Methods of Curve by the square

Methods of Movig Average

## **6T4- Indian Economy – II**

### **Unit I: Indian Agriculture**

Nature, Role of Agriculture in Indian Economy. Cropping Pattern in India and its Determining Factors. Land Reforms. Cooperative Farming & Marketing. Green Revolution: Impact and Constraints. Cause & Remedies to Low Agricultural Production and Productivity. Agriculture Marketing-Problems & Remedies. Agricultural Labour - Problems & Remedies. Sources of Agriculture Finance. NABARD ( National Bank for Agriculture and Rural Development). Financial Inclusion. Agricultural Price Policy- Objectives and Constituents. Agricultural Subsidies in India. Crop & Live Stock Insurance -Problems and Remedies.

### **Unit II: Indian Industry**

Industrial Policy 1991. Small Scale and Cottage Industries- Role, Performance, Problems and Remedies. Public Sector Industries - Role, Performance, Problems and Remedies. Privatization of Public Sector Industries: Meaning, Methods of Privatization Policy in India. Arguments in favor and against privatization. Policy of Disinvestment. Industrial Sickness in India- Definition, Causes, Effects, Remedial Measures. Indian Trade Union Movement: Role, Functions, Strength and Weaknesses.

### **Unit III: Indian Service Sector**

Growth of Services Sector in India. Nature, Scope, Trends & Importance of Service Sector in Current Scenario. Share of Service Sector in India's Employment Generation. Contribution of Service Sector to India's GDP. Government's reforms in various Services. IT & ITES Sector-Trend, Role & Importance. Challenges and Opportunity in IT & ITES Sector. Banking & Insurance Sector- Importance of Banking and Insurance Industry in India's Service Sector, Challenges and Opportunities.

### **Unit IV: India's International Trade**

Foreign Trade -Concept and Meaning, Advantages, Disadvantages, Composition and Direction of India's Exports & Imports. Special Economic Zones- Concept, History, Benefits, Arguments against SEZS. Foreign Capital and Aid- Need, Role, Problems. India's External Debt. Multinational Corporations(MNCs)- Role, Importance, Advantages and Disadvantages. Impact of MNCs on Indian Economy. Liberalization, Privatization, Globalization(LPG)- Meaning, Role, Impact of LPG on Indian economy. World Trade Organization (WTO)- Objectives, Working and Functions, WTO & India.

### **Books Recommended:**

1. Indian Economy, Datt & Sundharam, S Chand.
2. The Indian Economy: Problems and Prospects, D .R.Gadgil.
3. Globalization And Indian Economy, R.Chaddha, Sumit Enterprises.
4. Indian Economy : Problems of Development and Planning, A.N.Agrawal, New Age International.
5. Indian Economy, Misra & Puri, Himalaya Publishing House Pvt. Ltd.
6. Government of India- Five Year Plans.
7. Government of India- Economy Survey.
8. Reserve Bank of India- Annual Reports on Currency and Finance.

**Question Paper Pattern  
6T4- Indian Economy – II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

QR

- (c) UNIT – I 16Marks

**Q.2.**

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT = J 16Marks

0.3.

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT = J 16Marks

Q4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT - I 16Marks

Q5.

- a) UNIT – I 04 Marks  
b) UNIT – II 04 Marks  
c) UNIT – III 04Marks  
d) UNIT – IV 04 Marks

**Elective Group- II**  
**6T5.1- Human Resource Management**

**UNIT-I**

**Introduction**

Human Resource Management, Definition, Objectives, Functions, Scope, Importance.  
Quality of a ideal Human Resource Managers

**UNIT-II**

**Recruitment selection and training**

**Recruitment:** - meaning, source; selection process and importance, placement and induction, career planning v/s manpower planning

**Training:** - meaning, method, training and development,

**UNIT-V**

**Labour welfare and Collective bargaining**

**Labour welfare:** - Safety and Health Measures Workers Participation in Management - Objectives for Wage Incentive - Fringe Benefits

**Collective Bargaining** - Features - Pre-requisite of Collective Bargaining - Agreement at different levels, Successful Participation of workers in Management.

**UNIT-IV**

**Human resource planning and accounting**

Human Resource Planning - Human Capital Investment - Expenditure vs. Productivity  
Meaning and Definition of Human Resource Accounting, Importance; Human Resource Accounting - Measurement of Human Value addition into Money Value

**Suggested Books:**

1. Human Resource Management - Dr. C.B. Gupta - Sultan and Sons.
2. Personnel & Human Resource Management - P. Subba Rao - Himalaya Publishing House.
3. Human Resource and Personnel Management - K. Aswathappa - Tata Mc Graw Hill Publishing Co. Ltd.

Human Resource Management, Dr. Arvind shende, Dr. Dilip Vairagade, Dr. Devendra. Mohture, Anuradha Prakashan, Nagpur.

4. Personnel Management & Human Resources - C.S. Venkata Rathnam & B.K. Srivastava. TMPL.

5. ekuoh; lallk/ku O;oLFkkiu & MkW-es?kk ukusVdj&lkbZukFk izdk"ku]ukxijqj

## **Question Paper Pattern 6T5.1- Human Resource Management**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

QR

- (c) UNIT – I 16Marks

Q.2.

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT = I 16Marks

Q.3.

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT - I 16Marks

0.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT = J 16Marks

0.5.

- a) UNIT – I 04 Marks
  - b) UNIT – II 04 Marks
  - c) UNIT – III 04Marks
  - d) UNIT – IV 04 Marks

**Semester-VI**  
**6T5.2-Indirect Taxes**

**UNIT-I: Central Excise Laws**

Basis of chargeability of duties of central excise-goods, manufacture, classification and valuation of excisable goods; Registration and routine procedures in central excise, payment of duties of excise and removal of goods, Cenvat on inputs and on capital goods, excise and small scale industries.

**UNIT-II: Customs Laws**

Nature of customs duty, types of customs duty, classification for customs and rate of duty, valuation for customs duty, procedures for import and export.

**UNIT-III: Service Tax**

Charging of service tax, Services on which tax is payable, registration, records to be maintained by the assessee, returns and payment of tax, Provisions of law and procedures.

**UNIT-IV: State Sales Tax Law**

Basic Concepts, value added tax on sale or purchase of goods, levy or incidence of tax, goods liable to tax, rate of tax and exemptions, dealer and registration method of computing tax liability, credit, set-off and refunds, documents, records and maintenance of accounts, returns and assessments (the state sales tax law applicable will be the Bombay Sales Tax Act or the new sales tax enactment in its place).

**Central Sales Tax Act, 1956**

Definitions, Concepts of inter-state sales, Sale outside the state, sale in the course of export and import, Liability to tax and rate of tax, Registration of dealers.

**Reference Books**

Dr. H. C. Mehrotra and S. P. Goyal : Direct and Indirect Taxes ( Sahitya Bhawan, Agra)

V. S. Datey : Indirect Taxes Law and Practice ( Taxman, New Dehli)

V. Balchandran : Indirect Taxes ( Sultan Chand & Sons, Dehli)

C. A. Farooq Haque : Indirect Tax (Sheth Publishers Ltd., Mumbai)

# **Question Paper Pattern Semester -VI 6T5.2-Indirect Tax**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

Q. No. 1 – Unit I

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

Q. No. 2 – Unit II

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

O. No. 3 – Unit III

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

O. No. 4 – Unit I

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

Q. No. 5

- a) Unit- I Problem 04 Marks
- b) Unit -II Problem 04 Marks
- c) Unit-III Problem 04Marks
- d) Unit-IV Problem 04 Marks

## **Foundation Group II**

### **6T6.1- Business Finance – II**

#### **Unit – I**

**Financial Market in India** : significance of Financial Markets, Objectives and functions of the financial System, Types of Financial Markets,

**Money Market**- Meaning , features, functions, Composition

**Capital Market**- Meaning ,Composition & Structure of Capital Market Market segment. Products and Participant's in Primary market. Regulatory authorities governing financial and capital market.

**SEBI** - ( Security Exchange Board of India)Organisational structure of SEBI, Role and Functions of Stock Exchange and SEBI, Regulation issued by SEBI, Achievements of SEBI.(**Theory**)

**Unit – II Primary Market:** Meaning, Functions, Scope & Significance of PrimaryMarket,Developments in the Primary Market, Primary Market Intermediaries.

**Secondary Market:** Meaning , Difference between Primary Market & Secondary Market, Products dealt in the Secondary Market, Stock Exchange, Secondary Market Intermediaries. Listing Procedure. NSE and BSE. (**Theory** )

**Capital Budgeting** - Meaning, Nature and Importance of Capital Budgeting, Investment Appraisal Techniques, Pay Back Period Method, Rate of return method, Net Present Value Method, Discounted Cash Flow Method, (**Theory & Numericals**)

**Unit – III NBFC's-** Meaning, Formation of NBFC's , Types and Regulation of NBFC's,

**Credit Rating:** Meaning /Concept, Scope & Significance of credit rating, Benifits to Investors. Credit Rating Agency in India CRISIL, ICRA, CARE. (**Theory**)

**Dividend Policies**- Essentials of Sound Dividend Policy, Determination of Dividend Policy and its types ,Surplus and Reserve Policy, (**Theory & Numericals**)

**Unit -I V** - Cash Flow for Investment Analysis- Meaning, Benefits and Uses of Cash Flow Statement. Significance ,Limitations of Cash Flow Statement.

Format of Cash Flow Statement as per AS-3. (**Theory & Numericals**)

#### **Books Recommended:**

Financial Management Problems &Solutions :- Kishore Ravi M (Taxman Allied Service (p) Ltd.)

Fundamentals of Financial Management :- Chandra Prasanna (Tata McGraw Hill Publishing Co. Ltd.)

Management Accounting & Financial Management :-Arora M N (Himalaya Publishing House Pvt. Ltd.)

Business Finance : Dr.Jain V. K. ,And Sharma D.G. (Shethe publishers PVT. LTD.

**Question Paper Pattern  
Foundation Group II**

**6T6.1- Business Finance – II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours

Marks-80

**Q. No. 1 – Unit I**

- |           |          |
|-----------|----------|
| a) Theory | 08 Marks |
| b) Theory | 08 Marks |

**OR**

- |           |         |
|-----------|---------|
| c) Theory | 08Marks |
| c) Theory | 08Marks |

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 4 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

- |                   |                 |    |                  |
|-------------------|-----------------|----|------------------|
| <b>Q. No. 5 -</b> | <b>Unit- I</b>  | a) | Theory 04 Marks  |
|                   | <b>Unit –II</b> | b) | Problem 04 Marks |
|                   | <b>Unit-III</b> | c) | Problem 04Marks  |
|                   | <b>Unit-IV</b>  | d) | Problem 04 Marks |

## **Foundation Group II**

### **6T6.2- Industrial Law**

**Level of Knowledge:** Basic Conceptual Knowledge

**Objective:** To make students aware about Various Laws relating to Industries [with amendments up to June 2016 in respective Acts]

#### **Unit -I**

- (i) Indian Factories Act-1948: Important Definitions, Object & Scope, Provision regarding workers Health, Provision regarding Safety of Workers,
- (ii) Rules regarding Labour Welfare, Provision regarding Adults, women workers and Young Workers.
- (iii) Industrial Dispute Act-1947: Concept, Objectives and Significance, Authorities for settlement of Industrial Dispute-their work procedure & Powers,
- (iv) Concept and Distinction between Strike, Lockouts, Layoff & Retrenchments

#### **Unit-II**

- (i) Law relating to Wages: Object, Scope and Application of Minimum Wages Act-1948 and Payment of Wages Act 1936
- (ii) Law Relating to Bonus and Gratuity: Object, Scope and Application of Payment of Bonus Act 1965 and Payment of Gratuity Act 1972
- (iii) Law Relating to Employee State Insurance and Provident Fund: Object, Scope and Application of The Employee's State Insurance Act 1948 and Employee's Provident Fund & Miscellaneous Provision Act 1952
- (iv) Law Relating to Workmen Compensation and Maternity Benefits: Object, Scope and Application of Workmen Compensation Act-1923 and Maternity Benefits Act 1961

#### **Unit-III**

- (i) Child Labour (Prohibition and Regulation) Act 1986: Object Scope and Application
- (ii) Trade Union Act 1926: Object Scope and Application. Registration of Trade Union.
- (iii) International Labour Organization (ILO): Background and Importance of ILO and its impact on Indian Labor Laws
- (iv) Contract Labour Act: Object Scope and Application

#### **Unit-IV**

- (i) Meaning and Nature of Industrial Estate, Software Technology Park, SEZ, Co-operative Industrial Estate
- (ii) Intellectual Property Rights Law In India: Object and Scope of Patent, Copyrights, Trademark and Industrial Design
- (III) Procedure for registration of Trademarks and Copyrights.
- (IV) Environment Protection Act 1986: Objective and Scope, Location of Industries, Processes & Operation, offense and Penalties

#### **Reference Books:**

- Business Law Including Company Law, Gulshan, S S and Kapoor, G K: , New Age International (P) Ltd., Publishers
- Business Law, M.C. Kuchhal and Vivek Kuchhal , Vikas Publishing House, New Delhi
- Business and Corporate Laws, V.S. Datey, Taxman, New Delhi
- Mercantile Law, N.D. Kapoor, Sultan Chand & Sons, Educational Publishers, New Delhi.
- Business & Industrial Law , Dr. Arvind shende, Dr. Mohture, Dr. Dixit, Anuradha Prakashan Nagpur.

**Question Paper Pattern  
Foundation Group II  
6T6.2- Industrial Law**

**TIME:- 3 Hours]**      **[Full Marks:- 80**

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for all the subjects**

<b>1a</b>	<b>Two periodical class tests</b>	<b>08marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>08marks</b>
<b>1c</b>	<b>Overall conduct as a responsible learner</b>	<b>04marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination</b>  <b>marks</b>	     <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Vocational Course : Semester VI**  
**6T7- Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

**Unit-I**

Government policy and schemes for setting up agricultural & rural industries, financing schemes for khadi and village industries, small scale industries. WTO and small & village industries.

**Unit-II**

Incentives and Subsidies – Meaning of Incentives and Subsidies, Need and problems of Incentives and Subsidies, Incentives for development of backward areas.

**Unit-III**

Entrepreneurial systems – Search for a business ideas, sources of ideas, idea processing and selection, role of industrial fairs.

**Unit-IV**

Concept of cyber space and internet – importance of cyber marketing, internet usage applications, Technology as driver for entrepreneurship.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I: Computer Applications**  
**6T8.1 : Introduction to Visual Basic (IVB)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I**

Introduction to Visual Basic, Event driven programming, Programming constructs - Variables, Types of Variables, Data Types, Scope of Variables, Constants, system defined functions, Operators (Precedence and Associatively), Creating User Interface, VB Controls (Label, Text box, Command button, Frame, Check box, Option button,

**Unit –II**

List box, Combo box, Timer, Drive list box, Directory list box, File list box, Horizontal and vertical scroll bars, Image, Picture box, Shape, Line, Data, OLE container), Microsoft windows common controls (Tab Strip, Tool bar, Status Bar, Progress Bar, Tree View, List View, Image List, Slider, Date Picker, Month View)

**Unit –III**

Working with Procedure, Function and Modules (Form, Class, Standard Modules)  
Scope of Procedures, Calling Procedures, Calling Functions, Passing Arguments,  
Control Structures : If-Then, If-Then-Else, Select Case, Loops Structures : Do-While, While - Wend, For-Next, For-Each, With-End With.

**Unit – IV**

Arrays : Declaring an Array, Types of Array (Fixed arrays, Single-dimensional arrays, Multidimensional arrays, Dynamic arrays), Control Array.

Menus : Creating Menus, Adding Menu Items, Adding Code for the Menus, Modifying menus at run time, Creating Pop-Up Menus.

Database connectivity through data access object. Types of recordset , setting properties and record editing & updating , searching records.

**Practical : Practical will be based on Visual Basic**

**BOOKS RECOMMENDED :**

1. PAUL SHERIFF TEACHES VB-6 BY SHERIFF (PHI)
2. VISUAL BASIC: PETER WRITES
3. LEARN VB 6 BY HALVARSON ( MICROSOFT/PHI)
4. VB PROGRAMMING FOR A ABSOLUTE BEGINNER – MICHAEL VINE (PHI)
5. VISUAL BASIC: SUPPER BIBLE TECH MEDIA
6. VISUAL BASIC: STEPHEN SOLOSKY (PHI)
7. COMPLETE REFERENCE VISUAL BASIC – TATA MCGROW HILL

8. FRONT END DEVELOPMENT USING VISUAL BASIC BY DR.  
S.B.KISHOR(DASGANU)

9.

**Group –: Principles & Practice of Insurance**  
**6T8.2 -Insurance and Acturial Science – Paper II (Semester – VI)**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20

Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Insurance and Acturial Science

**Unit – I--** Privatisation of Insurance Business in India, Contribution of Private sector, Liberalisation required for privatization, Effect of globalization on Insurance sector.

- Methods of payment of amount insured, premium as consideration for insurance benefits, , nature of installment premiums.

**Unit – II**

- General Insurance Corporation(GIC) of India : Background ,main provisions of General Insurance Act 1972,Establishment and objectives, Functions of subsidiary companies
- Banc assurance - Meaning, nature and scope
- Insurance Innovation – Innovation ,use of Technology by Insurance Industry\

**Unit – III**

- Policy Value – Meaning ,Types of Policy value, equation, Alteranation of policy contracts
- Special reserves : Meaning, types of services maintained in Insurance
- Valuation of liability – Meaning and Importance

**Unit – IV**

- Probability – Meaning and nature, its use in insurance business
- Surrender of policy , surrender value , Lapse of policy ,Reserve for Revival of Lapse Policy

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House

बीमा के सिधांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

### VI - Semester

#### 6T8.3-Advertising, Sales Promotion and Sales Management – III

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

#### **Unit-I**

- Sales Territories - Concept of Sales territory - Procedures for setting up Sales territories - Deciding assignment of sales personnel to territories.

#### **Unit-II**

Sales Budget and Sales Quota - Sales budget - Purpose, form and content of sales budgets, Sales Quota - Concept, Types of quota, Quota setting procedures, Administering the quota system.

#### **Unit-III**

- Consumer Promotions and Trade Promotions – Their purpose and types How to plan and evaluate a successful promotion, The relationship between advertising and promotions. Introduction to Global Marketing, Advertising and sales promotion.

#### **Unit-IV**

Laws for protection against Malpractices: Introduction, civil and penal codes Applicable to Advertising; laws relating to Intellectual Property Rights. Consumer Protection Act 1986. Monopolies and restrictive trade practices Act 1969. Regulation Governing Broadcast Media Advertising.

#### **Recommended books:**

Advertising Management – Concepts and Cases, Manendra Mohan (Tata McGraw Hill)

Sales Promotion and Advertising Management (6thEd.)Himalaya Publishing House

Advertising Excellence by Bovee, Thill, Dovel and Wood (McGraw Hill)

Advertising Management – Shelekar, Victor & Nirmala Prasad (Himalaya Publishing House)

Foundations of Advertising – Theory & Practice – S.A. Chunawala

Brand Positioning – Subroto Sengupta, Tata McGraw Hill

Cases in Marketing Management – M.L. Bhasin, Excell Books

Sales & Distribution Management (Units 12-16 for Sales Promotion) F.L. Lobo, Global Business Press

**SEMESTER VI**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.2.(a)**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.3.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.4(a)**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.5. Answer in Brief**

- |     |            |         |
|-----|------------|---------|
| (a) | UNIT – I   | 4 Marks |
| (b) | UNIT – II  | 4 Marks |
| (c) | UNIT – III | 4 Marks |
| (d) | UNIT – IV  | 4 Marks |



## **jk"V<sup>a</sup>lar rqdMksth egkjkt ukxiwj fo|kihB] ukxiwj**

^^ ¼lsav<sup>a</sup>y izksfOgUlsI 'kklu f'k{k.k foHkkxkph vf/klwpuk Øekad 513 fnukad 1 vkWxLV] 1923 }jkj LFkkfir o egkjk"V<sup>a</sup> fo|kihB vf/kfu;e] 1994 }jkj lapkfyr jkT; fo|kihB½\*\*  
¼fo|k foHkkx½

**N=irh f'kokth egkjkt iz'kkldh; ifjljl jfoUnzukFk V<sup>k</sup>xksj ekxZ] ukxiwj & 440 001-  
nwj/ouh Øekad% dk;kZy;% 0712&2532063 QWDI % 0712&2555701**

**Ø- jkrqeukfo@fo|k@16@1170  
03 IIVsacj] 2016**

**fnukad**

### **vf/klwpuk**

IoZ laca/khrkaP;k ekfgrhdjhrk lqfpr dj.;kr ;srs dh] okf.kT; fo|k'kk[ksvarxZr ;s.kkjs ch-dkWe- inoh vH;kldze I= **2016&2017** iklqu I= ijfrus ykxw dj.;kr ;srs vkgs- Inj vH;kldzekaP;k ifj{kk ;kstuk o vH;kldzehdsyk ek- dqyxq: egksn;kauh egkjk"V<sup>a</sup> fo|kihB vf/kfu;e 1994 P;k dye **14½** varxZr fo}r ifjÔn vkf.k O;oLFkkiu ifjÔnsP;k orhus fnukad **02@09@2016** jksth ekU;rk iznku dsysyh vkgs- rlsp ek-dqyx:aauh Inj vH;kldzekyk I= ijrhuis dk;kZUohr dj.;kdfjrk egkjk"V<sup>a</sup> fo|kihB vf/kfu;e **1994** P;k dye **14½** varxZr ch-dkWe- vH;kldzekps funsZ'k dzekad **59** fnukad **02@09@2016** jksth fuxZfer dsyk vkgs-

ch-dkWe- inoh vH;kldzekaps funsZ'k] ifj{kk o vH;kldzehdk jk"V~lar rqdMksth egkjkt ukxiwj fo|kihB] ukxiwj-[www.naguniversity.org](http://www.naguniversity.org) ww;k ladsrLFkGkoj miyC/k dj.;kr vkysys vkgs-

d`lk;k laca/khrkuh ukasn ?;koh

**ek-dqyxq:aP;k**

**vkns'kkUo;s**

**Lok{kjhl@&  
¼Jh- iqj.kpnz esJke½  
dqylfpo  
jk"V<sup>a</sup>lar rqdMksth  
egkjkt  
ukxiwj fo|kihB**

**izfrfyih ekfgrh o iq<hy dk;ZokghIkBh vxzsfÔr:**

- 1-layfXur egkfo|ky;kaps IoZ izkp;Z@lapkyd@foHkkx izeq[k
  - 2- IoZ lHkkln] fo'ksÔ dk;Z lferh]
  - 3--ek- leUo;d] okf.kT; fo|kk'kk[kk]
  - 4- ek-ijh{kk fu;a=d]
  - 5 midqylfpo ¼iqoZ ifj{kk] iqokZRrj
  - 6-Lkgk;d dqylfpo ¼lk- lkjh{kk @ lk-
  - 7-Lkgk;d dqylfpo ¼xksiuh;½
  - 8- Lkgk;d dqylfpo ¼O;ko;k;hd
  - 9-vf/k{kd ¼v/;kns'k foHkkx½
  - 10-vf/k{kd ¼fudky foHkkx½
  - 11- izHkkjh vf/kdkjh ¼izdk'ku
- 
- ifj{kk] e-fo-½  
ifj{kk o pkSd'kh½  
jk"Clar rqdMksth egkjkt ukxiwj  
ijh{kk½  
foHkkx½

12-ek-dqyxq:aps Loh; lgk;d]  
13-ek- dqylfpokaps Loh; lgk;d]  
14-Jherh fouk izdk'ks] ekfgrk'kkL=

**Lok{kjhl@&  
¼MkW- vfuy  
fgjs[ku½  
midqylfpo ¼fo|k½  
jk"Valar rqdMksth  
egkjkt  
ukxiwj fo|kihB-**

# **R.T.M Nagpur University, Nagpur**

## **Syllabus**

### **B.Com**

#### **Semester I**

##### **1T5- Compulsory English**

**Prescribed Text :** Epiphanies by Board of Editors (Publisher: Orient BlackSwan)

#### **Unit 1: Prose**

1. Sreelakshmi Suresh
2. Why a Startup Needs to Find its Customers First- *Pranav Jain*
3. Devender Pal Singh

#### **Unit 2: Prose**

1. The Model Millionaire- *Oscar Wilde*
2. The Monkey's Paw -*W.W.Jacobs*
3. The Lumber Room-*Saki*

#### **Unit 3: Poetry**

1. Invictus-William Ernest Henley
2. The Builders- *Henry Wadsworth Longfellow*
3. Stay Calm- *Grenville Kleiser*

#### **Unit 4: Writing Skills**

1. Emails
2. Speeches
3. Views and Opinions

#### **Unit 5: Language Study**

1. Nouns
2. Pronouns
3. Verbs
4. Adjectives
5. Adverbs
6. Prefixes
7. Suffixes
8. Root Words

**B.Com**  
**Question Paper Pattern**  
**1T5-Compulsory English**  
**Semester I**

N.B: SAQ – Short Answer Questions to be answered in about 75-100 words  
VSAQ- Very Short Answer Question to be answered in two or three sentences  
PRQ- Personal Response Question to be answered in about 75- 100words

**Total 80 Marks**

- |   |      |
|---|------|
| Q.1. (A) Three VSAQ out of Five based on Prose (Unit 1) (3x 2) -            | (06) |
| (B) One SAQ out of Two based on Prose (Unit1)                               | (05) |
| ( C ).One PRQ out of Two based on Prose (Unit1)                             | (05) |
| Q.2. (A) Three VSAQ out of Five based on Prose (Unit 2) (3x 2) -            | (06) |
| (B) One SAQ out of Two based on Prose (Unit 2)                              | (05) |
| ( C ).One PRQ out of Two based on Prose (Unit 2)                            | (05) |
| Q.3. (A) Three VSAQ out of Five based on prescribed Poems (Unit 3) (3x 2) - | (06) |
| (B) One SAQ out of Two based on prescribed Poems (Unit 3)                   | (05) |
| ( C ).One PRQ out of Two based on prescribed Poems (Unit 3)                 | (05) |
| Q.4 .(A).ONE Business Email   | (05) |
| (B)One Speech (150 Words)   | (05) |
| ( C ) One View and Opinion (150 Words)                                      | (06) |
| Q.5.(A)i) Synonyms (3 Words)/Antonyms (3Words)                              | (06) |
| ii)Textual Match the following based on Unit-I & II(- 4 Items               | (02) |
| (B ) Nouns/Pronouns/ Verbs/ Adjectives/Adverbs                              | (06) |
| (C) Root word/Suffixes/Prefixes   | (02) |

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation/Oral** of the same.

**2 Assignments – 5+5 = 10 Marks**

**Power Point Presentation/Oral Presentation– 5 Marks**

**Attendance – 5 Marks TOTAL – 20 MARKS**

## **B.Com**

### **Semester II**

#### **2T5- Compulsory English**

**Prescribed Text :** Epiphanies by Board of Editors (Publisher: Orient BlackSwan)

##### **Unit 1: Prose**

1. Stephen Hawking
2. How to be a Healthy User of Social Media-*Peggy Kern*
3. Jadav Payeng

##### **Unit 2: Prose**

1. Luck-*Mark Twain*
2. How I Became a Public Speaker-*George Bernard Shaw*
3. My Lord, the Baby-*Rabindranth Tagore*

##### **Unit 3: Poetry**

1. Success is Counted Sweetest-*Emily Dickinson*
2. The World is Too Much with Us-*William Wordsworth*
3. No Man is an Island-*John Donne*

##### **Unit 4: Writing Skills**

1. Weave Your Idea/Story
2. Interviews
3. Narrating an Experience

##### **Unit 5: Language Study**

1. Articles
2. Prepositions
3. Conjunctions
4. Interjections

**B.Com**  
**Question Paper Pattern**  
**1T5-Compulsory English**

**Semester II**

N.B: SAQ – Short Answer Questions to be answered in about 75-100 words

VSAQ- Very Short Answer Question to be answered in two or three sentences

PRQ- Personal Response Question to be answered in about 75- 100words

**Total 80 Marks**

Q.1. (A) Three VSAQ out of Five based on Prose (Unit 1) (3x 2) -	(06)
(B) One SAQ out of Two based on Prose (Unit1)	(05)
( C ).One PRQ out of Two based on Prose (Unit1)	(05)
Q.2. (A) Three VSAQ out of Five based on Prose (Unit 2) (3x 2) -	(06)
(B) One SAQ out of Two based on Prose (Unit 2)	(05)
( C ).One PRQ out of Two based on Prose (Unit 2)	(05)
Q.3. (A) Three VSAQ out of Five based on prescribed Poems (Unit 3) (3x 2) -	(06)
(B) One SAQ out of Two based on prescribed Poems (Unit 3)	(05)
( C ).One PRQ out of Two based on prescribed Poems (Unit 3)	(05)
Q.4 .(A). Weave Your Idea/Story	(05)
(B) Framing Interview Questions (5x1)	(05)
( C ) Narrating an Experience	(06)
Q.5.(A) i)Synonyms(03 Words) & Antonyms(03 Words)	(06)
ii)Textual Match the Columns based on Unit I & II( 4 items)	(02)
(B )Articles(03) and Prepositions(03)-Fill in the Blanks	(06)
(C) Conjunctions(01) and Interjections(01)	(02)

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation/Oral** of the same.

**2 Assignments – 5+5= 10 Marks**

**Power Point Presentation/Oral Presentation– 5 Marks**

**Attendance - 5 Marks TOTAL – 20 MARKS**

**B.Com**  
**Semester III**  
**3T5- Compulsory English**

**Prescribed Text:** Igniting Minds by Board of Editors (Publisher: Orient BlackSwan)

**Unit 1: Prose**

1. The Chicago Speeches-*Swami Vivekananda*
2. What Teenagers Need to Know about Cyber Security- *Sanjay Goel*
3. Values in Life-*Rudyard Kipling*

**Unit 2: Prose**

1. Work Brings Solace-*A.P.J.Abdul Kalam*
2. Too Dear! - *Leo Tolstoy*
3. The Pleasures of Ignorance-*Robert Lynd*

**Unit 3: Poetry**

1. The Tiger and the Deer-*Sri Aurobindo*
2. A Dream within a Dream- *Edgar Allan Poe*
3. Leisure-*W.H.Davies*

**Unit 4: Writing Skills**

1. Application Letters
2. Etiquette and Manners
3. Writing Blogs

**Unit 5: Language Study**

1. Types of Sentences(Affirmative, Assertive, Negative, Exclamatory, Interrogative )
2. Tenses

**B.Com**  
**Question Paper Pattern**  
**3T5-Compulsory English**

**Semester III**

N.B: SAQ – Short Answer Questions to be answered in about 75-100 words

VSAQ- Very Short Answer Question to be answered in two or three sentences

PRQ- Personal Response Question to be answered in about 75- 100words

**Total 80 Marks**

- |   |      |
|---|------|
| Q.1. (A) Three VSAQ out of Five based on Prose (Unit 1) (3x 2) -                          | (06) |
| (B) One SAQ out of Two based on Prose (Unit1)   | (05) |
| ( C ).One PRQ out of Two based on Prose (Unit1)   | (05) |
| Q.2. (A) Three VSAQ out of Five based on Prose (Unit 2) (3x 2) -                          | (06) |
| (B) One SAQ out of Two based on Prose (Unit 2)  | (05) |
| ( C ).One PRQ out of Two based on Prose (Unit 2)  | (05) |
| Q.3. (A) Three VSAQ out of Five based on prescribed Poems (Unit 3) (3x 2) -               | (06) |
| (B) One SAQ out of Two based on prescribed Poems (Unit 3)                                 | (05) |
| ( C ).One PRQ out of Two based on prescribed Poems (Unit 3)                               | (05) |
| Q.4 .(A).One Application Letter   | (05) |
| (B)Etiquette & Manners  | (05) |
| ( C )Writing Blog (150 Word)  | (06) |
| Q.5.(A)i)Idioms and Phrases-Make sentences(03), One Word Substitute(03)                   | (06) |
| ii)True and False based on Unit II & III (4 items)  | (02) |
| (B )Types of Sentences (Affirmative, Negative, Interrogative, Exclamatory, Assertive (04) |      |
| (C) Tenses  | (04) |

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation /Oral Presentation** of the same.

**2 Assignments – 5+5 = 10 Marks**

**Power Point Presentation/Oral Presentation– 5 Marks**

**Attendance – 5 Marks TOTAL – 20 MARKS**

**B.Com**  
**Semester IV**  
**4T5- Compulsory English**

**Prescribed Text:** Igniting Minds by Board of Editors (Publisher: Orient BlackSwan)

**Unit 1: Prose**

1. Gifts-*Ralph Waldo Emerson*
2. India, What Can it Teach Us?-*Max Muller*
3. Why We Travel-*Pico Iyer*

**Unit 2: Prose**

1. The Doll's House- *Katherine Mansfield*
2. The Globe of Gold-*Bankim Chandra Chattopadhyay*
3. The Beggar-*Anton Chekhov*

**Unit 3: Poetry**

1. The Ballad of Father Gilligan-*William Butler Yeast*
2. God's Grandeur-*Gerard Manley Hopkins*
3. The Soul's Prayer- *Sarojini Naidu*

**Unit 4: Writing Skills**

1. Comprehension
2. Summary Writing
3. Writing Dialogue
4. Group Discussion

**Unit 5: Language Study**

1. Voice
2. Direct/Indirect Narration

**B.Com**

## **Question Paper Pattern**

## **4T5-Compulsory English**

Semester IV

N.B: SAQ – Short Answer Questions to be answered in about 75-100 words

## VSAQ- Very Short Answer Question to be answered in two or three sentences

**PRQ- Personal Response Question to be answered in about 75- 100words**

Total 80 Marks

- Q.1. (A) Three VSAQ out of Five based on Prose (Unit 1) (3x 2) - (06)  
(B) One SAQ out of Two based on Prose (Unit1) (05)  
( C ).One PRQ out of Two based on Prose (Unit1) (05)

Q.2. (A) Three VSAQ out of Five based on Prose (Unit 2) (3x 2) - (06)  
B) One SAQ out of Two based on Prose (Unit 2) (05)  
( C ).One PRQ out of Two based on Prose (Unit 2) (05)

Q.3. (A) Three VSAQ out of Five based on prescribed Poems (Unit 3) (3x 2) - (06)  
(B) One SAQ out of Two based on prescribed Poems (Unit 3) (05)  
( C ).One PRQ out of Two based on prescribed Poems (Unit 3) (05)

Q.4 .(A).One passage for Comprehension (05)  
(B)Summary Writing of the above passage in 4(A) (05)  
( C ) Dialogue Writing or Group Discussion  
(At least 3 Dialogues to be exchanged) (3x2) (06)

Q.5.(A)i)Idioms and Phrases-Make Sentences(03) One Word Substitute(03 Words) (06)  
ii)True and False(Textual based on Unit II & III) -4 Items (02)

(B ) Voice (04)  
(C) Direct/Indirect Narration (04)

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation/Oral Presentation** of the same.

**2 Assignments – 5+5 = 10 Marks**

**Power Point Presentation/Oral Presentation– 5 Marks**

**Attendance - 5 Marks TOTAL – 20 MARKS**

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B. Com.) Part I

मराठी

पाठ्यपुस्तक : शब्दसाधना

सत्र - १ (Semester - I)

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B. Com.) Part I

मराठी

पाठ्यपुस्तक : शब्दसाधना

सत्र - २ (Semester - II)

### अनुक्रमणिका

#### गद्य विभाग

१. भारतीय लोकशाहीचे भवितव्य काय? - डॉ. बाबासाहेब आंबेडकर
२. काळी आई - व्यंकटेश माडगूळकर
३. तुकारामांचे अभंग - निर्मलकुमार फडकुले
४. माझी शाळा - प्रकाश खरात
५. समतेचे वारकरी : संत गाडगेबाबा आणि - अशोक राणा
६. राष्ट्रसंत तुकडोजी महाराज
७. लोककल्याणकारी राजा : छत्रपती शाहू महाराज - शरयू तायवाडे

#### पद्य विभाग

१. ज्ञानेश्वरांचे अभंग - संत ज्ञानेश्वर
२. वनसुधा - वामन पंडित
३. नवा शिष्याई - केशवसुत
४. मेंढंर - विठ्ठल वाघ
५. पोरी - अनुराधा पाटील
६. गाव - हेमंतकुमार कांबळे

#### व्यावहारिक मराठी

१. म्हणी
२. मुलाखत लेखन

### अनुक्रमणिका

#### गद्य विभाग

१. आमची एक दुष्ट खोड : आळस - गोपाळ गणेश आगरकर
२. शील बनविणारे शिक्षण - स्वामी विवेकानन्द
३. मनुष्याचा देव आणि विश्वाचा देव - वि. दा. सावरकर
४. डॉ. पंजाबराव देशमुख - वि. भि. कोलते
५. नातं - वि. स. जोग
६. रुपी - माझी साक्ष! - मोहन नाईक

#### पद्य विभाग

१. एकनाथांची भारुडे - संत एकनाथ
२. दण्कट दंडस्नायू जैसे - बा. सी. मर्ढेकर
३. माय - वामन निंबाळकर
४. पुतळे - वसंत आबाजी डहाके
५. उद्घोष - प्रसेनजित गायकवाड
६. जागर - लखनसिंग कटरे

#### व्यावहारिक मराठी

१. वाकप्रचार
२. जाहिरात लेखन

३३३  
३३३  
(अद्यता)

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B.Com.) Part I

### मराठी

#### पाठ्यपुस्तक : शब्दसाधना

सत्र - १ (Semester - I)

वेळ : ३ तास)

(एकूण गुण : ८०

#### प्रश्नपत्रिकेचे स्वरूप

सूचना : सर्व प्रश्नांना समान गुण आहेत.

प्रश्न १ - गद्यावर आधारीत दीर्घ प्रश्न	किंवा	१६ गुण
गद्यावर आधारीत दीर्घ प्रश्न		
प्रश्न २ - पद्यावर आधारीत दीर्घ प्रश्न	किंवा	१६ गुण
पद्यावर आधारीत दीर्घ प्रश्न		
प्रश्न ३ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा.		(२ x ८ गुण = १६ गुण)
(अ) गद्यावर आधारीत		
(ब) पद्यावर आधारीत		
प्रश्न ४ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा.		(२ x ८ गुण = १६ गुण)
(अ) गद्यावर आधारीत		
(ब) पद्यावर आधारीत		
प्रश्न ५ - खालील प्रश्नांची थोडक्यात उत्तरे लिहा.		(४ x ४ गुण = १६ गुण)
(i) गद्यावर आधारीत		
(ii) पद्यावर आधारीत		
(iii) व्यावहारिक मराठी		
(iv) व्यावहारिक मराठी		

#### गुणांचे विभाजन

गद्य	-	३६
पद्य	-	३६
व्यावहारिक मराठी	-	०८
एकूण गुण		८०

(अंतर्गत मूल्यमापन : उपस्थिती - ०५ + गृहपाठ - ०५ + वाचन कौशल्य - ०५ + मौखिकी - ०५ = एकूण २० गुण)

श्री नीनाथ अड्डे

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B.Com.) Part I

मराठी

पाठ्यपुस्तक : शब्दसाधना

सत्र - २ (Semester - II)

वेळ : ३ तास)

(एकूण गुण : ८०

### प्रश्नपत्रिकेचे स्वरूप

सूचना : सर्व प्रश्नांना समान गुण आहेत.

प्रश्न १ - गद्यावर आधारीत दीर्घ प्रश्न	किंवा	१६ गुण
गद्यावर आधारीत दीर्घ प्रश्न		
प्रश्न २ - पद्यावर आधारीत दीर्घ प्रश्न	किंवा	१६ गुण
पद्यावर आधारीत दीर्घ प्रश्न		
प्रश्न ३ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा. (अ) गद्यावर आधारीत (ब) पद्यावर आधारीत		(२ x ८ गुण = १६ गुण)
प्रश्न ४ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा. (अ) पद्यावर आधारीत (ब) पद्यावर आधारीत		(२ x ८ गुण = १६ गुण)
प्रश्न ५ - खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (i) गद्यावर आधारीत (ii) पद्यावर आधारीत (iii) व्यावहारिक मराठी (iv) व्यावहारिक मराठी		(४ x ४ गुण = १६ गुण)

### गुणांचे विभाजन

गद्य	-	३६
पद्य	-	३६
व्यावहारिक मराठी	-	०८
एकूण गुण		८०

(अंतर्गत मूल्यमापन : उपस्थिती - ०५ + गृहपाठ - ०५ + वाचन कौशल्य - ०५ + मौखिकी - ०५ = एकूण २० गुण)

इंद्रजीत अरोडे  
३६२६३१

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B. Com.) Part II

मराठी

पाठ्यपुस्तक : शब्दसाधना : भाग-२

सत्र-३ (Semester-III)

### अनुक्रमणिका

#### गद्य विभाग

- |                                      |                      |
|--------------------------------------|----------------------|
| १. विंझीं गोँडवाडां अवस्थान          | - म्हाइंभट           |
| २. शेती सुधारणाविषयक विचार           | - जोतीराव फुले       |
| ३. अखेरचे वक्तव्य                    | - वासुदेव बळवंत फडके |
| ४. भारतीय स्त्रीत्वाचे गाणे सावित्री | - पु. भा. भावे       |
| ५. मरीआईचा गाडा                      | - अण्णाभाऊ साठे      |
| ६. पुस्तक चोरून शाळा शिकली           | - अशोक पवार          |

#### पद्य विभाग

- |                              |  |
|------------------------------|--|
| १. संत कवयित्रींची अभंगवाणी  | - संत मुक्ताबाई, संत जनाबाई,<br>संत बहिणाबाई |
| २. निश्चयाचा महामेळ          | - समर्थ रामदास                               |
| ३. नववधू, प्रिया मी...       | - भा. रा. तांबे                              |
| ४. सारेच दीप कसे मंदावले आता | - अनिल                                       |
| ५. सोनं होऊन उगावं           | - सदाननंद देशमुख                             |
| ६. विश्वाचे नवल              | - आ. य. पवार                                 |

#### व्यावहारिक मराठी

- |                 |                         |
|-----------------|-------------------------|
| १. वृत्त संपादन | - प्रभाकर कोंडबत्तुनवार |
| २. शुद्ध शब्द   |                         |

(डॉ. ईश्वर सोमन)

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B. Com.) Part II

मराठी

पाठ्यपुस्तक : शब्दसाधना : भाग-२

सत्र-४ (Semester-IV)

### अनुक्रमणिका

#### गद्य विभाग

- |                                       |                     |
|---------------------------------------|---------------------|
| १. खरे विद्यापीठ कोणते?               | - लोकमान्य टिळक     |
| २. संस्कार                            | - वामन चोरघडे       |
| ३. नक्षत्रांचे देणे                   | - श्रीनिवास ठाणेदार |
| ४. बिल्वा                             | - सुप्रिया अय्यर    |
| ५. श्रीकृष्ण : बहुआयामी व्यक्तिमत्त्व | - श्याम मोहरकर      |
| ६. यमाजीची गोष्ट                      | - संजय बोरुडे       |

#### पद्य विभाग

- |                           |                       |
|---------------------------|-----------------------|
| १. तीन अभंग               | - सेना न्हावी         |
| २. द्यावे ज्ञान मला       | - पद्धते बापूराव      |
| ३. दैवजात दुःखें भरतां... | - ग. दि. माडगूळकर     |
| ४. कष्टाचे गीत            | - शरच्चंद्र मुक्तिबोध |
| ५. जीजामाता               | - मिळार्फी अहमद बेग   |
| ६. पाखरू...               | - लक्ष्मीकमल गेडाम    |

#### व्यावहारिक मराठी

- |  |                     |
|--|---------------------|
| १. इंटरनेट आणि मराठी भाषा                  | - डॉ. नंदकुमार मोरे |
| २. इंग्रजी शब्दसंक्षेप व मराठी शब्दविस्तार |                     |

नाग्या)

*A. J. S. Deo*

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B.Com.) Part II

मराठी

पाठ्यपुस्तक : शब्दसाधना : भाग-२

सत्र-३ (Semester-III)

वेळ : ३ तास

(एकूण गुण : ८०

### प्रश्नपत्रिकेचे स्वरूप

सूचना : सर्व प्रश्नांना समान गुण आहेत.

- प्रश्न १ - गद्यावर आधारीत दीर्घ प्रश्न १६ गुण  
किंवा  
गद्यावर आधारीत दीर्घ प्रश्न
- प्रश्न २ - पद्यावर आधारीत दीर्घ प्रश्न १६ गुण  
किंवा  
पद्यावर आधारीत दीर्घ प्रश्न
- प्रश्न ३ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा.  
(अ) गद्यावर आधारीत  
(ब) पद्यावर आधारीत  $(2 \times 8 \text{ गुण} = 16 \text{ गुण})$
- प्रश्न ४ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा.  
(अ) पद्यावर आधारीत  
(ब) पद्यावर आधारीत  $(2 \times 8 \text{ गुण} = 16 \text{ गुण})$
- प्रश्न ५ - खालील प्रश्नांची थोडक्यात उत्तरे लिहा.  
(i) गद्यावर आधारीत  
(ii) पद्यावर आधारीत  
(iii) व्यावहारिक मराठी  
(iv) व्यावहारिक मराठी  $(4 \times 4 \text{ गुण} = 16 \text{ गुण})$

### गुणांचे विभाजन

गद्य	-	३६
पद्य	-	३६
व्यावहारिक मराठी	-	०८
		<hr/>
एकूण गुण		८०

(अंतर्गत मूल्यमापन : उपस्थिती - ०५ + गृहपाठ - ०५ + वाचन कौशल्य - ०५ + मौखिकी - ०५ = एकूण २० गुण)

*Debt, ~~Ajji~~ ~~Shri~~ -  
(डॉ. ईश्वर सोमनाथ)*

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Bachelor of Commerce (B.Com.) Part II

### मराठी

पाठ्यपुस्तक : शब्दसाधना : भाग-२

सत्र-४ (Semester-IV)

वेळ : ३ तास)

(एकूण गुण : ८०

### प्रश्नपत्रिकेचे स्वरूप

सूचना : सर्व प्रश्नांना समान गुण आहेत.

प्रश्न १ - गद्यावर आधारीत दीर्घ प्रश्न १६ गुण  
किंवा

गद्यावर आधारीत दीर्घ प्रश्न

प्रश्न २ - पद्यावर आधारीत दीर्घ प्रश्न १६ गुण  
किंवा

पद्यावर आधारीत दीर्घ प्रश्न

प्रश्न ३ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा. (२ x ८ गुण = १६ गुण)  
(अ) गद्यावर आधारीत  
(ब) पद्यावर आधारीत

प्रश्न ४ - खालीलपैकी दोन्ही प्रश्नांची उत्तरे लिहा. (२ x ८ गुण = १६ गुण)  
(अ) गद्यावर आधारीत  
(ब) पद्यावर आधारीत

प्रश्न ५ - खालील प्रश्नांची थोडक्यात उत्तरे लिहा. (४ x ४ गुण = १६ गुण)  
(i) गद्यावर आधारीत  
(ii) पद्यावर आधारीत  
(iii) व्यावहारिक मराठी  
(iv) व्यावहारिक मराठी

### गुणांचे विभाजन

गद्य	-	३६
पद्य	-	३६
व्यावहारिक मराठी	-	०८
एकूण गुण		८०

(अंतर्गत मूल्यमापन : उपस्थिती - ०५ + गृहपाठ - ०५ + वाचन कौशल्य - ०५ + मौखिकी - ०५ = एकूण २० गुण)

*Alm.*

*Alm. Isha (डॉ. इश्वर सोमनाथ)*

# राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर

बी. कॉम. प्रथम वर्ष

विषय : हिंदी

सत्र-१ (Semester - I)

समय : ३ घंटे)

(कुल अंक : ८०

## निर्धारित पाठ्यक्रम

### इकाई १ :

प्रमुख त्यौहार, सामाजिक, आर्थिक, नैतिक-मूल्यों पर आधारित निबंध ।

(किन्हीं चार में से एक विषय पर - शब्द सीमा ४०० तक)

### इकाई २ :

गद्य-विभाग : पाठ्यपुस्तक : “पलाश”

- |                             |                    |
|-----------------------------|--------------------|
| १. बड़े भाई साहब (कहानी)    | - प्रेमचंद         |
| २. स्मृति (निबंध)           | - श्रीराम शर्मा    |
| ३. गिल्लू (रेखाचित्र)       | - महादेवी वर्मा    |
| ४. अभाव (कहानी)             | - विष्णु प्रभाकर   |
| ५. महाभारत की साँझ (एकांकी) | - भारतभूषण अग्रवाल |
| ६. उखड़े खंभे (व्यंग्य)     | - हरिशंकर परसाई    |

### इकाई ३ :

पद्य-विभाग : पाठ्यपुस्तक : “पलाश”

- |                           |                               |
|---------------------------|-------------------------------|
| १. कबीर के दोहे           | - कबीरदास                     |
| २. ले चल वहाँ भुलावा देकर | - जयशंकर प्रसाद               |
| ३. सनह-निझर बह गया है     | - सूर्यकांत त्रिपाठी ‘निराला’ |
| ४. प्रथम रश्मि            | - सुमित्रानंदन पंत            |
| ५. जीवन का झरना           | - आरसीप्रसाद सिंह             |
| ६. बयान की आस             | - दामोदर खड़से                |

### इकाई ४ :

अन्य पाठ्य सामग्री :

१. पारिभाषिक शब्दावली : पाठ्यपुस्तक में संलग्न वाणिज्य से संबंधित पारिभाषिक शब्दों का अंग्रेजी से हिंदी तथा हिंदी से अंग्रेजी में अध्ययन अपेक्षित है।
२. अनुवाद : अर्थ, परिभाषा, प्रक्रिया, प्रकार - शब्दानुवाद, भावानुवाद, सारानुवाद, व्याख्यानुवाद, आशुअनुवाद, अनुवाद के गुण इत्यादि का अध्ययन अपेक्षित है।

# राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर

बी. कॉम. प्रथम वर्ष

विषय : हिंदी

सत्र-२ (Semester - II)

समय : ३ घंटे)

(कुल अंक : ८०

## इकाई ४ :

### अन्य पाठ्य सामग्री :

१. मुहावरे और लोकोक्तियाँ : पाठ्यपुस्तक में संलग्न मुहावरे और लोकोक्तियों का अर्थ एवं वाक्यप्रयोग का अध्ययन अपेक्षित है।
२. विज्ञापन कला : अर्थ, परिभाषा, प्रकार, शीर्षक का महत्व, विज्ञापन के प्रयोजन, तत्व, लक्ष्य, विज्ञापन की भाषा, अच्छे विज्ञापन के गुण इत्यादि।

## निर्धारित पाठ्यक्रम

### इकाई १ :

प्राकृतिक संसाधन, वर्णनात्मक, खेल-व्यायाम, विज्ञान और तकनीकी पर आधारित निबंध। (किन्हीं चार में से एक विषय पर – शब्द सीमा ४०० तक)

### इकाई २ :

गद्य-विभाग : पाठ्यपुस्तक : “पलाश”

- |                                  |                        |
|----------------------------------|------------------------|
| १. प्रायश्चित (कहानी)            | - भगवतीचरण वर्मा       |
| २. पाजेब (कहानी)                 | - जैनेन्द्र कुमार      |
| ३. ब्रह्मराक्षस का शिष्य (कहानी) | - गजानन माधव मुक्तिबोध |
| ४. गपशप (निबंध)                  | - नामवर सिंह           |
| ५. अफसर (व्यंग्य)                | - शरद जोशी             |
| ६. मोहन से महात्मा (रेडियो रूपक) | - सुनील देवधर          |

### इकाई ३ :

पद्य-विभाग : पाठ्यपुस्तक : “पलाश”

- |                      |                        |
|----------------------|------------------------|
| १. सब उन्नति को मूल  | - भारतेन्दु हरिश्चंद्र |
| २. पुष्प की अभिलाषा  | - माखनलाल चतुर्वेदी    |
| ३. कलम और तलवार      | - रामधारी सिंह ‘दिनकर’ |
| ४. यह दीप अकेला      | - अज्ञेय               |
| ५. बहुत दिनों के बाद | - नागार्जुन            |
| ६. छाया मत छूना      | - गिरिजाकुमार माथुर    |

राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर  
 बी. कॉम. प्रथम वर्ष  
 विषय : हिंदी  
 पाठ्यपुस्तक : 'पलाश'  
 सत्र-१ (Semester - I)

प्रश्न-पत्र का प्रारूप एवं अंक विभाजन

प्रश्न १ -	प्रमुख त्यौहार, सामाजिक, आर्थिक, नैतिक-मूल्यों पर आधारित निबंध। (किन्हीं चार में से एक विषय पर - शब्द सीमा ४०० तक)	अंक-१६
प्रश्न २ -	गद्य-विभाग पर आधारित पाठों में से विकल्प के साथ दीर्घोत्तरी प्रश्न। (दो प्रश्नों में से एक का उत्तर अपेक्षित है।)	अंक-१६
प्रश्न ३ -	पद्य-विभाग पर आधारित कविताओं में से विकल्प के साथ दीर्घोत्तरी प्रश्न। (दो प्रश्नों में से एक का उत्तर अपेक्षित है।)	अंक-१६
प्रश्न ४ -	तीन प्रश्न गद्य-विभाग पर (जिन पाठों से दीर्घोत्तरी प्रश्न पूछे गये हैं, उन पाठों को छोड़कर) व तीन प्रश्न पद्य-विभाग पर (जिन कविताओं से दीर्घोत्तरी प्रश्न पूछे गये हैं, उन कविताओं को छोड़कर) आधारित कुल छह लघु प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर अपेक्षित हैं।	अंक-१६
प्रश्न ५ -	इसके अंतर्गत अन्य पाठ्य सामग्री से चार अनिवार्य लघूतरी प्रश्न पूछे जायेंगे। प्रथम दो प्रश्न 'पारिभाषिक शब्दावली' से तथा अगले दो प्रश्न 'अनुवाद' से पूछे जायेंगे। सभी प्रश्नों के उत्तर अपेक्षित हैं।	४ x ४ अंक = अंक-१६

**कुल अंक विभाजन**

निबन्ध	-	१६ अंक
गद्य विभाग	-	२४ अंक
पद्य विभाग	-	२४ अंक
अन्य पाठ्य सामग्री	-	१६ अंक
कुल अंक	-	८० अंक
	+	
आंतरिक मूल्यांकन	-	२० अंक (उपस्थिति - ५ अंक, गृहकार्य - ५ अंक, मौखिकी - १० अंक)
कुल अंक	-	१०० अंक

राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर  
 बी. कॉम. प्रथम वर्ष  
 विषय : हिंदी  
 पाठ्यपुस्तक : 'पलाश'  
 सत्र-२ (Semester - II)

प्रश्न-पत्र का प्रारूप एवं अंक विभाजन

प्रश्न १ -	प्राकृतिक संसाधन, वर्णनात्मक, खेल-व्यायाम, विज्ञान और तकनीकी पर आधारित निबंध। (किन्हीं चार में से एक विषय पर - शब्द सीमा ४०० तक)	अंक-१६
प्रश्न २ -	गद्य-विभाग पर आधारित पाठों में से विकल्प के साथ दीर्घोत्तरी प्रश्न। (दो प्रश्नों में से एक का उत्तर अपेक्षित है।)	अंक-१६
प्रश्न ३ -	पद्य-विभाग पर आधारित कविताओं में से विकल्प के साथ दीर्घोत्तरी प्रश्न। (दो प्रश्नों में से एक का उत्तर अपेक्षित है।)	अंक-१६
प्रश्न ४ -	तीन प्रश्न गद्य-विभाग पर (जिन पाठों से दीर्घोत्तरी प्रश्न पूछे गये हैं, उन पाठों को छोड़कर) व तीन प्रश्न पद्य-विभाग पर (जिन कविताओं से दीर्घोत्तरी प्रश्न पूछे गये हैं, उन कविताओं को छोड़कर) आधारित कुल छह लघु प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर अपेक्षित हैं।	अंक-१६
प्रश्न ५ -	इसके अंतर्गत अन्य पाठ्य सामग्री से चार अनिवार्य लघूतरी प्रश्न पूछे जायेंगे। प्रथम दो प्रश्न 'पारिभाषिक शब्दावली' से तथा अगले दो प्रश्न 'विज्ञापन कला' से पूछे जायेंगे। सभी प्रश्नों के उत्तर अपेक्षित हैं।	४ x ४ अंक = अंक-१६

**कुल अंक विभाजन**

निबन्ध	-	१६ अंक
गद्य विभाग	-	२४ अंक
पद्य विभाग	-	२४ अंक
अन्य पाठ्य सामग्री	-	१६ अंक
कुल अंक	-	८० अंक
	+	
आंतरिक मूल्यांकन	-	२० अंक (उपस्थिति - ५ अंक, गृहकार्य - ५ अंक, मौखिकी - १० अंक)
कुल अंक	-	१०० अंक

# राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर

बी. कॉम. द्वितीय वर्ष

विषय : हिंदी

सत्र-३ (Semester - III)

---

## निर्धारित पाठ्यक्रम

इकाई १ :

निबंध :

समस्याप्रधान निबंध (ज्वलंत समस्याओं पर आधारित:- जैसे-महामारी, बेरोज़गारी, प्रष्टाचार, आतंकवाद आदि), कल्पनाप्रधान निबंध (यदि मैं शिक्षक होता, यदि परीक्षाएं न होतीं आदि), विश्लेषणात्मक निबंध (ऑन लाइन परीक्षाओं के लाभ और नुकसान, आधुनिक तकनीक/विज्ञान/सोशल मीडिया – वरदान या अभिशाप आदि), वर्णनात्मक निबंध (जनसंचार के नव आयाम (सोशल मीडिया), मेरे स्वप्नों का भारत आदि), विवेचनात्मक निबंध (कहावत/सुविचार प्रधान निबंध)।

इकाई २ :

गद्य-विभाग : पाठ्यपुस्तक : “पारिजात”

- |   |                 |
|---|-----------------|
| १. सच्ची सभ्यता कौनसी? (भेटवार्ता)                | - महात्मा गांधी |
| २. बनमानुष की दर्दनाक कहानी (कहानी)               | - प्रेमचंद      |
| ३. छड़ी (कहानी)                                   | - दामोदर खडसे   |
| ४. विक्रमार्क, बुढ़िया और सराय रोहिल्ला (व्यंग्य) | - हरीश नवल      |
| ५. काग़जी बुर्ज (एकल एकांकी)                      | - मीरा कांत     |
| ६. बिन पानी सब सून (व्यंग्य)                      | - नीरज व्यास    |

इकाई ३ :

गद्य-विभाग : पाठ्यपुस्तक : “पारिजात”

- |                 |          |
|-----------------|----------|
| १. सूर के पद    | - सूरदास |
| २. रहीम के दोहे | - रहीम   |

- |                                     |                     |
|-------------------------------------|---------------------|
| ३. कोशिश करनेवालों की हार नहीं होती | - सोहनलाल द्विवेदी  |
| ४. वाणी                             | - सुमित्रानन्दन पंत |
| ५. 'हिंदी' हिंद-हृदय की धड़कन       | - कृष्णकुमार चौबे   |
| ६. देशभक्ति की स्याही               | - सागर खादीवाला     |

इकाई ४ :

अन्य पाठ्य सामग्री :

१. संक्षिप्तीकरण (पदनाम) : पाठ्यपुस्तक में निहित सूची में से पूछे जाएँगे।
२. साक्षात्कार : परिभाषा, उद्देश्य, सतर्कताएँ, सीमाएँ, प्रकार, महत्व।

*(कृष्ण  
(डॉ. इश्वर सोमनाथ))*

### **निर्धारित पाठ्यक्रम**

इकाई १ :

निबंध :

समस्याप्रधान निबंध (ज्वलंत समस्याओं पर आधारित:- जैसे-महामारी, बेरोजगारी, भ्रष्टाचार, आतंकवाद आदि), कल्पनाप्रधान निबंध (यदि मैं शिक्षक होता, यदि परीक्षाएं न होतीं आदि), विश्लेषणात्मक निबंध (ऑन लाइन परीक्षाओं के लाभ और नुकसान, आधुनिक तकनीक/विज्ञान/सोशल मीडिया- वरदान या अभिशाप आदि), वर्णनात्मक निबंध (जनसंचार के नव आयाम (सोशल मीडिया), मेरे स्वप्नों का भारत आदि), विवेचनात्मक निबंध (कहावत/सुविचार प्रधान निबंध)।

इकाई २ :

गद्य-विभाग : पाठ्यपुस्तक : “पारिज्ञात”

१. प्रतिक्रिया : एक जीवन-कसौटी (निबंध) - कन्हैयालाल मिश्र ‘प्रभाकर’
२. चाटुकारिता भी एक कला है - बरसानेलाल चतुर्वेदी  
(व्यंय)
३. बहू की विदा (एकांकी) - विनोद रस्तोगी
४. बकुल! फिर आना (कहानी) - मालती जोशी
५. महाराष्ट्र की सांस्कृतिक परंपरा - सुनील देवधर  
(फीचर लेख)
६. मौन बोली दुनिया की सर्वश्रेष्ठ भाषा - मीनाक्षी जोशी  
(यात्रा-संस्मरण)

### इकाई ३ :

पद्य-विभाग : पाठ्यपुस्तक : “पारिजात”

- |                      |                       |
|----------------------|-----------------------|
| १. बिहारी के दोहे    | - बिहारी              |
| २. जनतंत्र का जन्म   | - रामधारीसिंह ‘दिनकर’ |
| ३. उनको प्रणाम       | - नागार्जुन           |
| ४. चलना हमारा काम है | - शिवमंगल सिंह ‘सुमन’ |
| ५. माँ               | - मधुप पांडेय         |
| ६. सौरभ के फूलों     | - सरोज व्यास          |

### इकाई ४ :

अन्य पाठ्य सामग्री :

- १ संक्षिप्तीकरण (संस्था-संगठनों के नाम) : पाठ्यपुस्तक में निहित सूची में से पूछे जाएँगे।
२. जीवनवृत्त : परिभाषा, प्रारूप, विशेषताएँ, प्रकार।

(दृष्टि  
(डॉ. शिवरामोद्दाश))

राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर

बी. कॉम. द्वितीय वर्ष

विषय : हिंदी

पाठ्यपुस्तक : 'पारिजात'

सत्र-३ (Semester - III)

समय : ३ घंटे

(कुल अंक : ८०)

### प्रश्न-पत्र का प्रारूप एवं अंक विभाजन

- प्रश्न १ - समस्याप्रधान, कल्पनाप्रधान, विश्लेषणात्मक, वर्णनात्मक तथा विवेचनात्मक विषयों पर आधारित निबंध। (किन्हीं चार में से एक विषय पर - शब्द सीमा ४०० तक) अंक-१६
- प्रश्न २ - गद्य-विभाग पर आधारित पाठों में से विकल्प के साथ दीर्घोत्तरी प्रश्न। (दो प्रश्नों में से एक का उत्तर अपेक्षित है।) अंक-१६
- प्रश्न ३ - पद्य-विभाग पर आधारित कविताओं में से विकल्प के साथ दीर्घोत्तरी प्रश्न। (दो प्रश्नों में से एक का उत्तर अपेक्षित है।) अंक-१६
- प्रश्न ४ - तीन प्रश्न गद्य-विभाग पर (जिन पाठों से दीर्घोत्तरी प्रश्न पूछे गये हैं, उन पाठों को छोड़कर) व तीन प्रश्न पद्य-विभाग पर (जिन कविताओं से दीर्घोत्तरी प्रश्न पूछे गये हैं, उन कविताओं को छोड़कर) आधारित कुल छह लघु प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर अपेक्षित हैं।  $4 \times 4$  अंक = अंक-१६
- प्रश्न ५ - इसके अंतर्गत अन्य पाठ्य सामग्री से चार अनिवार्य लघूत्तरी प्रश्न पूछे जायेंगे। प्रथम दो प्रश्न 'साक्षात्कार' से तथा अगले दो प्रश्न 'संक्षिप्तीकरण' (पदनाम) से पूछे जायेंगे। सभी प्रश्नों के उत्तर अपेक्षित हैं।  $4 \times 4$  अंक = अंक-१६

कुल अंक विभाजन

निबंध	-	१६ अंक
गद्य विभाग	-	२४ अंक
पद्य विभाग	-	२४ अंक
अन्य पाठ्य सामग्री	-	१६ अंक
कुल अंक	-	८० अंक
	+	
आंतरिक मूल्यांकन	-	२० अंक (उपस्थिति - ५ अंक, गृहकार्य - ५ अंक, मौखिकी - १० अंक)
कुल अंक	-	१०० अंक

## निर्धारित पाठ्यक्रम

इकाई १ :

निबंध :

समस्याप्रधान निबंध (ज्वलंत समस्याओं पर आधारित:- जैसे-महामारी, बेरोज़गारी, भ्रष्टाचार, आतंकवाद आदि), कल्पनाप्रधान निबंध (यदि मैं शिक्षक होता, यदि परीक्षाएं न होतीं आदि), विश्लेषणात्मक निबंध (आँन लाइन परीक्षाओं के लाभ और नुकसान, आधुनिक तकनीक/विज्ञान/सोशल मीडिया- वरदान या अभिशाप आदि), वर्णनात्मक निबंध (जनसंचार के नव आयाम (सोशल मीडिया), मेरे स्वप्नों का भारत आदि), विवेचनात्मक निबंध (कहावत/सुविचार प्रधान निबंध)।

इकाई २ :

गद्य-विभाग : पाठ्यपुस्तक : “पारिजात”

१. प्रतिक्रिया : एक जीवन-कसौटी (निबंध) - कन्हैयालाल मिश्र ‘प्रभाकर’
२. चाटुकारिता भी एक कला है - बरसानेलाल चतुर्वेदी (व्यंग्य)
३. बहू की विदा (एकांकी) - विनोद रस्तोगी
४. बकुल! फिर आना (कहानी) - मालती जोशी
५. महाराष्ट्र की सांस्कृतिक परंपरा - सुनील देवधर (फीचर लेख)
६. मौन बोली दुनिया की सर्वश्रेष्ठ भाषा - मीनाक्षी जोशी (यात्रा-संस्मरण)

### इकाई ३ :

पद्य-विभाग : पाठ्यपुस्तक : “पारिजात”

- |                      |                       |
|----------------------|-----------------------|
| १. बिहारी के दोहे    | - बिहारी              |
| २. जनतंत्र का जन्म   | - रामधारीसिंह ‘दिनकर’ |
| ३. उनको प्रणाम       | - नागार्जुन           |
| ४. चलना हमारा काम है | - शिवमंगल सिंह ‘सुमन’ |
| ५. माँ               | - मधुप पांडेय         |
| ६. सौरभ के फूलों     | - सरोज व्यास          |

### इकाई ४ :

अन्य पाठ्य सामग्री :

- १ संक्षिप्तीकरण (संस्था-संगठनों के नाम) : पाठ्यपुस्तक में निहित सूची में से पूछे जाएँगे।
२. जीवनवृत्त : परिभाषा, प्रारूप, विशेषताएँ, प्रकार।

(*कृष्ण  
डॉ. शिवरामनाथ*)

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**A Course of Choice Based Credit System**

**Bachelor of Arts**

**Under Graduate -Sanskrit**

**Semester Pattern**

**Compulsory Sanskrit**

for

**B.A. Sanskrit/B.COM. Sanskrit**



**(Faculty of Arts)**

**(From Session 2017-2018)**

**Bachelor of Arts -B.A.SANSKRIT**  
**A Course of Choice Based Credit System**  
**(From Session 2017-2018)**

**A) General**

1. Semesters I<sup>st</sup> (1T) and II<sup>nd</sup> (2T) will be compulsory for B.A. AND B.Com. Part I and Semesters III<sup>rd</sup>(3T) and IV<sup>th</sup> (4T) will be compulsory for B.A. AND B.Com. Part II, Semesters V<sup>th</sup>(5T) and VI<sup>th</sup> (6T) will be compulsory for only B.A. Part III
2. In optional Sanskrit Literature , Semesters I<sup>st</sup> (1T) and II<sup>nd</sup> (2T) will be for B.A. Part I and Semesters III<sup>rd</sup> (3T) and IV<sup>th</sup> (4T) will be for B.A. Part II and Semesters V<sup>th</sup> (5T) and VI<sup>th</sup>(6T) will be for B.A. Part III.
3. Each paper will be of 100 marks, out of which 80 marks will be for University ExaminationAnd 20 marks will be for Internal Assessment.
4. Minimum passing marks for each paper will be 40 and there will not be separate passing in theory and internal assessment.
5. There will be minimum 90 teaching days in each semester.
6. There will be 4 credits in each paper.
7. Credits will be calculated on marks obtained out of 100.
8. Answers will be written in the medium offered –Sanskrit Marathi, Hindi, English

**B) Pattern of Question Paper**

1. There will be 4 units in each paper and short and long questions will be asked from each unit.
2. Duration of examination for each paper will be 3 hours.

**C) Internal Assessment:**

**Total Mark = 100: Theory = 80 +Internal Assessment -20**

**❖ Details of Internal Assessment -20**

**○ Teaching Learning Activity-अध्ययन अध्यापन कार्य**

प्रकल्पकार्य, गृहपाठः, चर्चासत्रम्, संगणकद्वारा दृकशाव्यपाठांशप्रदर्शनम्(पीपीटी)  
घटकपरीक्षणम्, समूहचर्चा, अतिथी . व्याख्यानम्, सांस्कृतिककार्यक्रमसहभागः,  
कार्यशाळा, शैक्षणिक—सहल, संस्कृत—संभाषणम्, आलेख— निर्मिति:

**❖ Question Paper Pattern will be given in Syllabus.**

**❖ Same Teaching Learning Activities will be for Compulsory and Optional  
Sanskrit subject.**

**D) Absorption Scheme:**

- As per Direction No. 13 /2017 or Relevant subject Direction

**RASHTRASANT TUKADOJI MAHARAJ  
NAGPUR UNIVERSITY**

**A Course of Choice Based Credit System  
Bachelor of Arts  
Under Graduate -Sanskrit  
Semester Pattern  
Compulsory Sanskrit  
for  
B.A. Sanskrit/B.COM. Sanskrit**

# B.A. -I / B.Com. -I

## Compulsory Sanskrit (आवश्यक संस्कृतम् )

### Semester I- (1 T)

पूर्णाङ्गका: - १००

लिखितपरीक्षाङ्का: - ८०  
आन्तरिकमूल्यमापनाङ्का:-२०  
अड्डका:

घटक १) संस्कृत पुष्पहारः । रा.तु.म.नागपूर—विद्यापीठ—प्रकाशनम्।	५०
१ — ५ — गद्यपाठः	
१ — ५ — पद्यपाठः	
घटक २) संस्कृतकविपरिचयः- वाल्मिकिः, व्यासः, भासः, अश्वघोषः कालिदासः	१०
भवभूति, भारविः, माघ	
घटक ३) संस्कृतशास्त्रज्ञपरिचयः- चरकः, सुश्रुतः, वाग्भटः	१०
घटक ४) वस्तुनिष्ठप्रश्नाः । ( कवि-शास्त्रज्ञ-परिचयाधारिताः )	१०
आन्तरिकमूल्यमापनाङ्का:-	२०

### Semester II- (2 T)

पूर्णाङ्गका: - १००

लिखितपरीक्षाङ्का: - ८०  
आन्तरिकमूल्यमापनाङ्का:-२०  
अड्डका:

घटक १) संस्कृत पुष्पहारः । रा.तु.म.नागपूर—विद्यापीठ—प्रकाशनम्।	५०
६ — १० — गद्यपाठः	
६ — ११ — पद्यपाठः	
घटक २) संस्कृतकविपरिचयः- श्रीहर्षः, भर्तृहरिः, शूद्रकः, विशाखदत्तः, विष्णु शर्मा,	१०
जगन्नाथ पण्डितः, नीलकण्ठ दीक्षित, डॉ. श्री. भा. वर्णेकर	
घटक ३) संस्कृतशास्त्रज्ञपरिचयः- आर्यभट्टः, वराहमिहिरः भास्कराचार्य (द्वितीय)	१०
घटक ४) वस्तुनिष्ठप्रश्नाः । ( कवि-शास्त्रज्ञ-परिचयाधारिताः )	१०
आन्तरिकमूल्यमापनाङ्का:-	२०
संटर्भग्रन्थाः -	
१.संस्कृत कविदर्शनम्	
२.चौखम्बा सीरीज् वाराणसी	
३.संस्कृत साहित्याचा सोपपत्तिक इतिहास डॉ. कर्बेळकर	
४.संस्कृत शास्त्रों का इतिहास, चौखम्बा सीरीज वाराणसी	

## **B.A. -I / B.Com. -I**

# **Compulsory Sanskrit (आवश्यकं संस्कृतम् )**

## **Semester I- (1 T) & Semester II- (2 T)**

## प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

अड्डका: - 80

( संस्कृत-पुष्पहारः )

### प्रश्न १ अनुवाद कुरुत – अ) गद्यानुवादः

ब) पद्यानुवादः (१ – १)

प्रश्न २ ससन्दर्भ स्पष्टीकरण अ) गद्य वाक्यम् 5

ब) पद्य पंक्ति: (१ – १) 5

### प्रश्न ३ कथां लिखत अथवा दीर्घप्रश्ना:

अ) गद्य 10

ବ) ପଦ୍ୟ (୧ – ୧)

प्रश्न ४ अ) पठितगद्याधारितसंस्कृतप्रश्नाना॑ं उत्तराणि 5

ब) पठितपद्याधारितसंस्कृतप्रश्नाना॑ं उत्तराणि 5

प्रश्न ५ अ) संस्कृतकवींना परिचयं लिखत। (२) 10

ब) शास्त्रज्ञपरिचयं लिखत ।(२) 10

क) वस्तुनिष्ठप्रश्नाः। 10

# B.A. -II / B.Com. -II

## Compulsory Sanskrit (आवश्यक संस्कृतम् )

### Semester III- (3 T)

**पूर्णाङ्गिकाः - १००**

लिखितपरीक्षाङ्गिकाः - ८०  
आन्तरिकमूल्यमापनाङ्गिकाः - २०

घटक १) श्रीमद्भगवद्गीता -अध्याय - २	४०
घटक २) दशोपनिषद् परिचयः (संक्षिप्त -टिप्पणी)	९०
घटक ३) संस्कृत शास्त्रपरिचयः-	९०
घटक ४) वस्तुनिष्ठसंस्कृतप्रश्नाः-	२०
आन्तरिकमूल्यमापनाङ्गिकाः-	२०
<b>संदर्भग्रन्थाः:</b>	
१) श्रीमद्भगवतगीता (स्वामी ब्रह्मस्थानन्द) श्रीरामकृष्णमठ, धन्तोली, नागपूर	
२) संस्कृत नाटके आणि नाटककरार — गो. के. भट, पुणे	
३) संस्कृत व्यवहारसाहस्री — संस्कृत भारती।	
४) पातञ्जल योगसूत्रम् — पतञ्जलीकृत — चौखम्बा सिरीज, वाराणसी.	
५) वास्तुशास्त्र का इतिहास, ईस्टर्न बुक, लिंकर्स, दिल्ली	
६) मयमतम् दानवराजकृत — डॉ. शैलजा पाण्डेय, चौखम्बा सुरभारती प्रकाशन, वाराणसी.	
७) बृहत्संहिता वराहमिहीर, कृषी पाराशार, चौखम्बा सिरीज, वाराणसी.	
८) कौटिल्य अर्थशास्त्र, र. प. कंगले	
९) ग्रामगीतामृतम्, डॉ. श्री. भा. वर्णेकर	

### Semester III- (3 T)

#### प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

<b>श्रीमद्भगवद्गीता</b>	<b>अङ्गाः - ८०</b>
प्रश्न १ श्लोकद्वयस्य अनुवादं कुरुत।	९०
प्रश्न २ पंक्तिद्वयस्य ससन्दर्भ स्पष्टीकरणं कुरुत ।	९०
प्रश्न ३ अ) संक्षिप्त टिप्पणी अथवा श्लोकपूर्तिः	९०
प्रश्न ४ दीर्घोत्तरप्रश्नाः (१)	९०
प्रश्न ५ दशोपनिषद् परिचयः।	
अ) संक्षिप्त टिप्पणी-(२)	९०
ब) शास्त्रपरिचयः - (२)	९०
क) वस्तुनिष्ठसंस्कृतप्रश्नाः।	२०

## **B.A. -II / B.Com. -II**

# **Compulsory Sanskrit (आवश्यकं संस्कृतम् )**

## **Semester IV- (4 T)**

पूर्णाङ्गकाः - १००

लिखितपरीक्षाङ्कः - ८०

## आन्तरिकमूल्यमापनाङ्काः-२०

अड्डका:

- |  |    |
|--|----|
| घटक १) दूतधटोत्कचम् (भासरचितम्)  | ४० |
| घटक २) ग्रामगीतामृतम् - डॉ. श्री.भा.वर्णेकर रचितम् (राष्ट्रसंत तुकडोजी महाराज रचित<br>ग्रामगीतानुवादः) अध्याय-१० (संघटनशक्तिः), १२ (ग्रामशुद्धिः), २० (महिलोन्नतिः) १० |    |
| घटक ३) संस्कृत शास्त्रपरिचयः   | १० |
| १) कृषिशास्त्रम् २) कौटिलीय अर्थशास्त्रम् ३) वास्तुशास्त्रम्   |    |

घटक ४) वस्तुनिष्ठप्रश्नाः २०

## आन्तरिकमूल्यमापनाङ्काः-२०

## Semester IV- (4 T)

## प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

## दूतघटोत्कचम् (भास विरचित )

अड्का: - 80

प्रश्न १ श्लोकद्वयस्य अनुवादं कुरुत ।

१०

प्रश्न २ वाक्यद्वयस्य ससन्दर्भ स्पष्टीकरणं कुरुत । १०

प्रश्न ३ संक्षिप्त टिप्पणीद्वयम् / अथवा चरित्रचित्रणम् । १०

प्रश्न ४ दीर्घोत्तरप्रश्नः(१) 10

प्रश्न ५ ग्रामगीतामृतम्— अ) दीर्घोत्तर प्रश्नः (१), १०

ब) शास्त्रपरिचयः (२), १०

क) वस्तुनिष्ठसंस्कृतप्रश्नाः २०

संदर्भग्रन्थः

- १) श्रीमद्भगवतगीता (स्वामी ब्रह्मस्थानन्द) श्रीरामकृष्णमठ, धन्तोली, नागपूर

२) संस्कृत नाटके आणि नाटककरार – गो. के. भट, पुणे

३) संस्कृत व्यवहारसाहस्री – संस्कृत भारती।

४) पातञ्जल योगसूत्रम् – पतञ्जलीकृत – चौखम्बा सिरीज, वाराणसी.

५) वास्तुशास्त्र का इतिहास, ईस्टर्न बुक, लिंकर्स, दिल्ली

६) मयमतम् दानवराजकृत – डॉ. शैलजा पाण्डेय, चौखम्बा सुरभारती प्रकाशन, वाराणसी.

७) बृहतसंहिता वराहमिहीर, कृषी पाराशर, चौखम्बा सिरीज, वाराणसी.

८) कौटिल्य अर्थशास्त्र, र. प. कंगले १) ग्रामगीतामृतम्, डॉ. श्री. भा. वर्णेकर

# **B.A. -III Compulsory Sanskrit (आवश्यकं संस्कृतम् ) Semester V- (5 T)**

पूर्णाङ्कः - १००

लिखितपरीक्षाङ्काः - ८०  
आन्तरिकमूल्यमापनाङ्काः-२०

अड्का:-८०

80

घटक १) संस्कृतमञ्जरी (रा.तु.म. नागपूर विद्यापीठ प्रकाशनम्)	४०
गद्यपाठः - १-५	
पद्यपाठः - १-५	
घटक २) शुकनासोपदेशः (बाणभट्टकृत-कादम्बरी-कथांशः)	२०
घटक ३) प्राचीन भारतीय शास्त्रपरिचयः -व्याकरणशास्त्रम् (पाणिनी), कोषविद्या (निरुक्तः, अमरकोषः इ.), धर्मशास्त्रम्	९०
घटक ४) वस्तुनिष्ठसंस्कृतप्रश्नाः।	९०
आन्तरिकमूल्यमापनाङ्कः-	२०

**संदर्भग्रंथाः** —

- १) संस्कृत शास्त्रों का इतिहास — बलदेव उपाध्याय, चौखम्बा सीरीज वाराणसी
  - २) नलदर्पणम् — चौखम्बा सीरीज, वाराणसी.
  - ३) संगीतरत्नाकरं, चौखम्बा सीरीज, वाराणसी.
  - ४) भारतीय संस्कृतीकोश, पं. महादेवशास्त्री जोशी, महाराष्ट्र संस्कृती मंडळ, पुणे (खण्ड १ ते १०)
  - ५) कौटिल्य अर्थशास्त्रं, र. प. कंगले
  - ६) विष्णुधर्मोत्तरपुराणः
  - ७) संस्कृत शास्त्रों का इतिहास, डॉ. बलदेव उपाध्याय

## Semester V- (5 T)

## प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

अड्डका: - 80

प्रश्न १ अनुवादं कुरुत अ) गद्य (१) ब) पद्य (१)	१०
प्रश्न २ ससन्दर्भ स्पष्टीकरणं - अ) गद्य (१) ब) पद्य (१)	१०
प्रश्न ३ दीर्घोत्तरप्रश्नाः अ) गद्य (१) ब) पद्य (१)	२०
प्रश्न ४ शुकनासोपदशः- अ) अनुवादं कुरुत ब) दीर्घप्रश्नाः	१०
प्रश्न ५ अ) शास्त्रपरिचयं कुरुत ब) वस्तुनिष्ठसंस्कृतप्रश्नाः	१०

## B.A. -III

### Compulsory Sanskrit (आवश्यक संस्कृतम् )

#### Semester VI- (6 T)

पूर्णाङ्कः - १००

लिखितपरीक्षाङ्कः - ८०  
आन्तरिकमूल्यमापनाङ्कः-२०

अंड़कः-८०

घटक १) संस्कृतमञ्जरी (रा.तु.म. नागपूर विद्यापीठ)	४०
गद्यपाठः - ६-१३	
पद्यपाठः - ६-१३	
घटक २) प्राचीन-भारतीय-कलापरिचयः	२०
१) पाकशास्त्रम् (नलदर्पणम्)                    २) संगीतकला (संगीतरत्नाकरः)	
३) चित्रकला (विष्णुधर्मोत्तरपुराण)          ४) शिल्पकला	
घटक ३) वस्तुनिष्ठसंस्कृतप्रश्नाः	२०
आन्तरिकमूल्यमापनाङ्कः:-	२०
संदर्भग्रन्थाः -	
१) संस्कृत शास्त्रों का इतिहास — बलदेव उपाध्याय, चौखम्बा सीरीज वाराणसी	
२) नलदर्पणम् — चौखम्बा सीरीज, वाराणसी.	
३) संगीतरत्नाकरं, चौखम्बा सिरीज, वाराणसी.	
४) भारतीय संस्कृतीकोश, पं. महादेवशास्त्री जोशी, महाराष्ट्र संस्कृती मंडळ, पुणे (खण्ड १ ते१०)	
५) कौटिल्य अर्थशास्त्रं, र. प. कंगले	
६) विष्णुधर्मोत्तरपुराणः	
७) संस्कृत शास्त्रों का इतिहास, डॉ. बलदेव उपाध्याय	

#### Semester VI- (6 T)

#### प्रश्नपत्रिकास्वरूपः (Question Paper Pattern)

	अंड़कः - ८०
प्रश्न १) अनुवादं कुरुत अ) गद्य (१) ब) पद्य (१)	१०
प्रश्न २) ससन्दर्भ स्पष्टीकरणम् - अ) गद्य (१) ब) पद्य (१)	१०
प्रश्न ३) दीर्घोत्तरप्रश्नाः अ) गद्य (१) ब) पद्य (१)	२०
प्रश्न ४) कलापरिचयं कुरुत। (२) अथवा टिप्पणी लिखत। (२)	२०
प्रश्न ५) वस्तुनिष्ठप्रश्नाः।	२०





## **RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

“(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Universities Act, 1994.)”

### **Directions, Subject Scheme and Syllabus**

**For**

### **Bachelor of Commerce**



**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**

**Direction No. 59 of 2016**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF  
BACHELOR OF COMMERCE (CREDIT BASE SEMISTER PATTERN) FACULTY OF  
COMMERCE**

(Issued under section 14(8) of the Maharashtra University Act 1994)

**WHEREAS**, Maharashtra University act No. xxxv of 1994 has come into force with effect from 22<sup>nd</sup> July 1994 and has been amended from time to time,

AND

**WHEREAS**, the University Grants Commission, New Delhi vide letter no. D.O. No. F-2/2008/(XI Plan), Dated 31<sup>st</sup> January 2008 regarding new initiatives under the XI Plan-Academic reforms in the University has suggested for improving quality of higher education and to initiate the Academic reform at the earliest.

AND

**WHEREAS**, faculty of commerce act its meeting held 14.3.2016 has decided to update the existing syllabus for award of the degree of Bachelor of Commerce commensurate with the curricula existing in the various universities in India and with a view to include the latest trends in the commerce stream as well as to design it to suit to the needs of the industries and corporate houses,

AND

**WHEREAS**, University Grants Commission, New Delhi has prescribed the Model Curriculum for award of the Bachelor degree in the Faculty of commerce and directed to implement the same from the academic session 2016-2017

AND

**WHEREAS**, Chairman of all the Board of Studies in the Faculty of Commerce in their meeting held on 5.4.2016 prepared the Scheme of Credit Based Semester pattern for conduct of the BCom. Examination,

AND

**WHEREAS**, Board of Studies viz. (1) Business Administration and Business Management, (2) Commerce, (3) Accounts and Statistics, (4) Business Economics and (5) Ad-hoc Board in Computer Application in its meetings held on 8.2.2016 respectively updated the existing Syllabi and recommended some modifications in the scheme of examination for graduate courses,

AND

**WHEREAS**, Coordinator of Task Force, Faculty of Commerce has consented to the changes in the syllabus and the scheme of examination for the award of B.Com Degree,

AND

**WHEREAS**, the Vice-Chancellor, Nagpur University, Nagpur approved the recommendations so made by the Special Task Committee in the Faculty of Commerce duly concurred by the Coordinator, Faculty of Commerce as required under Section 38 (a) of the Act on

AND

**WHEREAS**, As per the Advice of the Vice Chancellor, Coordinator, Faculty of Commerce & Coordinator, Special Task Committee in the meeting held on 14.3.2016 constituted sub-committee for syllabus restructuring of B.Com with CBCS pattern.

The Sub-committee submitted the Draft Syllabus of B.Com with CBCS pattern in meeting held on 5.4.2016

AND

**WHEREAS**, ordinance making involve a time consuming process, Now, therefore, I, Dr. S. P. Kane, Vice-Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of the powers vested in me under Section 14(8) of the Maharashtra University Act of 1994 do hereby issue the following direction:

This direction shall be called "**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF BACHELOR OF COMMERCE (CREDIT BASED SEMESTER SYSTEM) FACULTY OF COMMERCE RASHTRASANT TUKDOJI MAHARAJ NAGPURUNIVERSITY,NAGPUR**".

- The Direction shall come into force with effect from the date of its issuance by Honorable Vice-Chancellor.

- The duration of the course shall be of **three** academic years consisting of the **six** semesters with university examination at the end of each semester namely
  - B.Com Semester I Examination
  - B. Com Semester II Examination
  - B. Com Semester III Examination
  - B.Com Semester IV Examination
  - B.Com Semester V Examination
  - B.Com Semester VI Examination

The examination shall be held at such places and on such dates which are notified by the University.

#### **I. ELIGIBILITY TO THE COURSE**

- The duration of B. Com. Course shall be of Three years consisting Semester-I &II in first year ,Semester-III &IV in second year and Semester-V &VI in third year
- Subject to compliance with the provisions of this direction and of other ordinances in force from time to time, an applicant for admission to this course shall have passed the XII Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education, with English at Higher or Lower level and any Modern Indian Language at higher or lower level with any combination of optional subjects;

#### **OR**

- XII Standard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only; OR any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed Minimum Competition vocation course (MCVC).
- 

#### **OR**

#### **Any other Equivalent Examination of any State in (10+2) pattern with English & any combination of subjects**

- The Examinations for Semesters I,II,III,IV , V and VI shall be held twice a year at Such places and on such dates as notified by the University.
- The fees for examination shall be as prescribed by the Rashtrasant Tukdoji Maharaj Nagpur University from time to time.

- Applicant for the examination pursuing the regular course of study leading to the Bachelor Degree in Commerce shall not be permitted to join any other course in this University or any other University simultaneously.
  - **ATKT Rules** for Admission for the B.Com. Course -An unsuccessful examinee at the any semester examination shall be **ALLOWED TO KEEP TERM in accordance to the following table:**

<b>Admission to Semester</b>	<b>Candidate should have filled in the examination form of the R.T.M. Nagpur University</b>	<b>Candidate should have passed at least 50% of the passing heads of following examinations</b>
I Semester	As provided eligibility to the course, as above in the direction.	-
II Semester	of semester I	-
III Semester	-	Semester I and II taken together i.e. 6 heads clear
IV Semester	of semester III	-
V Semester	-	Semester I & II all heads clear& semester III & IV together i.e. 6 heads clear
VI Semester	of semester V	-

**Note- The consideration of passing heads in respect of all the subjects, including languages, includes the University Theory Examination and Internal Assessment/Practical marks taken together for all subjects.**

**For providing teaching facility in the subjects of Foundation and Elective Groups minimum requirement of student is 5.**

## **II. CREDIT SYSTEM OF EVALUATION**

- The B. COM. programme shall consist of **Thirty Six** Papers/Subjects in old terminology

With the issuance of this Direction, The Direction No 46 of 2016 shall stand repealed.

Nagpur:

Sd/-  
( Dr. S.P. Kane )

Dated : 2/9/2016

Vice-Chancellor

**Subjects offered, contact hours, credits attached and allocation of marks shall be as follows:**

## **APPENDIX-I**

**Scheme of teaching and examination under credit based semester system for B.Com Course.**

### **Semester-I**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
1T1	Financial Accounting-I	Uni.	60	80	20	100	4
1T2	Business Organization	Uni.	60	80	20	100	4
1T3	Company Law	Uni.	60	80	20	100	4
1T4	Business Economics-I	Uni.	60	80	20	100	4
1T5	Compulsory English	Uni.	60	80	20	100	4
1T6	Second Language 1T6.1- Supplementary English 1T6.2- Marathi 1T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses : Semester -I**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
1T7	Entrepreneurship Development	60	80	20	-	40	100	4
1T8	2T8.1- Computer Application-II <b>or</b> 2T8.2- Principles and Practice of Insurance-II <b>or</b> 2T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

**Semester-II**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
2T1	Statistics and Business Mathematics	Uni.	60	80	20	100	4
2T2	Business Management	Uni.	60	80	20	100	4
2T3	Secretarial Practice	Uni.	60	80	20	100	4
2T4	Business Economics-II	Uni.	60	80	20	100	4
2T5	Compulsory English	Uni.	60	80	20	100	4
2T6	Second Language 2T6.1- Supplementary English  2T6.2- Marathi  2T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses : Semester -II**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni) Marks	Internal (College) Theory Paper	Practical (Uni) Marks	Practical (PR) Marks		
2T7	Entrepreneurship Development	60	80	20	-	40	100	4
2T8	2T8.1- Computer Application-II <b>or</b> 2T8.2- Principles and Practice of Insurance-II <b>or</b> 2T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

### **Semester-III**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
3T1	Financial Accounting -II	Uni.	60	80	20	100	4
3T2	Business Communication & Management	Uni.	60	80	20	100	4
3T3	Business Law	Uni.	60	80	20	100	4
3T4	Monetary Economics -I	Uni.	60	80	20	100	4
3T5	Compulsory English	Uni.	60	80	20	100	4
3T6	Second Language 3T6.1- Supplementary English  3T6.2- Marathi  3T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi** will be as per the Commerce Language Board.

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin** will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.

**Vocational Courses :Semester-III**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni) Max Marks Theory Paper (TH)	Internal (College) Max Marks (IM)	Practical (Uni) Max Marks Practical (PR)	Min Passing Marks		
3T7	Entrepreneurship Development	60	80	20	-	40	100	4
3T8	3T8.1- Computer Application-II <b>or</b> 3T8.2- Principles and Practice of Insurance-II <b>or</b> 3T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

#### **Semester-IV**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
4T1	Financial Accounting -III	Uni.	60	80	20	100	4
4T2	Skill Development	Uni.	60	80	20	100	4
4T3	Income Tax	Uni.	60	80	20	100	4
4T4	Monetary Economics-II	Uni.	60	80	20	100	4
4T5	Compulsory English	Uni.	60	80	20	100	4
4T6	Second Language 4T6.1- Supplementary English  4T6.2- Marathi  4T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-1. For rest of Indian Languages the code is as per syllabus of B.A. Semester –I**

**2. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Guajarati, Telgu, Bengali, Persian, Arabic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses :Semester-IV**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
4T7	Entrepreneurship Development-IV	60	80	20	-	40	100	4
4T8	4T8.1- Computer Application-IV <b>or</b> 4T8.2- Principles and Practice of Insurance-IV <b>Or</b> 4T8.3- Advertising, Sales Promotion and Sales Management-IV	60	80	20	-	40	100	4

**Semester-V**

Course Code	Subjects	Internal /Uni. Examination	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
5T1	<b>Core Group</b> 1. Financial Accounting- IV 2.Cost Accounting 3.Management Process 4. Indian Economics- I	Uni.	60	80	20	100	4
5T3	5T2	Uni.	60	80	20	100	4
5T4	5T3	Uni.	60	80	20	100	4
5T5	<b>Elective Group -I</b> 5T5.1 Marketing Management <b>OR</b> 5T5.2 Computerized Accounting	Uni.	60	80	20	100	4
5T6	<b>Foundation Group- I</b> 5T6.1 Business Finance -I <b>OR</b> 5T6.2 Auditing	Uni.	60	80	20	100	4
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Vocational Courses :Semester-V**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
5T7	Entrepreneurship Development-V	60	80	20	-	40	100	4
5T8	5T8.1  Computer Application-V  <b>Or</b>  5T8.2  Principles and Practice of Insurance-V  <b>Or</b>  5T8.3  Advertising, Sales Promotion and Sales Management-V	60	80	20	-	40	100	4

**Semester-VI**

Course Code	Subjects	University Examination	Total Interna l /Hours	Marks			Credits
				Semester End Exam.	Internal Assessm ent	Total Marks	
6T1	<b>Core Group</b>  1. Financial Accounting -V	Uni.	60	80	20	100	4
6T2	2.Management Accounting	Uni.	60	80	20	100	4
6T3	3.Advanced Statistics	Uni.	60	80	20	100	4
6T4	4. Indian Economics - II	Uni.	60	80	20	100	4
6T5	<b>Elective Group-II</b> 6T5.1 Human Resource Management <b>OR</b> 6T5.2- Indirect Tax	Uni.	60	80	20	100	4
6T6	<b>Foundation Group- II</b> 6T6.1 Business Finance - II <b>OR</b> 6T6.2 Industrial Law	Uni.	60	80	20	100	4
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Vocational Courses :Semester-VI**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
6T7	Entrepreneurship Development-VI	60	80	20	-	40	100	4
6T8	6T8.1  Computer Application-VI  <b>Or</b>  6T8.2  Principles and Practice of Insurance-VI  <b>Or</b>  6T8.3  Advertising, Sales Promotion and Sales Management-VI	60	80	20	-	40	100	4

### **III Choice of Vocational Courses :**

Apart from doing General B.Com, students can opt for vocational courses in B. Com as under :

- **Vocational subjects:** The various vocational courses (mainly sponsored by UGC) which can be chosen by the students are given below. As per the UGC letter no. F.9-3/95 (Desk-VE) dated 23.12.1999 a course for **Entrepreneurial Development is compulsory** for students opting for vocational subjects. Thus with every vocational subject there will be one paper of Entrepreneurship Development.

#### **Group -I - Computer Applications**

- I. Entrepreneurship Development- Paper-I
- II. Computer Applications  
(2 papers in each year i.e. 6 papers in 3 years)

#### **Group -II - Principles and Practice of Insurance**

- I. Entrepreneurship Development- Paper-I
- II. Principles and Practice of Insurance  
(2 papers in each year i.e. 6 papers in 3 years)

#### **Group -III - Advertising, Sales Promotion And Sales Management**

- I. Entrepreneurship Development- Paper-I
- II. Advertising, Sales Promotion And Sales Management  
(2 papers in each year i.e. 6 papers in 3 years)

#### **NOTE :**

Students opting for UGC Vocational subject (any one group of the two mentioned above) may select the same in lieu of following mentioned subjects in the respective Semester.

#### **B.Com. Semester-I :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Company Law

#### **B.Com. Semester-II :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Secretarial Practice

#### **B.Com. Semester-III :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Business Communication and Management

#### **B.Com. Semester-IV :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Skill Development

#### **B.Com. Semester-V :**

- a. Core Group-I
- b. Elective Group-I

#### **B.Com. Semester-VI :**

- a. Core Group-II
- b. Elective Group-II

### **Summary of the Total Marks and Credits**

<u>Sr. No.</u>		<u>Instruction Hours</u>	Total Marks ) Semester End Exam.	Credits
1	Semester—I	360	600	24
2	Semester—II	360	600	24
3	Semester—III	360	600	24
4	Semester—IV	360	600	24
5	Semester—V	360	600	24
6	Semester—VI	360	600	24
<b>Total</b>		2160	3600	144

- The Semester End written examination of all subjects shall be conducted by the University.

### **B.COM. Examination Semester—I**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting – I	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
2. Business Organization	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
3. Company Law	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
4. Business Economics-I	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	<i>University Theory Examination</i>	80	
	Internal Assessment	20	

	Total	100	40
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

### B.COM. Examination Semester-II

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Statistics &.Business mathematics	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Business Organization	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Company Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4. Business Economics-II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

**B..COM. Examination Semester-III**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting -II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Business Communication and Management	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Business Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4.Monetary Economics-I	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6.Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

**B..COM. Examination Semester-IV**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting – III	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Skill Development	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Income Tax	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4. Monetary Economics-II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

## B.COM. Examination Semester-V

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
<b>Group</b> <b>1. Financial Accounting-IV</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>2. Management Accounting</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>3. Management Process</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>4. Indian Economics- I</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>5. Elective Group-I</b> Marketing Management <b>OR</b> Computerized Accounting.	University Theory Examination	<b>80</b>	40
	Internal Assessment	20	
	Total	100	
<b>6. Foundation Group- I</b> Business Finance -I <b>OR</b> Auditing	University Theory Examination	<b>80</b>	40
	Internal Assessment	20	
	Total	100	
<b>Total</b>		<b>600</b>	<b>240</b>

## B.COM. Examination Semester–VI

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks ( Combined)
<b>Group</b>	University Theory Examination	80	
1.Financial Accounting -V	Internal Assessment	20	40
	Total	100	
2.Cost Accounting	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
3. Advanced Statistics	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
4. Indian Economics-II	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
<b>3. Elective Group-II</b> Human Resource Management <b>OR</b> Indirect Tax	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>4. Foundation Group- II</b> Business Finance –II <b>OR</b> Industrial Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>Total</b>		<b>600</b>	<b>240</b>

## **APPENDIX-II**

### **I. GENERAL RULES AND REGULATIONS**

The scope of the subject, percentage of passing in theory will be governed as per following rules:

- In order to pass at the Semester I, II, III & IV examinations an examinee shall obtain not less than 40% marks in each paper. This is to say that out of total 100 marks student should score 40 marks jointly in university examination (80 Marks) and internal examination (20 marks).
- The results of successful candidates at the end of semester-VI shall be classified on the basis of aggregate marks obtained in all the six semesters.
- The candidates who pass all the semester examinations in the first attempt are eligible for ranks.
- The results of the candidates who have passed the Semester-VI examination but not passed the lower semester examinations shall be declared as NCL (not completed lower semester examinations). Such candidates shall be eligible for the Degree only after successful completion of all the lower semester examinations.
- Percentage of marks for declaring class:  
Distinction- 75% and above (First Class With Distinction).  
First Class- 60% and above  
Second Class 45% and above but less than 60%.  
Third Class 40% but not less than 45%
- An unsuccessful examinee at the any semester wise end examination shall be eligible for re-examination on payment of a fresh Examination fee prescribed by the University.

### **II.TEACHING NORMS FOR THEORY PAPERS**

- For all Theory Papers there shall be **FIVE Periods Per week per Subject of 48 Minutes duration** each. Each Theory Paper must cover minimum 60 Clock Hours of Teaching and 360Clock Hours for semester I, II, III IV, V & VI form awl the 6 papers and One Credit, subject of Theory will be of 1 Clock Hour
- No person shall be admitted to this Programme, if he has already passed the same Programme or an Programme of any other statutory University (which has been recognized as equivalent to this programme.)
- A candidate who fails in any of the semester examinations may be permitted to take the examinations again at a subsequent appearance as per the syllabus and scheme of

examination in vogue at the time the candidate took the examination for the first time. This facility shall be limited to the following two years i.e. 4 more attempts.

- Examinee successful at the Semester I, II, III, IV, V and VI examinations shall, on payment of the prescribed fee, receive a Degree in the prescribed form signed by the Vice-Chancellor.
- Qualification of Teacher shall be as per U.G.C. and State Government norms.

**APPENDIX- III**  
**Rashtrasant Tukdoji Maharaj Nagpur University**

**I. SUBJECTS FOR B.Com. EXAMINATION**

**Semester-I**

1. 1T1-Financial Accounting-I
2. 1T2- Business Organization
3.1T3 Company Law
4. 1T4 Business Economics -I
5.1T5 Compulsory English
6.1T6 Second Language

**Semester-II**

1. 2T1 Statistics and Business Mathematics
2. 2T2 Business Management
3. 2T3 Secretarial Practice
4. 2T4 Business Economics -II
5.2T5 Compulsory English
6.2T6 Second Language

**Semester-III**

1. 3T1 Financial Accounting-II
2. 3T2 Business Communication and Management
3. 3T3 Business Law
4. 3T4 Monetary Economics -I
5.3T5. Compulsory English
6. 3T6 Second Language

**Semester-IV**

1. 4T1 Financial Accounting-III
2. 4T2 Skill Development.
3. 4T3 Income Tax
4. 4T4 Monetary Economics -II
5. 4T5 Compulsory English
6.4T6 Second Language

**Semester-V**

<b>Core Group</b>	1. 5T1 Financial Accounting IV
	2.5T2 Management Accounting
	3. 5T3 Management Process
	4. 5T4 Indian Economics-I
<b>Elective Group-I</b>	5. 5T5 .1 Marketing Management <b>OR</b> <b>5T5.2 Computerizes Accounting</b>
<b>Foundation Group I</b>	6. 5T6.1 Business Finance 1 <b>OR</b> 5T6.2 Auditing

**Semester-VI**

<b>Core Group</b>	1.6T1 Financial Accounting -V
	2. 6T2 Cost Accounting
	3.6T3 Advanced Statistics
	4. 6T4 Indian Economics-II
<b>Elective Group-II</b>	5. 6T5.1 Human Resource Management <b>OR</b> 6T5.2 Indirect Tax
<b>Foundation Group II</b>	6. 6T6.1 Business Finance-II <b>OR</b> 6T6.2 Industrial Law

## Workload

**Workload Chart (70 periods per week) (Odd Semesters) ( July to November )**

B. Com. Semester - I			B. Com. Semester – III			B. Com. Semester – V		
S. No.	Subjects	N/o. of Periods	S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods
1.	Financial Accounting-I	5	1.	Financial Accounting-II	5	1.	Core Group 1. Financial Accounting IV	5
2.	Business Organization	5	2.	Business Communication and Management	5	2 3 4.	Management Accounting Management Process Indian Economics	5
3	Company Law	5	3.	Business Law	5	5.	Elective Group - I Marketing Management <b>OR</b> Computerized Accounting	5
4.	Business Economics -I	5	4.	Monetary Economics -I	5	6.	Foundation Group - I Business Finance -I <b>OR</b> Auditing	5
<b>Total Periods</b>		<b>20</b>	<b>Total Periods</b>		<b>20</b>	<b>Total Periods</b>		<b>30</b>

**Workload Chart (70 periods per week)(Even Semesters)**

**( December to April)**

B. Com. Semester - II			B. Com. Semester – IV			B. Com. Semester – VI		
S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods
1.	Statistics and Business Mathematics	5	1.	Financial Accounting-III	5	1.	Core Group Financial Accounting-V	5
2.	Business Management	5	2.	Skill Development.	5	2.	Cost Accounting	5
						3.	Advanced Statistics	5
						4.	Indian Economics-II	5
3.	Secretarial Practice	5	3.	Income Tax	5	5.	Elective Group-I Human Resource Management OR Indirect Tax	5
4.	Business Economics – II	5	4.	Monetary Economics –II	5	6.	Foundation Group- I Business Finance-II OR Industrial Law	5
<b>Total Periods</b>		<b>20</b>			<b>20</b>			<b>30</b>

**WEEKLY Workload Chart ( LANGUAGES ) ( For Semesters I, II, III & IV)**

<b>SUBJECT(S)</b>		<b>PERIODS</b>
<b>1.</b>	<b>Compulsory English</b>	<b>5 PERIODS OF THEORY</b> + <b>1 PERIOD OF TUTORIAL FOR A BATCH OF 20 STUDENTS</b>
<b>2.</b>	<b>Second Language - Supplementary English/ Hindi/ Marathi/ Sanskrit etc.</b>	<b>5 PERIODS OF THEORY</b>

**II. CONVERSION OF MARKS TO GRADES AND CALCULATIONS OF GPA (GRADE**

**POINT AVERAGE) AND CGPA (CUMULATIVE GRADE POINT AVERAGE) :**

In the Credit and Grade Point System, the assessment of individual Subjects in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grades by some mechanism wherein the overall performance of the Learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of Grade. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviations and formulae used are as follows:-

**Abbreviations and Formulae Used**

G : Grade

GP : Grade Points

C : Credits

CP : Credit Points

CG : Credits X Grades (Product of credits & Grades)

SGPA =  $\Sigma CG / \Sigma C$ : Sum of Product of Credits & Grades points /  $\Sigma C$ : Sum of Credits points

SGPA : Semester Grade Point Average shall be calculated for individual semesters. (It is also designated as GPA)

CGPA : Cumulative Grade Point Average shall be calculated for the entire Programme by considering all the semesters taken together.

While calculating the CG the value of Grade Point 1 shall be consider Zero (0) in case of learners who failed in the concerned course/s i.e. obtained the marks below 40. After calculating the SGPA for an individual semester and the CGPA for entire programme, the value can be matched with the grade in the Grade Point table as per the Five (05) Points Grading System and expressed as a single designated GRADE such as O,A,B,C, F. (Fail).

Marks	Grade	Grade Points
75& above	O (Outstanding)	10
60-74	A (Very Good)	09
45-59	B (Good)	08
40-44	C (Average)	07
39& Below	F (Fail)	00

CGPA	Grade	Division
<b>10</b>	O (Outstanding)	<b>Distinction</b>
<b>9-10</b>	A(Very Good)	<b>First</b>
<b>8-9</b>	B (Good)	<b>Second</b>
<b>7-8</b>	C (Average)	<b>Third</b>

**Note:** -

- Consider Grade Points equal to Zero for (C x G) calculations of failed Learner/s in the concerned course/s.

#### **The illustration for the conversion of marks into grades in a course and semester Illustrations of Calculation:- Pass**

Subjects	Total Maximum Marks	Total Minimum Marks	Total Marks Obtained	Grade(G)	Grade points (GP)	Credit of the Course(C)	(Credit) X (Grade points)( CX GP)	SGPA=ΣCG/ΣC
C-11	100	40	60	A	9	4	36	<b>SGPA</b> $=208/24$ $=8.67$ <b>Grade B</b> <b>RESULT</b> <b>=PASS</b>
C-12	100	40	50	B	8	4	32	
C-13	100	40	75	O	10	4	40	
C-14	100	40	70	A	9	4	36	
C-15	100	40	48	B	8	4	32	
C-16	<b>100</b>	<b>40</b>	<b>52</b>	<b>B</b>	<b>8</b>	<b>4</b>	<b>32</b>	
<b>Total</b>	<b>600</b>	<b>240</b>	<b>355</b>	--	<b>48</b>	<b>24</b>	<b>208</b>	

#### **Illustrations of Calculation:- Fail**

Subjects	Total Maximum Marks	Total Marks Obtained	Grade(G)	Grade points(GP)	Credit of the Course(C)	(Credit) X (Grade points)( CX GP)	SGPA=ΣCG/ΣC
C-31	100	32	F	0	4	00	<b>SGPA</b> $=102/24$ $=4.24$ <b>Grade</b> <b>FRESUL</b> <b>T</b> <b>-F A II</b>
C-32	100	34	F	0	4	00	
C-33	100	60	B	8	4	32	
C-34	100	75	O	10	4	40	
C-35	100	33	F	0	4	00	
<b>C-36</b>	<b>100</b>	<b>55</b>	<b>B</b>	<b>8</b>	<b>4</b>	<b>32</b>	
<b>Total</b>	<b>600</b>	<b>304</b>	--	<b>26</b>	<b>24</b>	<b>102</b>	

Provision of Direction No.44 of 2001 governing the award of grace marks for passing an examination, securing higher Grades shall apply to the examination

### **III. GUIDELINES FOR SETTING QUESTION PAPERS:**

- .The question paper should be set in such a manner so as to cover the complete syllabus as prescribed by the University.
- .The numerical questions in any of the subjects shall be set in ENGLISH only and the candidate shall have to answer such questions in ENGLISH only. The candidate may answer non-numerical questions in ENGLISH, MARATHI or HINDI.
- The duration of the Semester wise End Examination shall be **3.00** Hours per course.

## **ABSORPTION SCHEME –I**

### **Bachelor of Commerce (B.Com)(Old Course Before 2013-2014)**

It is notified for general information of all concerned that the failure students of **Bachelor of Commerce (B.Com) OLD course** shall be absorbed in the **New course** introduced from the session 2014-2015 examination with the following scheme.

1. Those who have completed & passed **B.Com Part - I as per Old course** are eligible for admission in the **B.Com Part - II New course**.
2. Failure students of **B.Com Part - I old course** and having ATKT as per rules are eligible to take admission in **B.Com Part-II New course**. They should clear their **B.Com Part - I old course backlog** papers in next **three attempts (Last Chance Winter 2016)**. If they fail to pass in **Winter-2016** attempt they will have to appear in parallel papers of **New course**

**Scheme** as per absorption scheme indicated in Appendix- I.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheetofB.Com Part - I**.

3. Those who have completed & passed **B.Com Part - I & B.Com Part -II as per Old course** are eligible for admission in the **B.Com Part - III**

**New course.**

4. Failure students of **B.Com Part - II old course** and having ATKT as per rules are eligible to take admission in **B.Com Part-III New course**. They should clear their **B.Com Part - II old course backlog** papers in next **three attempts (Last Chance Winter 2017)**. If they fail to pass in **Winter-2017** attempt they will have to appear in parallel papers of **New course**

**Scheme** as per absorption scheme indicated in Appendix- II.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheetofB.Com Part - II**.

5. Failure students of **B.Com Part-III old course** are having chances up to **Winter 2018** examination (**Last Chance**). So they should appear **B.Com Part-III old course examination &are required to clear their backlog**. After that those who will have backlog in the **B.Com Part-III old course** will have to appear in parallel papers of **New course scheme** as per the absorption scheme indicated in Appendix- III.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in old course mark sheet of **B.Com Part-III.**

6. The students opted for UGC vocational subjects in **B.Com (old course)** & failed will have to appear in respective vocational paper of **B.Com (new course)** as indicated in Appendix – IV.

#### Appendix- I B.Com Part- I

Sr. No	<b>Old course Before 2013-2014</b>	<b>Max. Marks</b>	Sr.No.	<b>New Course from 2014-2015</b>	<b>Max. Marks</b>
				<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – I	100	3	Financial Accounting - I	100
4	Basics of Computer & Statistical Techniques	100	4	Fundamentals of Statistics & Computer	100
5	Principles of business Management	100	5	Principles of Management	100
6	Business Economics	100	6	Business Economics	100
7	Optional Paper - I (Any Group)	100	7	Company Law & Secretarial Practice (CLSP)	100

**Appendix- II B.Com Part-II**

Sr.N o.	Old course Before 2013-2014	Max. Marks	Sr.No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – II	100	3	Financial Accounting - II	100
4	Cost & Management Accounting	100	4	Cost & Management Accounting	100
5	Company Law & Secretarial Practice	100	5	Business and Industrial Law	100
6	Monetary Economics	100	6	Monetary Economics	100
7	Optional Paper - II (Any Group)	100	7	Business Communication	80

**Appendix- III B.Com Part-III**

Sr.No . .	Old course Before 2013-2014	Max. Marks . .	Sr.No	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Financial Accounts & Auditing – III	100	1	Financial Accounting – III	100
2	Income Tax	100	2	Income Tax & Auditing	100
3	Business Law	100	3	Business Finance	100
4	Business Communication & Management	100	4	Functional Management	100
5	Indian Economics	100	5	Indian Economy	100
6	Optional Paper - III (Any Group)	100	6	Computerized Accounting	80

## Appendix- IV

### B.Com Part- I ( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Marks	Sr No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70
4	Group IV. Computer Applications MIS & IT – I	70	4	Group IV. Computer Applications Information Technology & MIS (IT & MIS)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70
6	Entrepreneurship Development – I	70	6	Entrepreneurship Development – I	70

B.Com Part- II ( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Mark s	Sr No.	New Course from 2014-2015	Max. Mark s
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice-II	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- II	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70
4	Group IV. Computer Applications MIS & IT – II	70	4	Group IV. Computer Applications Visual Basic & DBMS (VB & DBMS)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70
6	Entrepreneurship Development – II	70	6	Entrepreneurship Development – II	70

B.Com Part-III  
( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Marks	Sr No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70
4	Group IV. Computer Applications MIS & IT – III	70	4	Group IV. Computer Applications E-Commerce & Web Development (EWD)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70
6	Entrepreneurship Development – III	70	6	Entrepreneurship Development – III	70

## **ABSORPTION SCHEME –II (Old Course 2014-2015 & New Course 2016-2017)**

Bachelor of Commerce (B.Com)(Old Course 2014-2015) The students of B. Com course of 2014-2015 who are not eligible for getting admission in B. Com part- II from B. Com part-I as per prevailing ATKT rules shall have to pass in the subjects given in the absorption scheme as below.

After becoming eligible they will be admitted in Semester III of CBCS2016-2017

Similarly, those students who are not eligible for getting admission in B. Com part-III from B. Com-II shall have to pass in the subjects given in the absorption scheme II as below. After becoming eligible they will be admitted in semester V of CBCS 2016-2017.

Only three attempts of successive examination shall be given to such students

For example- If the student fails in B. Com part –I in summer 2016 shall get winter 2016, Summer 2017, and Winter 2017 attempts only

### **Appendix- I B.Com Part- I**

Sr. No	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
				Theory	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – I	100	3	Financial Accounting - I	100
4	Fundamentals of Statistics & Computer	100	4	Statistics & Business Mathematics	100
5	Principles of business Management	100	5	Business of Management	100
6	Business Economics	100	6	Business Economics-I	100
7.	Company Law & Secretarial Practice(CLSP)	100	7	Company Law	100

**Appendix- II B.Com Part-II**

Sr.N o.	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II nd Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II nd Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting - II	100	3	Financial Accounting - II	100
4	Cost & Management Accounting	100	4	Cost Accounting	100
5	Business Communication	100	5	Business Communication & Management	100
6	Monetary Economics	100	6	Monetary Economics-I	100
7.	Business & Industrial Law	100	7	Business Law	100

**Appendix- III B.Com Part-III**

Sr.No.	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Financial Accounts – III	100	1	Financial Accounting – III	100
2	Income Tax& Auditing	100	2	Auditing	100
3	Functional Management	100	3	Management Process	100
4	Indian economy	100	4	Indian Economics -I	100
5	Business Finance	100	5	Business Finance - I	100
6	Computerized Accounting	80	6	Computerized Accounting	100

## Appendix- IV

### B.Com Part- I (Vocational Subjects)

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70	1	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70	2	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70
4	Group IV. Computer Applications MIS & IT – I	70	4	Group IV. Computer Applications Fundamentals of Information Technology (FIT )	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
6	Entrepreneurship Development – I	70	6	Entrepreneurship Development – I	70

B.Com Part- II \_\_\_\_\_ ( Vocational Subjects )

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70	1	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice-II	70	2	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70	3	<b>Advertising, Sales Promotion and Sales Management.</b> <b>Advertising, Sales Promotion and Sales Management – II</b>	70
4	Group IV. Computer Applications MIS & IT – II	70	4	Computer application- Software Packages (Word & Excel)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70	5	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
6	Entrepreneurship Development – II	70	6	Entrepreneurship Development – II	70

B.Com Part-III  
(Vocational Subjects)

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	Theory			Theory	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70	1	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70	2	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70	3	<b>Advertising, Sales Promotion and Sales Management.</b> <b>Advertising, Sales Promotion and Sales Management. III</b>	70
4	Group IV. Computer Applications MIS & IT – III	70	4	Group IV. Computer Applications Web Designing using HTML (WD)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70	5	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
6	Entrepreneurship Development – III	70	6	Entrepreneurship Development – III	70

The students of old course shall be given 03 attempts to pass their examination with old course starting from implementation of New Course.

***Proposed New syllabus For B. Com***  
From the Academic session 2016-2017  
**B.Com. – First Year**  
**Semester-I**  
**1T1: Financial Accounting-I**

**Unit – I Financial Accounting**

Meaning, objectives and principles of Accounting, Accounting concepts & Conventions, Accounting Standards- AS 1 to AS 10. Final accounts of Sole Traders. (**Theory & Numerical**)

**Unit – II Hire Purchase Accounts**

Meaning of Hire Purchase Accounts, Features, Merits and Demerits of Hire Purchase System, Distinction between Hire Purchase and Instalment System.

(**Theory & Numerical Excluding Instalment System and Repossession of Assets**)

**Unit – III**

**Final Accounts of Co - Operative Societies:** ( As per Maharashtra Co-Operative Societies Act 1960)- Introduction, Types of Co-operative societies Preparation of Trading & Profit and Loss A/C and Balance Sheet. (**Theory & Numerical**)

**Unit – IV**

**Joint Venture Accounts**

Meaning, Distinction between Joint venture and Partnership, Methods of joint venture accounting. (**Theory & Numerical on Centralized & Decentralized Method**)

**The Financial year ends on 31<sup>st</sup> March.**

**Reference Books :**

- S. N. Maheshwari :- Financial Accounting – Vikas Publishing House, New Delhi.
- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons.
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House.
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi).
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana).
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata).
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers).
- M. A. Arulnandam :- Advance Accounting – Himalay Publication
- Gulhane, Navghare And Others- Financial Accounting –I, Sheth Publishers Pvt. Ltd. Mumbai.
- Prof. PradeepWath, Dr. R. D. Mehta, Dr. DilipGotmare :- Financial Accounting– Payal Pakashan.
- Advanced Accounts (volume –I), M. C. Shukla, T.S. Grewal, Revised by S. C. Gupta. S, Chand Publishing.

## **1T1-Financial Accounting – I**

# Paper Pattern

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

OR

## **Q. No. 2 – Unit II**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

**OR**

### **Q. No. 3 – Unit III**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

**OR**

### **Q. No. 4 – Unit I**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

OR

### **Q. No. 5**

- a) Unit- I Problem 04 Marks
  - b) Unit -II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

## **1T2: Business Organization**

### **Unit – I**

Nature and scope of business: Meaning and definition of business, characteristics, objectives of business, classification of business activities, Industry, Service, Commerce & Trade. Social Responsibility of Business towards different groups.

### **Unit – II**

**Forms of Business Units:** Meaning, Characteristics, Advantages and Disadvantages of Sole Trader, Partnership, One Person Company, Private Company, Joint Stock Company- Concept, Classification, Service sector business: - meaning, types including BPO and KPO, advantage its role in economy

### **Unit - III**

**Organization:** Meaning, Definition ,Concept and functions of Organization, Principles of Organization, Types of Organization- Line and Staff, Modern types of organizations- Project, Matrix, Formal and Informal Organization, Advantages and Disadvantages.

### **Unit IV**

**Recent Trends in Business Organization:** Internal constituents of the Business Organization; key managerial personnel (KMP); chairman- qualities of a chairman, powers, responsibilities and duties of a chairman; chief executive officer (CEO), role and responsibilities of the CEO; E-commerce, E-business, E-banking.

### **Suggested Books:**

1. Jain, Khushpat S : Business Organisation,Mumbai
2. C.P Bose: Business Organisation & Management
3. Sekhri, Arun : Organisation, MUMBAI, Himalaya Publishing House, 2014
4. P.C.Jain: Government and business policy,Galgotia Publishing Com.New Delhi
5. Gulhane, Chopade Choudhary- Business Organization, Sheth Publishers Pvt. Ltd. Mumbai.
6. 'kekZ] ,l-y- % O;kolkf;d laxBu] jes'k cwd fMiks] ubZ fnYyh
7. oekZ] ;ksxsUnzizlkn % O;kolkf;d laxBu izca/k ,oa iz'kklu] ,l-pkUn ,aM da-
8. Dr. A. Shende, Dr. M Dixit& Dr. D. Mohture, Business Organization, Anuradha Prakashan Nagpur.

**QUESTION PAPER PATTERN**  
**BCOM – I : SEMESTER I**  
**1T2-Business Organisation**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **1T3: Company Law**

**Level of Knowledge:** - Basic Conceptual Knowledge.

**Objective:** To make aware the students with basic concept of company law  
[The Company Act 2013 with Amendments up to June 2016]

### **UNIT - I**

- (i) Background of New Company Act 2013.
- (ii) Corporate Personality – Company, Meaning of Company, Characteristics of a Company, Lifting of Corporate Veil
- (iii) Kinds of Company- Private Company, Public Company, Company limited by Share, Company Limited by guarantee, Unlimited Company, Association not for profit, Government Company, Foreign Company, Holding and Subsidiary and associate company with features of all kinds of company.
- (iv) Promotion and incorporation of company- stages in formation and incorporation of company, registration and commencement of business, Certificate of Incorporation

### **UNIT - II**

- (i) Memorandum of Association- Meaning, Definition, Importance and Content of Memorandum of Association.
- (ii) Articles of Association – Meaning, Definition, Importance and content of Articles of association.
- (iii) Private Placement and Prospectus: Meaning and definition of private placement and prospectus, public offer, types of prospectus- Deemed prospectus, Shelf prospectus, Red Herring Prospectus, Abridge prospectus.
- (iv) Misrepresentation in prospectus, Consequences of misrepresentation and remedies for misrepresentation in prospectus.

### **UNIT- III**

- (i) Share and share capital- Meaning and nature of capital and share capital, kinds of share- equity, preference, sweat equity, bonus, employee stock option scheme, and Right issue.
- (ii) Debt Capital (Borrowing and Debenture)- Meaning and nature of debt and debt capital, Types of different types of borrowing
- (iii) Difference between- Share and debenture, owned capital and debt capital.
- (iv) Depositories and dematerialization of securities- meaning and nature of depositories, procedure of dematerialization of securities.

### **UNIT – IV**

- (i) Membership in a company – Meaning of shareholder and member, distinction between shareholder and member, kinds of member.
- (ii) Procedure to become member and shareholder of a company, Concept of Transfer and Transmission of Securities (Share and Debenture)
- (iii) Directors – Meaning, Appointment, Power and Duties, Managing Director and Whole Time Director – Appointment and Qualification.

(iv) Concept of Small Shareholders Director, Women Director, Resident Director and Independent Director,Auditor – Meaning, Appointment and Removal

**Reference Books:**

- Company Law By Ashok K. Bagrial; , Vikas Publication House
- Company Law And Practice, Ratan Nolakha: Vikas Publication House
- Business Law Including Company Law, Gulshan, S S and Kapoor, G K , New Age International (P) Ltd., Publishers.
- Company Law - A comprehensive Textbook on New Companies Act 2013 , Kapoor G.K. and Dhamija Sanjay: Tazman Publication
- Company Law & Secretaria lPractice- Appannaian Reddy, Prabhudev, Himalaya Publishing House
- Faroq Haque Company Law., Sheth Publishers Pvt. Ltd. Mumbai
- Company Law Dr. A . Shende, Dr. R. Ingole, Anuradha Prakashan, Nagpur
- Company Law and Secretarial Practice- Dr. R.K. Nelakha, Ramesh Book Depot, Jaipur, New Delhi.
- Secretarial Practice & Company Law- Arunkumar, Rachana Sharma- Atlantic Publishers and Distributors
- A Text Book of Company Law & Corporate Law) P.P.S.Gogna, S. Chand Publishing.

**QUESTION PAPER PATTERN**  
**1T3-COMPANY LAW**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **1T4: Business Economics – I**

### **Unit I: Nature and Scope of Business Economics**

Business Economics-Meaning, scope and objectives of business economics. Nature and types of business decisions. Role and social responsibility of business & business economist. Micro and Macro Economics- Definition, scope, merits and demerits.

### **Unit II: Theory of Consumption**

Law of Demand, Demand determinants, Changes in demand, Indifference Curve Concept- Definition, properties, importance of indifference curves. Elasticity of Demand- Concept, definition, kinds, measurement of elasticity of demand, Factors influencing elasticity of demand, Importance of elasticity of demand. Demand Forecasting- Meaning, need, importance, methods of demand forecasting.

### **Unit III: Theory of Production**

Concept of Production Function- Concept, definition, Types of Products, Total Production, Average Production, Marginal Production. Law of Variable Proportions- Assumptions, significance & limitations. Isoquant Curves- Definition, general properties of Isoquant curves, Expansion Path. Law of Returns to Scale, Internal and External Economies and Diseconomies of Scale, Ridge Lines. Theories of Population - Malthusian Theory of Population, Optimum Theory of Population, Demographic Transition Theory of Population and Criticisms. Law of Supply.

### **Unit IV- Theory of Cost and Revenue**

Law of Supply & Criticisms, Factors influencing supply. Concept of Cost in the Short & Long Run- Accounting Cost, Economic Cost, Opportunity Cost, Fixed Cost, Variable Cost, Direct and Indirect Costs, Real Cost, Explicit & Implicit Costs, Money Cost, Total Cost, Average Cost, Marginal Cost, Selling Costs. Revenues - Total Revenue, Average Revenue, Marginal Revenue and their Relationship.

### **Books Recommended:**

1. Business Economics ,V.G. Mankar, Himalaya Publication House.
2. Business Economics, H.L.Ahuja, S.Chand Publishing
3. Business Economics, Dr. A. shende, Dr. D. Mohture, Dr. Dixit,  
Dr. R. Gan, Anuradha Prakashan Nagpur
4. Micro Economics, P.N.Chopra, Kalyani Publishers.
5. Micro Economics, D.D.Chaturvedi, Galgotia Publishing Company.
6. Principles of Economics, D.M.Mithani, Himalaya Publishing House.
7. Advance Micro Economic Theory, M.Maria John Kennedy, Himalaya Publishing House.
8. Business Economics, Rashi Arora, Sheth Publishers, Mumbai
9. Business Economics, Dr. Samudra, Sai Jyoti Prakashan

**QUESTION PAPER PATTERN**  
**BCOM – I : SEMESTER I**  
**1T4-Business Economics- I**

**TIME:- 3 Hours]**

**[Full Marks:-80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Financial Accounting**
- 2. Business Organization**
- 3. Company Law and**
- 4. Business Economics-I**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10marks</b>
<b>1</b>		<b>Internal assessment Total marks</b>
<b>2</b>	<b>Unit- I            20 marks</b>	<b>20 marks</b>
	<b>Unit-II          20 marks</b>	
	<b>Unit-III       20 marks</b>	
	<b>Unit-IV       20 marks</b>	
		<b>Semester wise End Examination marks</b>
		<b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

## **1T5-Compulsory English**

### **Unit –I Short Stories:**

1. The Gifts by O Henry
2. The Quality by J. Galsworthy
3. The Axe by R. K. Narayan

### **Unit –II Poems:**

1. You turned away yourself by Kabir
2. Mending wall by Robert Frost
3. Unknown Citizen by W.H. Auden

### **Unit –III Essays:**

1. Tolerance by E.M. Forster
2. The Philosophy of Pleasure by Fulton J. Sheen
3. On Painted Face by A. G. Gardiner

### **Unit –IV**

A) I ) Synonym/Antonym of Given words (Match the following format)

II ) One Word Substitute

B) Business Correspondence:

Job Application Letter, Interview Call Letter, Job Offer Letter

C) Comprehension of an Unseen Passage

D) Precis Writing

**Prescribed Textfor UNITS I, II & III:** Swan and Pearls (Raghav Publishers)

### **Reference Books :**

#### **For UNIT IV(A) (Grammar /Vocabulary items)**

1. Learner's English Grammar & Composition by Dr. N.D.V.Prasada Rao (S.Chand)  
For Unit IV (B)
2. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan  
(Tata McGraw-Hill)
3. Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

## **Question Paper Pattern 1T5:- Compulsory English SEMESTER – I**

**N.B. LAO - Long Answer Question to be answered in about 150 words.**

**SAQ - Short Answer Question to be answered in about 75 words.**

VSAQ – Very Short Answer Question to be answered in one or two sentences.

Total Marks- 80

- |      |   |                          |
|------|---|--------------------------|
| Q 1. | A. One LAQ out of Two based on Short Stories (Unit I)                                   | 08 Marks                 |
|      | B. Two SAQs with internal choice based on Short Stories (Unit I) 2 x 4 Marks - 08 Marks |                          |
| Q 2. | A. One LAQ out of Two based on prescribed poems (Unit II)                               | 08 Marks                 |
|      | B. One LAQ out of Two based on the prescribed Essays (Unit III)                         | 08 Marks                 |
| Q 3. | A. Two SAQs with Internal Choice from Unit III  | (2 x 4 Marks) = 08 Marks |
|      | B. (i) Synonyms/Antonyms - Match the following – 4 items against 6 options              | 04 Marks                 |
|      |   | (4 x 1 Marks)            |
|      | (ii) One word substitute – 4 out of 6 (4 x 1 Marks)                                     | 04 Marks                 |
| Q 4. | A. One out of Two items based on Business Correspondence (Unit IV)                      | 08 Marks                 |
|      | B. Comprehension of Unseen Passage – 4 VSAQs – 4 x 2 Marks                              | 08 Marks                 |
| Q 5. | A. Make a Precis of the given passage and give it a suitable Title                      | 08 Marks                 |
|      | B. Five VSAQs based on Unit I and Unit III  | (4x2 Marks) = 08 Marks   |

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

## **2 Assignments – 6+6 = 12 Marks**

## **Performance & Conduct – 4 Marks**

### **Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Semester - I**  
**1T6.1- Supplementary English**

**Unit 1- Prose**

1. A New Star Rises- Jawaharlal Nehru
2. Mahatma Gandhi- Louis Fischer
3. Jagdish Chandra Bose- Aldous Huxley
4. My Greatest Olympic Prize- Jesse Owens
5. Eating for Health- Rajkumari Amrit Kaur

**Unit 2 - Poetry**

1. Virtue- George Herbert
2. Solitude- Alexander Pope
3. How Sleep the Brave- William Collins

**Non-Textual portion-**

**Unit 3 – Writing Skills**

**(A) Social Correspondence:**

Letter of Congratulations, Letter of Condolence, Informal Invitation

**(B) Writing Classified Advertisements**

**Unit 4 – Grammar**

Spotting errors in the use of - (1) Articles (2) Subject-Verb Agreement

**Prescribed Text- Zenith- An Anthology of Prose and Poetry (Raghav Publishers)**

**Reference books**

1. Macmillan Foundation English - R.K. Dwivedi, A. Kumar (**for Unit IV**)
2. Developing Communication Skills -- Krishna Mohan & Meera Banerji (Macmillan Publishers) (**for the topic of ‘Social Correspondence under Unit III’**)
3. Write Right – Sarita Manuja (Macmillan) (**For the topic ‘Writing Classified Advertisements’ given under Unit III**)

## **1T6.1- Supplementary English Question Paper Pattern**

### **Semester - I**

Q1.

(A) Unit 1 Prose - LAQ 150 words ( 2 out of 4) $2 \times 08 = 16$  marks

Q 2.

(B) Unit 1 Prose - SAQ 75 words( 4 out of 5) $4 \times 4 = 16$  marks

Q 3.

(A) Unit 2 Poetry- LAQ 150 words (1 out of 2)  $1 \times 08 = 08$  marks

(B) Unit 2 Poetry - SAQ 75 words ( 2 out of 3)  $2 \times 4 = 08$  marks

Q 4.

Non-textual portion

(A) Social Correspondence:  $1 \times 08 = 08$ Marks

(B) Writing Classified Ads  $1 \times 08 = 08$  Marks

Q 5. (A)i. Correct the error in the use of Articles (4)  $04 \times 1 = 04$  Marks

ii. Correct the error in the subject-verb agreement (4) $04 \times 1 = 04$ Marks

(B)VSAQs Units 1 & 2

Answer each of the following in one or two lines  $04 \times 2 = 08$  Marks

### **Total Marks of Theory Examination- 80**

### **INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

## 1T6.2 - विषय : मराठी

सत्र पहिले २०१६

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	समकालीन राष्ट्रीय, सामाजिक समस्यावर आधारित ( चार पर्यायांपैकी एका विषयावर, शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक	३५	
		१. लोकशाहीचे भवितव्य (डॉ. बाबासाहेब आंबेडकर) २. नौका ( प. भा. भावे ) ३. अस्पृश्यांचा आधारवड ( शिवाजी सावंत ) ४. बेगड ( योगीराज वाघमारे ) ५. उमा ( वि. स. जोग )		
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक	३५	
		१. ज्ञानेश्वरांच्या विराण्या ( संत ज्ञानेश्वर ) २. मन ( बहिणाबाई चौधरी ) ३. गणपतवाणी ( बा. सी. मर्ढकर ) ४. गिरणीची लावणी ( नारायण सुर्वे ) ५. माऊली भुकेले बेट ( सुधाकर गायधनी )		
४	४	व्यावहारिक मराठी	१०	
		१. पत्रलेखन २. इतिवृत्त लेखन		

## **1T6.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप  
सत्र : पहिले**

(वेळ: ३ तास)

(एकूण गुण-80)

प्रश्न: १ समकालीन राष्ट्रीय, सामाजिक समस्यावर आधारित निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा-४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागावर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

### **एकूण गुण विभागणी**

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण
३. व्यावहारिक मराठी 08 गुण
४. निबंध 16 गुण

एकूण गुण : 80

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्यांची वर्गातील उपस्थिती (०५ गुण ), परीक्षार्थ्यांचा वर्गातील सक्रीय सहभाग ( ०५ गुण) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

**1T6.3-fo"k;%& fgUnh  
izFke l=% SSSSemester I**

<b>le;%&amp; rhu ?kaVs</b> (Units)	bdkb;ksa Units)dk ikB~;Øe Øekuqlkj	<b>dqy vad%&amp;80</b> Vad
<b>bdkbZ 1</b> <b>(Unit-1)</b>	<b>Lkedkyhu jk"Vªh;] Ikekftd rFkk vkfFkZd leL;kvksa ij vk/kkfjr fuca/k A</b>  ¼fdUgh pkj esa ls,d fo"k; ij & 'kCn lhek 400 rd½	
<b>bdkbZ 2</b> <b>(Unit-2)</b>	<b>Xk  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>  1½ xi'ki& fuca/k&ukeoj flag  2½ IPph ohjrk& fuca/k&ljnkj iw.kZflag  3½ dQu & dgkuh &izsepan  4½ phQ dh nkor& dgkuh & Hkh"e lkguh  5½ 'kj.kkxr& dgkuh& o`Unkouyky oekZ  <b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>	
<b>bdkbZ 3</b> <b>(Unit-3)</b>	 1½ dchj ds nksgs & dchjnkl  2½ cky yhyk & lwjnkI  3½ HkfDr] uhfr ds nksgs &fcgkjh  4½ oj ns] oh.kkokfnuh oj ns& lw;ZdkUr f=ikBh fujkyk  5½ fgekfnz rqax Ja`x ls & t;`kadj izlkn  <b>vU; ikB~; Ikexzh%&amp;</b>	
<b>bdkbZ4</b> <b>(Unit-4)</b>	 1½ ikfjHkkf"kd 'kCnkoyh&ikB~;iqLrd esa layXu okf.kT; ls lcaf/kr ikfjHkkf"kd 'kCnksa dk vaxzsth ls fgUnhrFkk fgUnh ls vaxzsth esa v/;u visf{kr gSA  2½ dYiuk foLrkj&ikkB~;iqLrd esa layXu mfDr;ksa dh lwph ls gh dYiuk foLrkj dk v/;u visf{kr gSA	

**iz'u&i= dk izk:lk ,oa vad foHkktu**

izFke l=

le;%& rhu ?kaVs dqy vad%&80

iz'u&1Lkedkyhu jk"V<sup>a</sup>h;] lkekftd rFkk vkfFkZd leL;kvksa ij vk/kkfjr fuca/kA  
**vad&16**

¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½

iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
**vad&16**

¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½

iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
**vad&16**

¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½

iz'u&4 rhu x|&foHkkx lss o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa ls fdUgha  
pkj iz'uksa dsmRrj visf{kr gSA 4 x 4vad =vad&16

iz'u&5 blds vUrXzr lEiw.kz ikB~;Øe ls pkj y?kqRjh iz'u gksaxsaA izFke iz'u x| ls] f}rh;  
iz'u i| ls] r`rh; iz'u ikfjHkkf"kd 'kCnkoyh ls vksj prqFkZ iz'u dYiuk foLrkj ls  
iwNs tk;saxsa A lKhk iz'uksa ds mRrj visf{kr gSA

**4 x 4 vad = vad&16**

**dqy vad foHkktu%&**

fucU/k&16 vad

x| foHkkx&28 vad

i| foHkkx&28 vad

vU; ikB~; lkexzh&08vad

dqy vad&80 vad

## **Vocational Course**

## Semester I

**(Same syllabus for all vocational group subjects in B. Com. – I)**

## **1T7-Entrepreneurial Development-I**

**Time : 3 Hours**

Full Marks: 80

## **Internal Assessment: 20**

### **Level of knowledge: Basic knowledge**

**Objective:** To provide an introductory knowledge about entrepreneurship and its development process.

---

### **Unit-I**

Entrepreneurship – Evolution of the concept of entrepreneur, Definitions of Entrepreneurship & Entrepreneur, Types of Entrepreneurship, Function of Entrepreneur, Characteristics of Entrepreneur, Socio-economic origins of Entrepreneurship.

### **Unit-II**

Stages in the Entrepreneurial process, Barriers to Entrepreneurship, Environmental factors affecting Entrepreneurship, Entrepreneurial Structures.

### **Unit-III**

Qualities of a successful Entrepreneur. Distinction between an Entrepreneur and a Manager, role of Entrepreneurship in Economic development. Theories of Entrepreneurship- Theory of Achievement Motivation, Conceptual Model of Entrepreneurship.

### **Unit-IV**

Women Entrepreneurship- Concept of Women Entrepreneurs, Functions of Women Entrepreneurs, Growth of women Entrepreneurship and problems of women Entrepreneurs, Development of women Entrepreneurship, Recent Trends.

#### **Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

## **Group – I : Computer Applications**

### **1T8.1 : Fundamental of Information Technology (FIT)**

**Unit-I:** Definition of Computer, Block diagram of computer, generations of computer, classification of computers, characteristics, advantages & limitations of computer. Computer organization: Central processing Unit - speed of processor, computer memory: primary & secondary, Storage devices: floppy disk, Hard disk, magnetic tapes, optical disk (CD/ DVD), pen drive. Input devices: keyboard, mouse, joystick, light pen, scanners, OCR, MICR, Touch Screen, Bar code reader. Output devices: monitor, printers, classification of printers, impact & non-impact printers, dot matrix, ink jet, laser, thermal printers, plotters.

**Unit-II :** Hardware & software, Software and programming languages.

Computer networks – LAN, WAN, MAN

Internet, WWW, E-Mail, education, financial service, e-Commerce, banking, shopping, advertising, e-governance. Virus, Types of Viruses, Anti-Virus, Firewall and Anti-Spy ware Utilities

### **UNIT – III :**

#### **Introduction to Disk Operating System (DOS) :**

-File types, Directory Structure, Booting - Warm and Cold Booting, Types of DOS commands (Internal and External)

-Directory commands: DIR, MD, RD, TREE, PATH, SUBST ETC., Wild card Definitions, Commands related to file management: COPY, DEL, ERASE, REN, ATTRIB, XCOPY, BACKUP and RESTORE , General commands: TYPE DATE, TIME, PROMPT etc., batch commands, wild card characters & its use.

### **UNIT – IV :**

#### **Introduction to Windows Operating System :**

Advantages of windows operating system, operating with windows, GUI, use of help features, starting an application, essential accessories, windows explorer, control panel, my computer, my documents, recycle bin, finding folders and files, system tools, new features in windows-7/8/10 versions.

**Practical : Practical will be based on Unit-III & IV i.e. MS-DOS and Windows**

#### **BOOKS RECOMMENDED:**

1. I.T. Today (Encyclopedia) By S. Jaiswal (Test Book)
2. Computer Today By Donald Senders
3. Computer Applications In Management – Ushadahiya, Sapnanagpal(Taxmann's)
4. Information Technology - Dr. Sushilamadan (Taxmann's)
5. Understanding Computer By Dineshkumar
6. Computer Fundamentals By P. K. Sinha
7. Office Automation By K.K. Bajaj (Macmillan)
8. Business On The Net An Introduction To The Whats And Hows Of E-Commerce By K. N. Agarwala & Others (Macmillan)
9. Dos/Unix & Windows: I.T. Today (Encyclopedia) By S. Jaiswal
10. Msdos; Manual

**Vocational Course**  
**Semester – I**  
**Group - II : Principles & Practice of Insurance**  
**1T8.2-Life Insurance – Paper I**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Life Insurance.

**Unit - I**

Concept of Risk, Meaning ,Definition, Classification of Risk

Risk management : Meaning and Definition, Objectives, Importance, Classification of Risk,

Methods of Handling Risk, factors affecting Risk Management, Principles of Insurance Management, Process of Risk Insurance Management

**Unit - II**

Concept of Insurance: Meaning, Definition, Need, Importance and Scope of Insurance, Benefits of Insurance

History of Insurance, Meanings of Terms used - Premium, Compensation, Cover note, Claim, Peril, actor affecting premium calculation

Reinsurance : Important concepts, characteristics, types of reinsurance, double cover, external and internal insurance.

**Unit - III**

Life Insurance: Meaning and definition of Life Insurance, Organization , Management , regulation , role and functions of life insurance

Insurance Contract, Essentials of Insurance Contract

Principles of Life Insurance, Classification of Life Insurance Policies.

**Unit - IV**

Policy conditions of Life Insurance ,

Insurance document – Proposal form, policy form, cover note, certificate of Insurance, endorsement, co-insurance and renewal receipt, procedure of taking Life Insurance Policy.

Settlement of Claim on Maturity of Policy, Death of Policy holder,

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication
- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल– हिमालया पब्लिशिंग हाउस

**Group III.**  
**Advertising, Sales Promotion and Sales Management**  
**Semester-I**  
**1T8.3 -Advertising, Sale Promotion and Sales Management - I**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

**Objectives:** The aim of the paper is to acquaint the students with concepts, techniques and give experience in the application of concepts for developing an effective advertising programme.

**Unit-1**

- Advertising Role in the Marketing Process: Legal Ethical and social Aspects of Advertising. Functions and types of advertising.

**Unit- 2**

Integrated Marketing communication .Brand management , Brand Image, Brand Equity and Brand Building. Ethics of advertising

**Unit- 3**

The major players in advertising, Advertising agency, Brand manager, market research firms, Media, Type of agencies. Structure of an agency and its functions. The process of developing an ad.

**Unit-4**

Objective Setting and market Positioning; Dagmar Approach in Determination of Target Audience and understanding them. Assumptions about consumer behavior.

**Recommended books:**

- Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968) □
- Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981) □
- Stanton, William J & Buskirk, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- Russell, Frederic A. Beach, Frank H & Buskirk, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982) □
- David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi) □
- Kazmi & Batra, Advertising & Sales Promotion - Excel Books. □
- Belch & Belch, Advertising & Promotion - Tata McGrow Hill. □
- Jethwaney & Jain - Advertising Management, Oxford Univ. Press □□

**SEMESTER I**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

# **Computer Application, Insurance & Entrepreneurial Development**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B.Com. – First Year**  
**Semester-II**  
**2T1: Statistics and Business Mathematics**

**Unit – I Statistics & Measures of Central Tendency**

Meaning, Scope, Importance, Functions and Limitations of Statistics. Collection of data, Tabulation and Classification, Frequency distribution.  
Mean, Median, Mode, Geometric Mean and Harmonic Mean (**Theory & Numericals**)

**Unit – II**

**Dispersion-** Meaning and significance of dispersion, Methods of measuring dispersion, Mean Deviation, Standard Deviation, Quartile Deviation, co-efficient of variation (**Theory & Numericals**)

**Unit – III**

Skewness-Absolute Measures of Skewness, Relative Measures of Skewness, Karl Pearson's Coefficient of Skewness, Bowley's Coefficient of Skewness. (**Numericals**)

**Unit – IV**

**Business Mathematics**:- Ratio Proportion, Percentages, Simple & Compound Interest, Profit/ Loss. (**Numericals**)

**Reference Books:**

- Fundamentals of statistics : D. V. Elhance&VeenaElhance
- Statistics : V. K. Kapoor – S. Chand & Sons
- Statistics : B. New Gupta – SahityaBhavan Agra
- Fundamentals of statistics and Computer, Dr. M. Datalkar & Mrs. Sindhu Ghate, Sai Jyoti Prakashan, Nagpur
- Business Statistics A Self Study Text Book, Dr. P. C. Tulsian & Bharat Jhunjhunwala, S. Chand Publishing
- Fundamental of Statistics : S. C. Gupta – Himalaya Publishing House
- Business Mathematics & Statistics : NEWK Nag & S.C. Chanda – Kalyani Publishers
- Gulhane, Chopade – Statistics and business mathematics, Sheth Publishers Pvt. Ltd. Mumbai
- Business Mathematics and Statistics- Dr. M. Datalkar & Mrs. S. Ghate, Sai Joyti Publication, Nagpur.
- Problem in statistics : Y. R. Mahajan - Pimplapure Publisher Nagpur

## **Question Paper Pattern Semester-II**

### **2T1-Statistics and Business Mathematics Paper - I**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 3 – Unit III**

- a) Problem                                    08 Marks  
 b) Problem                                    08 Marks

**OR**

c) Problem                                    16 Marks

O. No. 4 – Unit I

- a) Problem                            08 Marks  
b) Problem                            08 Marks

**OR**

c) Problem                            08 Marks  
d) Problem                            08 Marks

Q. No. 5

- a) Unit- I Problem 04 Marks
  - b) Unit -II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

## **2T2: Business Management**

### **Unit I**

**Introduction:** Meaning, Definition ,concept and types of management. Principles of business Management. Scope and significance of business management.

Process of business management. Function of business Management. Management as a science or art.

### **Unit II**

**Planning:** - Meaning, Nature and Characteristics, Importance, Types & Components of Planning. **Decision Making:** Meaning, characteristics & importance of decision making. Traditional and Modern techniques of Decision-Making.

### **Unit – III**

**Delegation of Authority:**-- Meaning, Elements, Advantages, & Obstacle of Delegation of Authority. Centralization and decentralization of authority and its merits and demerits.

**Co-ordination & Controlling:** Meaning, Concept and principles of Coordination, Internal & External Coordination. Meaning, concept and elements of control.

### **Unit IV**

#### **Recent trends in management:**

Management of Change Management of Crisis, Total Quality Management, Stress Management, International Management.

#### **Suggested Books:**

1. Bajaj: Management Processing and Organization, Excel Publications.
  2. Tripathy and Reddy – Principles of Management – Tata McGraw Hill.
  3. A. Pardhasaradhy & R. Satya Raju: Management Text and Cases, Prentice Hall of India.
- Gulhane, Chopade Choudhary- Business Management, Sheth Publishers Pvt. Ltd. Mumbai
- 4- lq/kk] th-,l- Jhekjh fot;% O;kofk;d izcaU/k ds fl/nkar] jes'k cwd fMisk]ubZ fnYyh  
5- 'kekZ] th-Mh-lwukuk] th-lh-% izcaU/k ds fl/nkar] jes'k cwd fMiks]ubZ fnYyh  
6- ns'keq[k] izHkkdj% O;olk; O;oLFkkiukph ewy rRos] fiaiGkiwjs vaM da- ukxiqjs

**Question Paper Pattern  
Semester-II  
2T2-Business Management**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal mark

Time :- 3 hours Marks-80

**Q.1.**

(a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

OR

(c) UNIT – I 16 Marks

**Q.2.**

(a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

(c) UNIT – II 16 Marks

**Q.3.**

(a) UNIT – III 08 Marks

(b) UNIT – III 08 Marks

OR

(c) UNIT – III 16 Marks

**Q.4.**

(a) UNIT – IV 08 Marks

(b) UNIT – IV 08 Marks

OR

(c) UNIT – IV 16 Marks

Q.5.

a)	UNIT – I	04 Marks
b)	UNIT – II	04 Marks
c)	UNIT – III	04Marks
d)	UNIT – IV	04 Marks

## **2T3 : Secretarial Practice**

**Level of Knowledge:** - Book Conceptual Knowledge.

**Objective:** To make aware the student with various function, duties and responsibilities of company secretary and Secretarial Practice

[The Company Act 2013 with Amendments up to June 2016]

### **UNIT – I**

- (i) Procedure for Incorporation of Companies, Conversion of Companies – Private Limited to Public Limited and Public Limited to Private Limited
- (ii) Procedure for Alteration of Memorandum of Association and Article of Association
- (i) Company Secretary – Meaning, Qualification and Functions/ Role
- (ii) Directors – Procedure for Appointment of Directors and Director's Identification Number (DIN)- allotment and surrender

### **UNIT- II**

- (i) Types and characteristics of company meeting, statutory, board, general and extra ordinary meeting, and meetings of committee of director.
- (ii) Agenda, Notice and provision regarding quorum of Board meeting, Annual General Meeting and Extra ordinary General Meeting
- (iii) Voting and resolution- Meaning of poll, postal ballot and E-Voting, Meaning of ordinary and Special Resolution.
- (iv) Circular Resolution, Explanatory statement, Ordinary and special Business to be transacted in meetings.

### **UNIT – III**

- (i) Report Writing - Essential and content of Board Report and Annual Report.
- (ii) Concept of secretarial audit, Secretarial standards, corporate social responsibility and corporate governance, National Financial Reporting Authority.
- (iii) E-Governance and E-Filing- Meaning, features and procedure of E-Governance and E-Filing, MCA-21

### **UNIT – IV**

- (i) Key managerial personnel- Appointment and function of managing director, whole time director and manager.
- (ii) Procedure for appointment of Additional Directors, Alternate Directors, Nominee Directors.
- (iii) Managerial Remuneration - Remuneration of managing director, whole time director or manager.
- (iv) Provisions regarding resignation, removal of directors, Casual vacancy.

Reference Books:

- Company Law, Ashok K. Bagrial: Vikas Publication House
- Ratan Nolakha: Company Law And Practice, Vikas Publication House
- Gulshan, S S and Kapoor, G K: Business Law Including Company Law , New Age International (P) Ltd., Publishers
- Dr. Arvind shende, Dr. Asha Tiwari, Company Law & Secretarial Practice, Anuradha prakashan, Nagpur.
- Faroq Haque Secretarial Practice., Sheth Publishers Pvt. Ltd. Mumbai
  
- Kapoor G.K. and Dhamija Sanjay: Company Law -A comprehensive Textbook on New Companies Act 2013 , Tazman Publication
- Secretarial Practice & Company Law- Arunkumar, Rachana Sharma- Atlantic Publishers and Distributors
- Secretarial Practice, M. C. Kuchhal, S. Chand Publishing.

**QUESTION PAPER PATTERNS**  
**SEMISTER II**  
**2T3-SECRETARIAL PRACTICE**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |          |
|-----|----------|----------|
| (c) | UNIT – I | 16 Marks |
|-----|----------|----------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |           |          |
|-----|-----------|----------|
| (c) | UNIT – II | 16 Marks |
|-----|-----------|----------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |            |          |
|-----|------------|----------|
| (c) | UNIT – III | 16 Marks |
|-----|------------|----------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |           |          |
|-----|-----------|----------|
| (c) | UNIT – IV | 16 Marks |
|-----|-----------|----------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04 Marks |
| d) | UNIT – IV  | 04 Marks |

## **2T4 : Business Economics – II**

### **Unit I: Market Structure**

Meaning, Definition, Classification of Market Structures. Firm & Industry- Meaning, Difference between Industry and Firm. Pricing of Products-Types, Cost-based pricing, Customer-based pricing, Competitor-based pricing.

### **Unit II: Perfect & Imperfect Competition Markets**

Definition, Features, Price-output determination under Perfect Competition Market. Monopoly - Definition, Features, Types, Price determination under Monopoly. Concept of Price Discrimination .Monopolistic Competition- Meaning, Features, Price determination under Monopolistic Competition.

### **Unit III: Theories of Distribution**

Theory of Distribution -Modern Theory of Distribution. Theories of Rent- Ricardian theory of Rent, Modern theory of Rent, Concept of Quasi Rent. Theory of Wages- Marginal Productivity theory of Wages with Criticisms, Nominal & Real wages. Theories of Interest-Loanable Funds Theory of Interest, Liquidity Preference Theory of Interest, Criticisms, Concept of Gross Interest & Net Interest. Theories of Profit- Dynamic Theory of Profit, Innovation Theory of Profit, Criticisms of the Theories, Gross Profit & Net Profit.

### **Unit IV- Business Cycles & National Income**

Business Cycles-Concept, Features, Types, Phases of Business Cycles. National Income - Meaning, Concepts, Methods of Measuring National Income, Difficulties in National Income Accounting.

### **Books Recommended:**

1. Business Economics , V.G. Mankar, Himalaya Publication House
2. Modern Economics, H.L.Ahuja, S.Chand & Co Ltd.
3. Micro Economics P.N.Chopra, Kalyani Publishers.
4. Micro Economics, D.D.Chaturvedi, Galgotia Publishing Company.
5. Modern Economic Theory, K.K.Dewett, S.Chand & Co Ltd.
6. Business economics, Dr. Arvind Shende, Dr. R. Ingole, Dr. P. Kothiwale, Anuradha Prakashan, Nagpur
7. Managerial Economics,D.N.Dwivedi, Vikas Publishing House Pvt Ltd.
8. Managerial Economics-Theory & Applications, D.M.Mithani, Himalaya Publishing House.
9. Business Economics by Ms. V. Karkare, Mrs. S Ghate, Anuradha Prakashan Nagpur.
10. Business Economics, Rashi Arora, Sheth Publishers, Mumbai

## **Question Paper Pattern**

### **Semester- II**

### **2T4-Business Economics - II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |
| OR  |          |          |
| (c) | UNIT – I | 16 Marks |

Q.2.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |
| OR  |           |          |
| (c) | UNIT – II | 16 Marks |

Q.3.

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |
| OR  |            |          |
| (c) | UNIT – III | 16 Marks |

Q.4.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |
| OR  |           |          |
| (c) | UNIT – IV | 16 Marks |

Q.5.

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04 Marks |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Statistics and Business Mathematics**
- 2. Business Management**
- 3. Secretarial Practice and**
- 4. Business Economics-II**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I           20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-II**  
**2T5-Compulsory English**

**Unit -I Short Stories**

1. Some Day by Issac Asimov
2. Marriage is a private affair by Chinua Achebe
3. The Taxi Driver by Kartar Singh Duggal

**Unit -II Poems**

1. Art of Life by Tukadoji from Gramgeeta ( Translation by Dr. Bhelkar)
2. Horses Graze by Gwendolyn Brooks
3. Swan and Shadow by John Hollander

**Unit -III Essays**

1. Knowledge and Wisdom by Bertrand Russell
2. On education by Albert Einstein
3. What is Indianess? by Shelia Dhar

**Unit -IV**

A)a. Degrees of Comparison    b. Words often Confused

B) Business Correspondence:

Sales Letter, Inviting Quotations, Placing Orders

C) Comprehension of an Unseen Passage

D) Essay in about 300 words on any one Topics out of the Four Given Topics [Social issues, Economic issues, Environmental issues, Personal (Reflective) essays]

**Prescribed Textfor UNITS I, II & III:** Swan and Pearls (Raghav Publishers)

**Reference Books :**

**For UNIT IV (A) (Grammar /Vocabulary items)**

1.Learner's English Grammar & Composition by Dr. N.D.V.Prasada Rao (S.Chand)

For Unit IV (B)

2. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan  
(Tata McGraw-Hill)

3 Developing Communication Skills – Krishna Mohan & Meera Banerji

**2T5-Compulsory English**  
**SEMESTER – II**  
**Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Short Stories (Unit I)	08 Marks
	B. Two SAQs with internal choice based on Short Stories (Unit I) 2 x 4 Marks -	08 Marks
Q 2.	A. One LAQ out of Two based on prescribed poems (Unit II)	08 Marks
	B. One LAQ out of Two based on the prescribed Essays (Unit III)	08 Marks
Q 3.	A. Two SAQs with Internal Choice from Unit III	(2 x 4 Marks) = 08 Marks
	B. (i) Degrees of Comparison – 4 out of 6 - 4 x 1 Marks	08 Marks
	(ii) Words often confused – 4 out of 6 - 4 x 1 Marks	04 Marks
Q 4.	A. One out of Two items based on Business Correspondence (Unit IV)	04 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs – 4 x 2 Marks	08 Marks
Q 5.	A. Essay in about 300 words (1 out of 4 topics)	08 Marks
	B. Four VSAQs based on Unit I and Unit III	(4x2 Marks) = 08 Marks

**Total = 80 Marks**

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Question to be answered in one or two sentences.

**INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline. Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

## **2T8.1-Supplementary English**

### **Semester - II**

#### **Unit 1- Prose**

1. Using the Dictionary- Albert Walker and Mary R. Parkman
2. On the Rule of the Road- A.G. Gardiner
3. How I became a Public Speaker- George Bernard Shaw
4. Seeing People Off- Sir Max Beerbohm
5. The Postmaster- Rabindranath Tagore

#### **Unit 2 - Poetry**

1. The Daffodils- William Wordsworth
2. Stopping by Woods on a Snowy Evening- Robert Frost

#### **Unit 3 Non-Textual Portion**

##### **(A) Social Correspondence:**

- Letter of Recommendation
- Letter of Introduction
- Making reservations in hotels for accommodation

##### **(B) Note making :**

- Serial or sequential format
- Tree diagram

#### **Unit 4 – Grammar**

Spotting errors in the use of- (1) Prepositions s (2) Tenses

**Prescribed Text- Zenith- An Anthology of Prose and Poetry (Raghav Publishers) For Unit I and II**

#### **Reference books**

1. Macmillan Foundation English - R.K. Dwivedi, A. Kumar (**For Unit IV**)
2. Developing Communication Skills -- Krishna Mohan & Meera Banerji (Macmillan Publishers) (**For the topic ‘Social Correspondence’ under Unit III** )
3. Write Right by Sarita Manuja ( Macmillian Publication) (**For the topic ‘Note Making’ under unit III)**

## **2T8.1-Supplementary English Question Paper Pattern**

Semester - II

Q 1.

(C) Unit 1 Prose - LAQ 150 words ( 2 out of 4)                   $2 \times 08 = 16$  marks

Q 2.

(D) Unit 1 Prose - SAQ 75 words( 4 out of 5)                   $4 \times 4 = 16$  marks

Q 3.

(A) Unit 2 Poetry- LAQ 150 words (1 out of 2)                    1 x 08 = 08 marks  
(B) Unit 2 Poetry - SAQ 75 words ( 2 out of 3)                2 x 4 = 08 marks

Q 4.

## Non-textual portion

(A) Social Correspondence: 1 x 08= 08Marks

(B) i. Correct the error in the use of prepositions (4 out of 5)  $04 \times 1 = 04$  Marks

ii. Correct the error in the use of the tense (4 out 5) 04 x 1 = 04 Marks

Q 5.

(A) Note Making  $1 \times 08 = 08$  Marks

**(B) VSAQs Units 1 & 2**

Answer each of the following in one or two lines 4X2 Marks = 08 Marks

## **Total Marks of Theory Examination- 80**

## **INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The**

**concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

## 2T8.2-विषय : मराठी

### सत्र दुसरे

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	आत्मवृत्तपर, वर्णनपर, विषयांवर आधारित निबंध ( चार पर्यायांपैकी एका विषयावर शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक  १ जेट युगातील मराठी माणूस ( शंतनू किलोस्कर ) २ विड्ल तो आला आला ( पु. ल. देशपांडे ) ३ नवसमाजनिर्मितीचे प्रणेते: महात्मा ज्योतीबा फुले ( गंगाधर पानतावणे ) ४ भरती ( वसंत वळडपांडे ) ५ महालूट ( संदानंद देशमुख )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक  १ तुकारामांचे अभंग ( संत तुकाराम ) २ प्रेमाचा गुलकंद ( केशव कुमार ) ३ पृथ्वीचे प्रेमगीत ( कुसुमाग्रज ) ४ स्वप्न ( ग्रेस ) ५ दोन कामागारांच्या गोष्टी ( लोकनाथ यशवंत )	३५	
४	४	ट्यावहारिक मराठी ३. मुलाखत तंत्र ४. म्हणी व वाक्प्रचार	१०	

## **2T8.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप**

**सत्र : दुसरे**

वेळ: ३ तास)

(एकूण गुण- 80

प्रश्न: १ आत्मवृत्तपर, वर्णनपर निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

### **एकूण गुण विभागणी**

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण
३. व्यावहारिक मराठी 08 गुण
४. निबंध 16 गुण

एकूण गुण : 80

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षाथर्थाची वर्गातील उपस्थिती (०५ गुण ), परीक्षाथर्थाचा वर्गातील सक्रीय सहभाग ( ०५ गुण) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण) या निकषांवर एकूण २० गुणांपैकी विद्याथर्थाचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

### 2T8.3-fo"k;%& fgUnh

### f}rh; I= % Semester II

le;%& rhu ?kaVs

dqy vad%&100

bdkbZ Øekad ( Units)	bdkb;ksa ( Units) dk ikB~;Øe Øekuqlkj	vad
<b>bdkbZ 1 (Unit-1)</b>	<b>Tkhouh ] o.kZukRed rFkk 'kS{kf.kd fo"k;ksa ij vk/kkfjr fuca/kA</b> 1/4 fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd1/2	<b>20</b>
<b>bdkbZ 2 (Unit-2)</b>	<b>Xk  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>  1½ âf"kds'k eq[kthZ ds lkFk <kbZ fnu & laLej.k& euks gj ';ke tks'kh 2½ lk;kZoj.k vkSj ge & fuca/k & jktho xxZ 3½ lkbcj dkSrqd & ,dkadh & e/kq /kou 4½ jkr dk jgL; & ,dkadh & MkW- jkedqekj oekZ 5½ baLisDVj ekrknhu pkjn ij & O;aX; & gfj'kadji lkbZ  <b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>	<b>35</b>
<b>bdkbZ 3 (Unit-3)</b>	  1½ Bqdkj nks ;k l;kj djks & lqHknzkdqekjh pkSgku 2½ dye vkSj ryokj & jke/kkjhflag ^fnudj* 3½ /kwi pedrh gS pkjnh dh lkMh igus & dsnkjukFk vxzoky 4½ chrs fnu dc vkus okys & gfjoa'kjk; cPpu 5½ i`Foh fdlfy, ?kwerh jgh & v#.k dey	<b>35</b>
<b>bdkbZ 4 (Unit-4)</b>	  <b>vU; ikB~; Ikexzh%&amp;</b>  1½ eqgkojs vkSj yksdksfDr;kj &ikB~;iqLrd esa lyaXu eqgkojs vkSj yksdksfDr;ksa dk vFkZ ,oa okD; iz;ksx dk v/;u visf{kr gSA  2½ i= ys[ku& izdkj]xq.k] fo'ks"krk,j] izk:i] dk;kZy;hu i=]	<b>10</b>

	dk;kZy; Kkiu] dk;kZy; vkns'k] ifji=d] v/kZljdkjh i=¼blesa vkosnu]fu;qfDr] chek] cSad] Kkiu] fufonk oLrqvksa dsa Ø;]&foØ;] izkfIr ,oa lwpuk i=] vkns'k i=½ bR;kfn lkexzh v/;;u vkSj v/;kiu ds ek;/e ls rS;kj dh tk;sA	
--	---	--

**f}rh; I= % Semester II**

**2T8.3-fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%- 80**

**iz'u&1 Tkhouh ] o.kZukRed rFkk 'kS{kf.kd fo"k;ksa ij vk/kkfjr fuca/kA  
vad&16**

**¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½**

**iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
vad&16**

**¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx ls o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gS A 4 x  
4vad =vad&16**

**iz'u&5blds vUrxZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA **izFke iz'u**  
**x| ls] f}rh; iz'u i| ls] r`rh; iz'u eqgkojs vkSj yksdksfDr;ksa ls vkSj**  
**prqFkZ iz'u i=&ys[ku ls iwNs tk;saxsAIHkh iz'uksa ds mRrj visf{kr**  
**gSA****

**4 x 4vad =vad&16**

**vkUrfjd ewY;kdau & 20 vad**

**dqy vad foHkktu%&**

**fucU/k&16 vad**

**x| foHkkx & 28 vad**

**i| foHkkx &28 vad**

**vU; ikB~; lkexzh& 08 vad**

**dqy vad & 80 vad**

**Vocational Course**  
**Semester II**  
**(Same syllabus for all vocational group subjects in B.Com – I)**  
**2T7:Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide an introductory knowledge about rural entrepreneurship and its development process.

---

**Unit I**

Rural entrepreneurship-meaning and need of Rural entrepreneurship, problems of Rural entrepreneurship and how to develop Rural entrepreneurship?, rural marketing potential marketing of agricultural inputs-warehousing, cold storage-importance and problems,

**Unit II**

NGO's and Rural entrepreneurship, entrepreneurship in agriculture, organization and management of agro-based industries, development strategy for Rural entrepreneurs, entrepreneurial development in backward areas.

**Unit III**

Entrepreneurial growth before and after independence, Factors determining the growth of entrepreneurs, Source of entrepreneurship in India, Causes of slow growth

**Unit IV**

The concept and need of Entrepreneurial development programmes in India, Phases and contents of Entrepreneurial development programmes in India, the target group, special agencies and schemes for Entrepreneurial Development Institutions conducting Entrepreneurship development programmes.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I : Computer Applications**  
**2T8.1 : Software Packages (SP)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I : Introduction to Word Processing**

Introduction, Starting word, Creating document, Structure of Ms-word window and its application, Mouse & keyboard operations, designing a document; formatting-selection, cut, copy, paste, Toolbars, operating on text;

**Unit –II : Word Processing Tools**

Printing, Saving, Opening, Closing of document; creating a template; Tables, borders, textbox operations; Spelling and Grammar check,

Mail Merge, Envelope and Label, Protection of document, Change the view of document.

**Unit-III : Introduction to Excel**

Introduction To Ms-Excel, Navigating, Excel Toolbars and Operations, Formatting Features-Copying Data Between Worksheets; Entering and Editing Cell Entries,

**Unit-IV : Advance Features of Excel**

Creation of Charts, Editing and Formatting Charts, Goal Seek, Auditing, Linking, Workbook, Database in Excel (Auto Filter, Advanced Filter, Sort, Form), Mathematical, Statistical and Financial Functions in MS-Excel.

**Practical : Practical will be based on MS-Word and MS-Excel**

**Books Recommended:**

1. Microsoft Office –2000 – Gini Courier , Annelte Marquis BPB
2. IT Today (Encyclopaedia) – S.Jaiswal
3. A First Course In Computers – Sanjay Saxena
4. First Text Book On Information Technology – Srikant Patnaik

**Group -: Principles & Practice of Insurance**  
**2T8.2-Life Insurance – Paper II (Semester – II)**

Time : 3 Hours]

Theory : 80 Marks

Internal Assessment: 20

Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Life Insurance.

**Unit - I**

**Insurance Agent** – Meaning and Definition of agent as per Insurance Act, Qualification and Disqualification for Appointment of Life Insurance Agent Training, duties, rights, code of conduct for agents, essential qualities for a successful agent.

**Unit -II**

**Life Insurance Corporation of India(LIC)** – History and Development and Establishment, Objectives, Organization structure , working of LIC Accounting procedure in life insurance business, analysis and interpretation of financial statement of life insurance organization

**Unit -III**

Role of IRDA – Insurance regulatory and development authority – Constitution, objectives, duties and powers, Role of IRDA in appointing agents. Progress of Life Insurance Business, Privatisation of Life Insurance Business, effect of globalization on insurance sector

**Unit - IV**

Silent features of Insurance Act 1938  
Silent features of Life Insurance Corporation Act 1956  
Marketing strategies of Life Insurance Products, insurance funds, investment of life, insurance funds

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
  - Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
  - Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication
  - Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल– हिमालया पब्लिशिंग हाउस
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Semester - II**  
**2T8.3-Advertising, Sale Promotion and Sales Management - II**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

**Unit-1**

Building of Advertising Programme-Message, Headlines, Copy, Logo, Illustration, Appeal, layout Campaign Planning. Creative Strategies. Production and execution of TVCs and print ads.

**Unit-2**

Sales Promotion – Introduction to Sales Promotion; Role and growth of Sales Promotion; its Features and Purpose; Tools and Techniques of Sales promotion, Sales promotion campaign, Developing a logic for sales promotion programmes.

**Unit-3**

- Role of selling in planed economy, selling as a career, Acquiring skills and developing new qualities for salesmen and to improve growth chances,

**Unit-4**

Tips and suggestions to improve personal ability, skills for salesmen, product knowledge, planned selling system.

**Recommended books:**

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
- ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
- ✓ Stanton, William J & Buskrit, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskrit, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)
  - ✓ Kazmi & Batra, Advertising & Sales Promotion - Excel Books.
  - ✓ Belch & Belch, Advertising & Promotion - Tata McGraw Hill.
  - ✓ Jethwaney & Jain – Advertising Management, Oxford Univ. Press

**SEMESTER II**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**      **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B. Com. Second Year**  
**Semester- III**  
**3T1 – : Financial Accounting – II**

**Unit – I**

**Consignment Accounts.**

Meaning, Needs, Advantages and Formalities in consignment, Difference between a consignment and a sale, Performa invoice, Account Sales, Accounting Procedure of Consignment, Valuation of Consignment Stock. (**Theory & Numerical**)

**Unit – II**

**Branch Accounts (Excluding Foreign Branch)**

Meaning of Branch, Objectives of Branch Accounting, Maintenance of Accounting Records , Transactions relating to Branch. Accounting Procedure of Branch(**Theory & Numerical** )

**Unit – III**

**Flotation of Joint Stock Companies and their Capital Structure.**

Types of Shares, Methods of issue of shares, Accounting for Issue, Forfeiture of shares & reissue of forfeited shares(**Theory & Numerical**)

**Unit – IV**

**Final Accounts of Joint Stock Companies**

Introduction, Statutory provisions regarding preparation of companies final accounts. Provision for interest on debentures, Proposed Dividends, Interim Dividend (**Theory & Numerical**)

**The financial year ends on 31<sup>st</sup> March.**

**Reference Books:**

- Corporate Accounting:-Maheshwari S N, Vikas Publishing house Pvt. Ltd.
- Advanced Financial Accounting, Gupta R. L. ,S. Chand Publishing
- Advanced Accounts Shukla and Grewal : (S. Chand & Ltd. New Delhi)
- Advanced Accounts , Jain and Narang : (Kalyani Publishers, Ludhiana)
- Accountancy, Volume –I and II ,Sr. K. Paul : (New Central Book Agency,Kolkata)
- Accounting Theory, R. K..Lele and Jawaharlal : (Himalaya Publishers)
- Accounting Theory, Dr. L. S. Porwal : (Tata McGraw Hill)
- Corporate Accounting Dr. S. N. Maheshwari : (Viakas Publishing House Pvt. Lit. New Heldi)
- Advanced Financial Accounting ,Dr. Ashok Sehgal& Dr. Deepak Sehgal : (Taxmann, New Delhi)
- Advanced Financial Accointing Dr. R. D. Mehta, Prof. P. Wath & Dr. D. C. Gotmare ,Payal Prakashan, Nagpur.

## **Question Paper Pattern**

### **Semester-III**

#### **3T1 -Financial Accounting – II**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

Time :- 3 hours

Marks-80

Q. No. 1 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

Q. No. 2 – Unit II

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 3 – Unit III

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 4 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 5

- |    |          |                  |
|----|----------|------------------|
| a) | Unit- I  | Problem 04 Marks |
| b) | Unit –II | Problem 04 Marks |
| c) | Unit-III | Problem 04Marks  |
| d) | Unit-IV  | Problem 04 Marks |

## **3T2 : Business Communication & Management**

### **Unit – I: Introduction**

Meaning, Definition and concept of Communication, Objectives of Communication, Functions of communication Written Communication, Oral Communication, Visual Communication, Audio Visual Communication, interpersonal communication, supervisory communication, grapevine communication, barrier in communication

### **Unit – II: Business communication**

Business communication: concept, objective, elements, purpose, importance, salient feature, principles of effective business communication.

#### **customer care communication In business**

Types of business communication-company manual, house journal, placement brochure, leaflets, E MAIL . Public Relations Management- Role of public relations officer in business, group discussion,

### **Unit-III: Technology and business communication**

Concept of Management Information System, Role of Computer in communication, Barriers of computerized Communication –Use of internet, website and electronic media in business communication. **Social media as a mean of communication.**

### **Unit-IV:**

**MS-office aided communication:** MS Word and its application in business communication , Role of MS-Excel and MS-Power point in communication skill, MS-excel and financial presentation, MS-power point and business communication, Use of MS-power point in business meeting as a tools of effective communication.

### **Suggested Books:**

1. A guide to business correspondence- Kapoor A- S Chand & Co
- 2.. Urmila Rai & S.M. Rai, Business Communication, Himalya Publishers,
3. Lesikar I Flatley, Basic Business Communication, Tata McGraw Hill.
4. Microsoft office-2000/2007- Gini courter, annelte Marquis BPB
5. Business Communication, Dr. Arvind Shende, Dr. Asha Tiwari,  
Anuradha Prakashan, Nagpur.
5. Business Communication , Pooja Khanna, S. Chand Publishing.
5. dwekj] fojsUnz % O;kolkf;d lapkj] dY;k.kh ifCy'klZ]ubZ fnYyh  
6-pwMkor] nfj;ko flag] O;olkf;d lapkj] jes'k cwd fMiks]ubZ fnYyh  
7-fkans] ih-,e-% ekfgrh ra=Kku vkf.k O;olk; mi;kstuk]dSyk'k ifCyds'kUl]vkSjkaxkckn

# **3T2-Business Communication & Management Paper - II Question Paper Pattern**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

- |      |                |          |
|------|----------------|----------|
| Q.1. | (a) UNIT – I   | 08 Marks |
|      | (b) UNIT – I   | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – I   | 16Marks  |
| Q.2. | (a) UNIT – II  | 08 Marks |
|      | (b) UNIT – II  | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – II  | 16Marks  |
| Q.3. | (a) UNIT – III | 08 Marks |
|      | (b) UNIT – III | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – III | 16Marks  |
| Q.4. | (a) UNIT – IV  | 08 Marks |
|      | (b) UNIT – IV  | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – IV  | 16Marks  |
| Q.5. | a) UNIT – I    | 04 Marks |
|      | b) UNIT – II   | 04 Marks |
|      | c) UNIT – III  | 04Marks  |
|      | d) UNIT – IV   | 04 Marks |

### **3T3– III: Business Law**

**Level of Knowledge:** Basic Conceptual Knowledge

**Objective:** To make students aware about various Laws relating to Business [with amendments up to June 2016 in respective Acts]

#### **Unit-I**

(i)Business law : Meaning, evolution and significance

- (ii) Law relating to Contract – (Indian Contract Act-1872): important definitions, nature and kinds of contract, essentials of a valid contract, offer and acceptance, consideration, capacities of parties to contract, free consent.
- (iii) Void Agreement, Contingent Contract, Quasi Contract
- (iv) Contract of Indemnity and Guarantee, Law of Agency.

#### **Unit-II**

- (i) Law relating to Sale of Goods- (Sale of Goods Act- 1930): contract of sale of goods, Essentials of a contract of sale, concept of goods, sale distinguished from agreement to sell, difference between conditions and warranties; transfer of ownership and delivery of goods, unpaid seller - his rights against the goods and the buyer.
- (ii) Law relating to Partnership- (the Indian partnership act 1932): concept of partnership and partnership firm, types of partner, types of partnership.
- (iii) Registration of partnership firm, effect of non registration, partnership deed, duties and liabilities of partners including those of newly admitted partners, dissolution of partnership firms.

#### **Unit-III**

- (i) Law relating to Negotiable Instruments -(Negotiable Instrument Act-1881): Meaning and Definition of Negotiable instruments, Promissory Notes, Bills of Exchange and its Types, Cheques and Its types, Crossing of Cheques.
- (ii) Endorsements: Meaning and Types, Holder and Holder in due course and its rights, Discharge of Negotiable Instruments.
- (iii) Parties to a Negotiable Instrument - duties, rights, and liabilities
- (iv) Prevention of Money Laundering Act-2002: Objectives, Important Definitions and Salient Features.

#### **Unit-IV**

- (i) Law relating to Consumer protection in India - (Consumer Protection Act-1986): Definition of Consumer, Importance of Consumer, Problems faced by Consumers, Consumer Protection- Need & Importance, Rights & Responsibilities of Consumer

(ii) Definitions: Complaints, Services, Defects & Deficiency, Relief available to consumer, Procedure to file complaints, ways and means of consumer protection, consumer dispute redresser agencies and procedure followed by redresser agencies.

(iv) Law Relating to Information Technology- (Information Technology Act-2000): Objectives, scope and Important Terms, Digital Signature & Electronic Records, Certifying Authority, Digital Signature Certificates, offense and Penalties.

(iv) Cyber Law: Meaning, Important Definitions, Features, Need and Importance of cyber Law in India

### **Reference Books:**

- Gulshan, S S and Kapoor, G K: Business Law Including Company Law , New Age International (P) Ltd., Publishers
- M.C. Kuchhal and Vivek Kuchhal : Business Law, Vikas Publishing House, New Delhi
- V.S. Datey: Business and Corporate Laws, Taxman, New Delhi
- N.D. Kapoor: Mercantile Law, Sultan Chand & Sons, Educational Publishers, New Delhi.
- Dr. V. K. Jain: Mercantile Law, Seth Publications, Nagpur.
- Business Law R.S. N. Pillai& V. Bhagavathi, S. Chand Publishing.
- Sen & Mitra: Cinnercuak Kawn, The World Press Pvt. Ltd., Kolkata.
- C.K. Kapoor: Lectures on Business and Corporate Laws, Vidya Sadan, Delhi.
- K.R. Bulchandani, Business Law Himalaya P. House, Mumbai-2006.
- Business Law, Dr. Arvind shende, Dr. Vijay Upgade, Anuradha Prakashan, Nagpur.

# **Question Paper Pattern**

## **3T3-Business Law**

### **Paper - III**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

Q.1.

(a) UNIT – I 08 Marks

(b) UNIT – I 08 Marks

(c) UNIT – I OR 16Marks

**Q.2.**

(a)	UNIT – II	08 Marks
(b)	UNIT – II	08 Marks

(c) UNIT - II OR 16Marks

(c) UNIT - III OR 16Marks

Q.4.

(a) UNIT – IV 08 Marks

(b) UNIT – IV 08 Marks

(c) UNIT - IV OR  
(b) UNIT - IV 16Marks

**Q.5.**

- a) UNIT – I 04 Marks
- b) UNIT – II 04 Marks
- c) UNIT – III 04Marks
- d) UNIT – IV 04 Marks

## **3T4 MONETARY ECONOMICS-I**

### **Unit I: Money**

Evolution, Meaning, Definition, Nature and Functions of Money. Quantity Theory of Money and Criticisms. Paper Currency & Methods of Note Issue- Fixed Fiduciary Method, Proportionate Reserve Method, Minimum Reserve Method.

### **Unit II: Inflation & Deflation**

Inflation- Meaning, Nature, Causes, Effects, Impact of Inflation. Deflation - Meaning, Nature, Causes, Effects, Impact of Deflation. Role of Monetary Policy and Fiscal Policy in controlling Inflation & Deflation.

### **Unit III: Money Market & Policies**

Money Market- Concept of Money Market, Objectives, Importance of Money Market, Instruments of Money Market. Monetary Policy and Fiscal Policy Concept-Meaning, Objectives, Need, Importance, Impact, Recent Changes/Trends.

### **Unit IV: Public Finance**

Concept, Meaning, Importance of Public Finance, Principles of Public Finance, Theory of Maximum Social Advantages & Criticisms. Taxation – Definition, Characteristics& Cannons. Types of Taxation- Proportional, Progressive and Regressive Taxation System .Direct and Indirect Taxes- Merits & Demerits.

### **Books Recommended:**

1. Monetary Economics, RR Paul, Kalyani Publishers.
2. Money,Banking,Trade & Public Finance, M.V.Vaish, New Age International Pvt.Ltd.
3. Money, Banking and International Trade, K.P.M. Sundaram , Sultan Chand,New Delhi.
4. Public Finance, Tyagi , Jai Prakash Nath Publishers.
5. Money and Financial System P.K. Deshmukh, Phadke Prakashan.
6. Monetary Economics, Rashi Arora, Sheth Publishers, Mumbai
7. Modern Macroeconomics(Theory & Policy ),B.N.Ghosh, Ane Books Pvt Ltd, 2<sup>nd</sup> Edition, 2012.
8. Macro Economics, D.D.Chaturvedi, Galgotia Publishing Company,1999.

**Question Paper Pattern**  
**Semester -III**  
**3T4-Monetary Economics – I**  
**Paper - IV**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.	(a) UNIT – I	08 Marks
	(b) UNIT – I	08 Marks
OR		
	(c) UNIT – I	16Marks
Q.2.		
	(a) UNIT – II	08 Marks
	(b) UNIT – II	08 Marks
OR		
	(c) UNIT – II	16Marks
Q.3.		
	(a) UNIT – III	08 Marks
	(b) UNIT – III	08 Marks
OR		
	(c) UNIT – III	16Marks
Q.4.		
	(a) UNIT – IV	08 Marks
	(b) UNIT – IV	08 Marks
OR		
	(c) UNIT – IV	16Marks
Q.5.		
	a) UNIT – I	04 Marks
	b) UNIT – II	04 Marks
	c) UNIT – III	04Marks
	d) UNIT – IV	04 Marks

**Allocation of marks for the subjects-**

- 1. Financial Accounting -II**
- 2. Business Communication and Management,**
- 3. Business Law and**
- 4. Monetary Economics-I**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10 marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10 marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-III**  
**3T5-Compulsory English**

**Unit -I PROSE ITEMS FROM “BLOSSOMS”**

- 1.The Portrait of a Lady - Khushwant Singh
- 2.Youth and the Tasks Ahead – Karan Singh
- 3.The Verger - W.S.Maugham
- 4.*The Eyes are not Here* - Ruskin Bond

**Unit -II POEMS FROM “BLOSSOMS”**

- 1.*Money Madness* – D.H.Lawrence
- 2.*The Felling of the Banyan Tree* – Dilip Chitre
3. *A River* - A.K.Ramanujan

**Unit -III**

(A)Comprehension of UnseenPassage

(B)Transformation of Sentences:

- a.Affirmative –Negative and vice-versa
- b.Interrogative – Assertive and vice-versa

**Unit -IV**

(A) Business Correspondence:

*Claim and Adjustment Letters* – Making Claims/Offering Adjustments

(B)Drafting Agenda/Minutes of a Meeting

**Prescribed Text :***Blossoms* (Raghav Publishers)

**Reference Books (For Sem III & IV) :**

For Unit III – Learner’s English Grammar and Composition – N.D.V.Prasada Rao  
(S.Chand)

For Unit IV – 1. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan (Tata  
2.Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan) (Tata McGraw-Hill)

### **3T5-Compulsory English**

#### **Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Prose items (Unit I: Lesson No. 1 & 2)	08 Marks
	B. One LAQ out of Two based on Prose items (Unit I: Lesson No 3 & 4)	08 Marks
Q 2.	Four SAQs with internal choice based on prescribed Prose items (Unit I) (4 x 4 Marks)	16 Marks
Q 3.	A. One LAQ out of Two from prescribed poems (Unit II)	08 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs –4 x 2 Marks	08 Marks
Q 4.	A. (i) Four items based on Unit III B (a) – 4 x 1 Mark - (ii) Four items based on Unit III B (b) – 4 x 1 Mark -	04 Marks
	B. One out of Two Questions based on Business Correspondence [Unit IV (A)]	08 Marks
Q 5.	A. One out of Two Questions based on UNIT IV (B)	08 Marks
	B. Four VSAQs based on Unit I and Unit III - (4×2 Marks)	08 Marks
		Total = 80 Marks

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Questions to be answered in one or two sentences.

#### **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance – 4 Marks**

**TOTAL – 20 MARKS**

## **3T6.1 - Supplementary English**

### **Semester - III**

#### **Unit 1 – Prose**

1. The Thief- Ruskin Bond
2. Three Hermits – Leo Tolstoy
3. The Power of Prayer- A.P.J. Abdul Kalam
4. A Tryst with Destiny- Jawaharlal Nehru

#### **Unit 2 - Poetry**

1. Still I Rise- Maya Angelou
2. Ulysses - Alfred, Lord Tennyson
3. Telephone Conversation- Wole Soyinka

#### **Non-Textual Portion-**

#### **Unit 3- Writing Skills**

##### **A) Report Writing**

- Inquiry Report
- Progress Report

##### **(B) Expansion of an Idea**

#### **Unit 4 - Vocabulary**

(A) Business Terminology - Ad Valorem, Authorized Capital, Blue Chip, Benchmark, Credit Rating, Corporation, Debenture, Dividend, Excise Duty, Face Value, Fringe Benefits, Goodwill, Gross Profit, Inventory, Inflation, Joint Venture, Kickback, Lease, Mortgage, Patent, Portfolio, Running Costs, Surety, Social Security, Voucher

(Students to give the appropriate business term for the definition/ explanation given)

Prescribed Text- *Reflections*- A Supplementary English Coursebook for Undergraduates (Raghav Publishers)( **for unit I & II** )

#### **Reference Books-**

1. Professional Communication - Roshan Lal Raina, Iftikhar Alam, Falzia Siddiqui. (Himalaya Publishing House)( **For the topic ‘Report Writing’ under unit III**)
2. Macmillan Foundation English - R.K. Dwivedi, A. Kumar( **for the topic ‘Expansion of an Idea’ under Unit III**)
3. Business Correspondence & Report Writing- A practical approach to Business & Technical Communication- R.C. Sharma & Krishna Mohan Fourth Edition (McGraw Hill) ( **for the topic ‘Business Terms’ under Unit IV** )

**3T6.1 - Supplementary English**  
**Question Paper Pattern**

Q1.

(E) Unit 1 Prose - LAQ 150 words (2 out of 4)                   $2 \times 08 = 16$  marks

Q 2.

(F) Unit 1 Prose - SAQ 75 words (4 out 5)

$4 \times 04 = 16$  marks

Q 3.

(C) Unit 2 Poetry- LAQ 150 words- 1 out of 2                   $1 \times 08 = 08$  marks

(D) Unit 2 Poetry - SAQ 75 words- 2 out of 3                   $2 \times 04 = 08$  marks

Q4.

(A) Unit 3- Report Writing                   $1 \times 08 = 08$  marks

(B) Unit 3- Expansion of an idea (1out of 2)                   $1 \times 08 = 08$  marks

Q 5.

(A) Business Terms (4 out of 6)                   $4 \times 02 = 08$  marks

(B) VSAQs from Unit 1 and Unit 2                   $4 \times 02 = 08$  marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

### 3T6.2-विषय : मराठी

#### सत्र तिसरे

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	पर्यावरण, आधुनिकज्ञानविज्ञान आणि प्रसार माध्यमे ह्या विषयांवर आधारित निबंध ( चार पैकी एक ; शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन १ दुखःक्रांत लेंकी येणे (म्हाइंभट) २ माझे दत्तक वडील ( चि. वि. जोशी) ३ सांगावा ( शंकरराव खरात ) ४ शेवटची माती ( आनंद यादव ) ५ जनसामान्यांच्या प्रबोधनाचं गतिचक्र ( बा. ह. कल्याणकर )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन १ संतवाणी ( चोखामेळा, सेना न्हावी, नरहरी सोनार ) २ लटपट लटपट तुझे चालणे ( होनाजी बाळा ) ३ माझी कन्या ( बी. ) ४ आभाळाची आम्ही लेकरे ( वसंत बापट ) ५ इथेच ( यशवंत मनोहर ) ६ जहर खाऊ नका ( जानेश वाकुडकर )	३५	
४	४	व्यावहारिक मराठी १ प्रसारमाध्यमांसाठी वृत्तलेखन २ कल्पना विस्तार	१०	

### **3T6.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप  
सत्र : तिसरे**

वेळ: ३ तास)

(एकूण गुण-80)

प्रश्न: १ पर्यावरण आधुनिक ज्ञानविज्ञान आणि या विषयावर आधारित निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

#### **एकूण गुण विभागणी**

१. गद्य विभाग २८ गुण
२. पद्य विभाग २८ गुण
३. व्यावहारिक मराठी ०८ गुण
४. निबंध १६ गुण

एकूण गुण : ८०

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्यांची वर्गातील उपस्थिती (०५ गुण ), परीक्षार्थ्यांचा वर्गातील सक्रीय सहभाग ( ०५ गुण ) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण ) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण  
एकूण गुण : १००

3T6.3-fo"k;%& fgUnh  
r`rh; I= % Semester III

le;%& rhu ?kaVs		dqy vad%&80
bdkbZ Øekad (Units)	bdkb;ksa (Units) dk ikB~;Øe Øekuqlkj	vad
<b>bdkbZ 1 (Unit-1)</b>	<b>Toyar leL;kvksa]</b> vk/kqfud Kku&foKku rFkk izlkj <b>ek;/e vkfn fo"k;ksa ij vk/kkfjr fuca/k A</b> ½ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½	20
<b>bdkbZ 2 (Unit-2)</b>	<b>Xk  foHkkx %&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk &amp;Hkkx&amp;2**</b> 1½ fgEer vkSj ftanxh & fuca/k& jke/kkjh flag ^fnudj* 2½ thou dh fdrkc & fuca/k& vuar xksiky 'ksomS 3½ lk;kZoj.k& iznw"k.k % leL;k eukstxr dh & fuca/k& foosdh jk; 4½ xkSjk & laLej.k & egknsoh oekZ 5½ izfr'kks/k & ,dakdh & MkW- jkedqekj	35
<b>bdkbZ 3 (Unit-3)</b>	<b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk&amp;Hkkx&amp;2**</b> 1½ fou; if=dk & rqylhnkl 2½ ehjk ds in & ehjkckbZ 3½ jghe ds nksgs & jghe 4½ fiz; izokl & v;ks;/kflag mik;/k; ^gfjvkS/k* 5½ ckny dks f?kjrs ns[kk gS & ukxktqZu	35
<b>bdkbZ 4 (unit-4)</b>	<b>vU; ikB~; lkexzh %&amp;</b> 1½ thou o`Rr (Bio-Data)ifjHkk"kk] lkekU; ifjp;] izk:i]fo'ks"krk,j] izdkjA	10

2½ lk{kkRdkj (Interview)ifjHkk"kk]lhek, i] mls';] fl)kar]  
izdkj]egRRoA

fVli.kh%& bdkbZ& 4 dh lkexzh v/;u vkSj v;/kiu ds ek/;e  
ls rS;kj dh tk;sA

**3T6.3-fo"k;%& fgUnh  
r`rh; I= % Semester III  
fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%&80**

**iz'u&1 Toyar leL;kvksa] vk/kqfud Kku&foKku rFkk izlkj ek;/e vkfn  
fo"k;ksa ij vk/kkfjr fuca/kA  
¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn e;kZnk 400 'kCnksa rd½  
vad&16**

**iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½**

**iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx lss o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gSSA 4  
x4vad =vad&16**

**iz'u&5 blds vUrXZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA izFke iz'u  
x| ls] f}rh; iz'u i| ls] r`rh; iz'u eqgkojs vkSj yksdksfDr;ksa ls vkSj  
prqFkZ iz'u i=&ys[ku ls iwNs tk;saxsa A lHkh iz'uksa ds mRrj  
visf{kr gSA 4 x4vad =vad&16**

**vkUrfjd ewY;kdau & 20 vad  
dqy vad foHkktu%&**

**fucU/k&16 vad  
x| foHkkx & 28 vad  
i| foHkkx &28 vad  
vU; ikB~; lkexzh& 08 vad  
dqy vad &80 vad**

**Vocational Course**  
**Semester III**  
**(Same syllabus for all vocational group subjects in B.Com – I)**  
**3T7-Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge regarding assisting institutions and preparation of project.

---

**Unit-I**

Institutions Assisting Entrepreneurs- District Industries Centres (DICs), State Small Industries Corporations (SSIC), Small Industries Services Institute (SISI), Small Industry Development Corporations (SIDCO), Khadi & village Industries Commission (KVIC)

**Unit-II**

Commercial Bank & Entrepreneurial Development: State Bank of India (SBI), Punjab National Bank (PNB), Indian Bank (IB), Bank of Baroda, Bank of India (BOI), Canara Bank, Syndicate Bank, Export Import Bank of India (Exim Bank).

**Unit-III**

Concept of project and classification of project, project identification, project selection, elements of project formulation - project report, contents of project report- project design - project appraisal

**Unit-IV**

Methods of project appraisal-- Ratio analysis - Break even analysis - Profitability analysis, average rate of return, overrun analysis,

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I : Computer Applications**  
**3T8.1 : Application Software**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit-I : Introduction to PowerPoint**

Working with PowerPoint Window, Standard Toolbar, Formatting Toolbar, Drawing Toolbar, Moving the Frame, Inserting Clip Art, Picture, Slide; Text Styling, Send to Back, Entering Data to Graph,

**Unit-II : Features of PowerPoint**

Organization Chart, Table, Design Template, Master Slide, Animation Setting, Saving and Presentation, Auto Content Wizard, Package for CD (Pack & Go Feature).

**Unit-III : Introduction to MS-Access**

Introduction to database management system, DBMS vs RDBMS, Database Administrator (DBA) and its role.

Introduction to Microsoft Access, creating a database in access, using database wizards and blank database, creating table, database view and design view,

**Unit-IV : Introduction to MS-Access**

Creating queries, forms, reports and macros in MS-Access, Relationship in MS-Access

**Practical : Practical will be based on MS-PowerPoint and MS-Access**

**Books Recommended:**

1. Microsoft Office –2000 – Gini Courter , Annelte Marquis BPB
2. IT Today (**Encyclopedia**) – S.Jaiswal
3. A First Course In Computers – Sanjay Saxena
4. First Text Book On Information Technology – Srikant Patnaik
5. Guide To Microsoft Access – Carl Townsand
6. An Introduction To Database Management System – Bipin C. Desai (Galgotia Pub.)

7. Database Management Design – CSV Murthy ( Himalaya)

(Semester - III)

**Group - II : Principles & Practice of Insurance**

**3T8.2:General Insurance – Paper I**

Time : 3 Hours]

Theory : 80 Marks

Internal Assessment: 20 Marks

---

### **Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about General Insurance.

#### **Unit - I**

- General Insurance : Meaning Definition ,Functions, Importance of General Insurance
- Principle of General Insurance ,History and Development of Insurance

#### **Unit - II**

- Types of Insurance, Life Insurance Vs.General Insurance
- Silent features of General Insurance Business ( Nationalisation ) Act,1972
- Concept of Reinsurance ,Double Insurance and Over insurance and its features

#### **Unit-III**

- Fire Insurance : Meaning, features and policy conditions for Fire Insurance, premium calculation, fire insurance contracts.
- Procedure of Taking of Fire Policy, Types of Fire insurance, Settlement of Claim of Fire Insurance, rate of fixation in fire insurance

**Unit IV-** Introduction to miscellaneous insurance, nature and utility of miscellaneous insurance, progress of miscellaneous insurance, general insurance business in India.

- Introduction to National Agricultural Insurance Scheme, property, motor vehicle, health, cattle and engineering insurance, public liability insurance

#### **Recommended books:**

Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.

Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House

Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिधांत एवं व्यवहार – भगवती प्रकाळ अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

### Group-III

#### 3T8.3- Advertising, Sales Promotion and Sales Management - III

Full Marks : 80

Time : 3 Hours

Internal Assessment : 20

- Level of knowledge: basic knowledge
- Objectives: to acquaint students with the theory and practice of advertising as well also management of a firm's sales operation.

## CONTENTS

### Unit-I

- **Introduction:** meaning of advertising, importance of advertising from the viewpoint of marketing and communication, role of advertising in the marketing mix – inter-relationship with product decisions, Pricing Decision, Channels Decision. Personal Selling, Sales Promotion and Publicity.

### Unit-II

- **Scope of advertising:** How advertising works (a few case studies), Stimulating, Expanding and sustain scale: secure sales lead, Increasing profits, Demarketing, Supporting other promotion tools etc.

### Unit - III

**Various forms of advertising:** National, Retail, Trade, Cooperative, Industrial, Corporate/Institutional, Financial, Public Service, Political, Primary and Selective demand Ad; Push and Pull Ad.

### Unit - IV

- **Advertising objectives:** Meaning and importance, Difference between objective, goals and strategy, possible Ad objectives, Sales as an objective, communication objectives, DAGMAR Approach of RH Colley.

### Recommended books:

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
  - ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
  - ✓ Stanton, William J & Buskirk, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskirk, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)

✓ Rajiv BAtra, Myers, David Aaker, Advertising Management (Prentice Hall India Pvt. Ltd., New Delhi)

**SEMESTER III**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours] [Full Marks:- 80**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B.Com. – Second Year  
Semester-IV  
4T1:- Financial Accounting – III**

**Unit – I**

**Final Accounts of Banking Companies**

Meaning of Banking Companies, Functions of Banking, Restrictions for a Banking Company, Provision of the Banking Companies Regulation Act 1949, Preparation of Annual accounts as per Banking Companies Regulation Act 1949 as per amendment by RBI.

( Theory & Numericals)

**Unit – II**

**Final Accounts of General Insurance Companies**

Introduction, Types of General Insurance, Important Terms- Reserve for unexpired Risk, Reinsurance Claims, Reinsurance Premium, Commission, Bonus in Reduction of Premium and preparation of final accounts

( Theory & Numericals)

**Unit – III**

**Valuation of Goodwill**

Meaning, Characteristics of Goodwill, Factors influencing the value of goodwill, Need for Valuation of goodwill , Valuation of goodwill as per -Average Profit Method, Weighted Average Profit Method, Super Profit Method, Capitalization Method. ( Theory & Numericals)

**Unit – IV**

**Liquidation of Company.**

Meaning, Types of Liquidation, Steps in Voluntary Liquidation, Functions of Liquidator, Liquidators remuneration/Commission. Preparation of Liquidator's Final Statement of Account only. (Theory & Numericals)

**The Financial year ends on 31<sup>st</sup> March.**

**Books Recommended**

- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya PublicationHouse
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency,Kolkata)
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- Dr. L. S. Porwal : Accounting Theory (Tata McGraw Hill)

- Robert Anthony, D. F. Hawkins & K. A. Merchant : Accounting Text & Cases(Tata McGraaw Hill)
- Dr. S. N. Maheshwari : Corporate Accounting (Viakas Publishing House Pvt.Lit. New Heldi)
- Dr. Ashok Sehgal& Dr. Deepak Sehgal : Advanced Accounting (Taxmann,New Delhi)

**Question Paper Pattern  
Semester IV  
4T1-Financial Accounting – III  
Paper - I**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours		Marks-80
Q. No. 1 – Unit I		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16Marks	
Q. No. 2 – Unit II		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 3 – Unit III		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 4 – Unit I		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 5	a) Unit- I	Problem 04 Marks

b)	Unit –II	Problem 04 Marks
c)	Unit-III	Problem 04Marks
d)	Unit-IV	Problem 04 Marks

## **4T2- : Skill Development**

### **Unit I: Introduction:**

Basic of personality, Human growth and behavior, Motivation and morality, Meaning of Skill, types; soft and hard skill, need for developing skill, human skill and behavior, Motivation and morality, skill development and employment

### **Unit II: Communication skills and Personality Development:**

Intra-personal communication and Body Language, Inter-personal Communication and Relationships, Leadership Skills, Team Building and public speaking, Communication in English, Presentation Skills, and Quality required for good public speaker,

### **Unit III: Techniques in Personality development**

Self confidence, Mnemonics, Goal setting, Time Management and effective planning, Stress Management, Meditation and concentration techniques, Self Motivation Self acceptance and Self growth

### **Unit IV : Entrepreneurial skill development**

Skill development of rural industrial sectors - small scale - handloom - agro based industries, rural artisans - handicrafts and sericulture. Meaning of entrepreneurship, types skill required for entrepreneurship

### **Suggested Books:**

1. Personality Development –Transform yourself by Rajiv K Mishra.
2. Personality Development and Communication Skills – II by Dr.C.B.Gupta
3. Business Communication and Personality Development: Lessons for Paradigm Change in Personality by Biswajit Das and Ipseeta Satpathy.
4. Entrepreneurship development.

# **Question Paper Pattern**

## **Semester-IV**

### **4T2-Skill Development**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks

Time :- 3 hours Marks-80

**Q.1.** (a) **UNIT – I** **08 Marks**

OB

(c) UNIT – I 16Marks

Q.2.

(a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

(c) UNIT-II 16Marks

0.3.

(a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

(c) UNIT – III 16Marks

Q.4.

(a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

(c) UNIT – IV 16Marks

**Q.5.**

- a) UNIT – I 04 Marks
- b) UNIT – II 04 Marks
- c) UNIT – III 04Marks
- d) UNIT – IV 04 Marks

## **4T3-: Income Tax**

### **Unit I: Introduction of Income Tax**

- i) Basic Concepts of Income Tax, Meaning & Definition of Assesses, Assessment Year, Previous Year, Gross Total Income, Types of Assesses, Income Exempt from tax, Capital & Revenue Expenditure. Agricultural Income.

#### **Residential Status**

- ii) Residential Status and its effects on Tax incidence: Residential status of Individual, HUF, Firm & Association of Person, Company, Basic Conditions & Additional Conditions.(**Theory**)

### **Unit II: Income from Salary**

- i) Definition of Salary, Allowances, Types of Allowances, Taxable Allowances, Tax Free Allowances, Partly Taxable Allowances,  
ii) Perquisites, Types of Perquisites, Taxable Perquisites, Tax Free Perquisites,  
iii) Types of Provident Fund, Tax treatment of P.F, E.P.F., Superannuation Fund and Computation of Salary Income/Taxable Salary and tax liability. (**Theory & Numericals**)

### **Unit II Income from House Property**

- i) Meaning of Annual Value, Fully exempted income of house property, deemed owner.  
ii) Deduction from income from house property, unreleased rent, computation of income from house property. (**Theory & Numericals**)

### **Unit IV : i)Income Tax Slab Rates, Rebates, Income which do not form part of total Income**

- ii)Deduction under section 80C, 80CCC, 80CCD, 80D, 80DDB, 80E, 80G, 80GG, 80U

#### **iii) Income from Other Sources**

Income specifically included under the head of other sources, specified income, casual income, deduction allowed from the income of other sources, computation of income from other sources. (**Theory & Numericals**)

### **Books Recommended :**

Ahuja G. K. and Ravi Gupta :- Systematic Approach to Income and Central Sales tax, Bharat law house, New Delhi.

- Singhania V. K. :- Direct taxes :- Law and Practice, Taxman's publication, Delhi.

- Jain K. C., Gour V. P., Narang D. B. :- Direct taxes Kalyani Publishers, Delhi.
  - Datey V. S. :- Indirect taxes law and Practice, Taxman, New Delhi, customs and excise Law Time - various issues.
  - Dr. V. Upgade and Shende Dr. A. K. Income Tax, Anuradha publication, Nagpur.

## **Question Paper Pattern**

**Semester-IV**

## 4T3-Income Tax

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

## Q. No. 1 – Unit I

a) Theory 08 Marks  
b) Theory 08 Marks

**OR**

c) Theory 08 Marks  
d) Theory 08 Marks

Q. No. 2 – Unit II	a) Theory	08 Marks
	b) Problem	08 Marks
	<b>OR</b>	
	c) Problem	16 Marks

Q. No. 3 – Unit III	a) Theory b) Problem	08 Marks 08 Marks
		<b>OR</b>
	c) Problem	16 Marks

Q. No. 4 – Unit I	a) Theory b) Problem	08 Marks 08 Marks
		<b>OR</b>
	c) Problem	16 Marks

Q. No. 5	a)	Unit- I	Problem 04 Marks
	b)	Unit –II	Problem 04 Marks
	c)	Unit-III	Problem 04Marks
	d)	Unit-IV	Problem 04 Marks

## **4T4-: MONETARY ECONOMICS-II**

### **Unit I: Commercial Banking**

Evolution, Meaning, Functions of Commercial Banks. Role commercial banks in a developing economy. Process of Credit Creation by Commercial Banks & its Limitations, Investment Policy of Commercial Banks. Non-Performing Assets- Meaning, Criteria and Causes.

### **Unit II: E-Banking & Core Banking**

Meaning, Features, Advantages & Disadvantages of ATM (Automated Teller Machines.) Meaning, Features, Merits and Demerits of Credit cards, Plastic cards, Smart cards, e-purse, Laser cards. EFT (Electron Fund Transfer), ECS (Electronics clearing system).

### **Unit III: Banks and Customers Relationship and Services**

Introduction, Meaning of Customer. Bank & Customer Relationship- Debtor & creditor, Trustee and Beneficiary, Agent and Principal, Bailer and Bailee. Opening, operating and closing of various bank accounts. Demat Account -Advantages, Opening and Operation of Demat Account. Methods of Calculating Interest Rates on deposits and on loans.

### **Unit : IV Central Bank**

Meaning, Objectives, Functions, Role of Central Bank. Credit Control- Meaning, Objectives, Methods : Quantitative- Bank Rate, Open Market Operations, Cash Reserve Ratio(CRR), Statutory Liquidity Ratio(SLR), Repo Rate. Qualitative – Varying margin requirement, Regulation of consumer's credit, Issuing directives, Publicity measure, Moral suasion, Credit rationing and limitations.

### **Books Recommended:**

1. Monetary Economics, RR Paul, Kalyani Publishers.
2. Money, Banking and International Trade, K.P.M. Sundaram , Sultan Chand,New Delhi.
3. Macroeconomics, Mankiw, N. Gregory, Macmillan Worth Publishers New York, Hampshire U.K.

4. Financial Institutions and Markets , Agrawal & Gupta, Kalyani Publishers.
5. Modern Banking ,Vaish, M.C, Oxford & IBH Publishing Co.,New Delhi
6. Money and Financial System P.K. Deshmukh, Phadke Prakashan.
7. Monetary Economics, Rashi Arora, Sheth Publishers, Mumbai

### **Question Paper Pattern**

#### **Semester-IV**

#### **4T4-Monetary Economics- II**

- N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

Q.2.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |           |         |
|-----|-----------|---------|
| (c) | UNIT – II | 16Marks |
|-----|-----------|---------|

Q.3.

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |            |         |
|-----|------------|---------|
| (c) | UNIT – III | 16Marks |
|-----|------------|---------|

Q.4.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |           |         |
|-----|-----------|---------|
| (c) | UNIT – IV | 16Marks |
|-----|-----------|---------|

Q.5.

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Financial Accounting -III**
- 2. Skill Development**
- 3. Income Tax and**
- 4. Monetary Economics-II**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10 marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10 marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-IV**  
**4T5-Compulsory English**

**Unit –I PROSE ITEMS FROM “BLOSSOMS”**

PROSE ITEMS FROM “BLOSSOMS” :

1. *Go! Kiss the World* - Subroto Bagchi
2. *The Gold Frame* - R.K.Laxman
3. *The Cabuliwallah* - Rabindranath Tagore
4. *The Struggle for an Education* - Booker T. Washington

**Unit –II POEMS FROM “BLOSSOMS”**

POEMS FROM “BLOSSOMS” :

1. *If* – Rudyard Kipling
2. *Stay Calm* - Grenville Kleiser
3. *Ballad of the Landlord* - Langston Hughes

**Unit –III**

(A)Comprehension of Unseen Passage

(B) Transformation of Sentences:

- a. Exclamatory-Assertive and vice-versa
- b. Change the Voice

**Unit –IV**

(A) Business Correspondence:

*Credit and Collection Letters* – Granting Credit/Refusing Credit, Reminders for payment

(B)Interoffice Memorandum/Office Order

**Prescribed Text :***Blossoms* (Raghav Publishers)

**Reference Books (For Sem III & IV) :**

For Unit III – Learner’s English Grammar and Composition – N.D.V.Prasada Rao  
(S.Chand)

For Unit IV – 1. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan (Tata  
2.Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan) (Tata McGraw-  
Hill)

## **4T5-Compulsory English**

### **Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Prose items (Unit I: Lesson No. 1 & 2)	08 Marks
	B. One LAQ out of Two based on Prose items (Unit I: Lesson No 3 & 4)	08 Marks
Q 2.	Four SAQs with internal choice based on prescribed Prose items (Unit I) (4 x 4 Marks)	16 Marks
Q 3.	A. One LAQ out of Two from prescribed poems (Unit II)	08 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs –4 x 2 Marks	08 Marks
Q 4.	A. (i) Four items based on Unit III B (a) – 4 x 1 Mark - (ii) Four items based on Unit III B (b) – 4 x 1 Mark -	04 Marks
	B. One out of Two Questions based on Business Correspondence [Unit IV (A)]	08 Marks
Q 5.	A. One out of Two Questions based on UNIT IV (B)	08 Marks
	B. Four VSAQs based on Unit I and Unit III - (4×2 Marks)	08 Marks
		Total = 80 Marks

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Questions to be answered in one or two sentences.

### **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

## **4T6.1-Supplementary English**

### **Semester - IV**

#### **Unit 1 - Prose**

1. The Last Salvation- R.P. Sisodia
2. The Romance of a Busy Broker- O' Henry
3. Playing the English Gentleman- M.K. Gandhi
4. My Financial Career- Stephen Leacock

#### **Unit 2 - Poetry**

1. Dulce et Decorum est- Wilfred Owen
2. At the Lahore Karhai- Imtiaz Dharker
3. Leisure- W.H. Davies

#### **Non-Textual Portion-**

#### **Unit 3 - Writing Skills**

##### **A) Report Writing**

- Recommendation Report
  - Situational Report about an event or function
- B) Writing a dialogue with minimum 5 exchanges**

#### **Unit 4 - Vocabulary**

##### **(A) Business Terminology**

(Advice Note, Arbitration, Boom, Brand, Buffer, Curriculum Vitae, Capital, Devaluation, Duty, Entrepreneur, Gilt-Edged Stock, Infrastructure, Internal Audit, Ledger, Petty Cash, Raw Data, Scrip, Social Audit, Stock Exchange, Tender, Trademark, Underwrite, Warranty, Wildcat Strike, Write-Off) (Students to give the appropriate business term for the definition/ explanation given)

#### **Prescribed Text:**

*Reflections* - A Supplementary English Coursebook for Undergraduates  
(Raghav Publishers) **(For Unit I & II)**

#### **Reference Books-**

1. Professional Communication - Roshan Lal Raina, Iftikhar Alam, Faizia Siddiqui (Himalaya Publishing House) (**For the topic ‘Report Writing’ under Unit III**)
2. English for Practical Purposes - Z.N. Patil, B.S. Valke, Ashok Thorat, Zeenat Merchant. (Macmillan) (**for the topic ‘Dialogue Writing’ under Unit III**)
3. Business Correspondence & Report Writing - A Practical Approach to Business & Technical Communication- R.C. Sharma & Krishna Mohan. (McGraw Hill Higher Education) (**for the topic ‘Business Terms’ under Unit IV**)

**4T6.1-Supplementary English  
Question Paper Pattern**

**Semester - IV**

**Q1.**

(G) Unit 1 Prose - LAQ 150 words (2 out of 4)  $2 \times 08 = 16$  marks

**Q 2.**

(H) Unit 1 Prose - SAQ 75 words (4 out of 5)

$4 \times 04 = 16$  marks

**Q 3.**

(E) Unit 2 Poetry- LAQ 175 words- 1 out of 2  $1 \times 08 = 08$  marks

(F) Unit 2 Poetry - SAQ 75 words- 2 out of 3  $2 \times 04 = 08$  marks

**Q 4.**

(A) Unit 3- Report Writing (1 out of 2)  $1 \times 08 = 08$  Marks

(B) Unit 3- Writing a dialogue  
(with minimum 4 exchanges)  $1 \times 08 = 08$  Marks

**Q 5. (A) Business Terms (4 out of 6)**  $4 \times 02$  Marks= 08 Marks

**(B) VSAQ from Unit 1 and Unit 2**  $4 \times 02$  Marks =08 Marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

#### **4T6.2-विषय : मराठी**

**सत्र चौथे**

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	साहित्यविषयक निबंध ( चार पैकी एक; शब्द मर्यादा- ४००)	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन  १ इंद्रायणीच्या वाळवंटात ( श्री. म . माटे ) २ मित्र ( ना. सी. फडके ) ३ माणसांत विरलेला माणूस ( दुर्गा भागवत ) ४ रामा मैलकुली (व्यंकटेश माडगुळकर ) ५ प्रेम ( मारोती चित्तमपल्ली) ६ विजान युगात भारत ( जयंत नारळीकर )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन  १ दोन भारुडे ( संत एकनाथ) २ विद्यार्थ्याप्रत ( केशवसुत) ३ आई ( यशवंत )	३५	

		४ विचार झाला पाहिजे ( वसंत आबाजी डहाके) ५ आता आम्ही (वैभव सोनारकर)		
४	४	व्यावहारिक मराठी १ स्मरणिका संपादन २. वाक्प्रचार	१०	

#### 4T6.2-विषय : मराठी

प्रश्न पत्रिकेचे स्वरूप  
सत्र : चौथे

वेळ: ३ तास)

(एकूण गुण-80

प्रश्न: १ साहित्य विषयक निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घोत्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घोत्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक

गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

#### एकूण गुण विभागणी

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण

३. व्यव्हारिक मराठी ०८ गुण

४. निबंध १६ गुण

एकूण गुण : ८०

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्याची वर्गातील उपस्थिती (०५ गुण), परीक्षार्थ्याचा वर्गातील सक्रीय सहभाग (०५ गुण) आणि लिखित स्वरूपातील गृह पाठ (१० गुण) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

### 4T6.3-fo"k;%& fgUnh prqFkZ I= %Semester IV

**le;%& rhu ?kaVs**

**dqy vad%&80**

bdkbZ Øekad(Units)	bdkb;ksa (Units) dk ikB~;Øe Øekuqlkj	Vad
<b>bdkbZ 1 (Unit-1)</b>	<b>IkfjfR;d fo"k;ksa] Hkkjr; R;kSgkjsarFkk LokLF; laca/kh fo"k;ksa ij vk/kkfjr fuca/kA ½ fdUgh pkj esa ls,d fo"k; ij &amp; 'kCn lhek 400 rd½</b>	20
<b>bdkbZ 2 (Unit-2)</b>	<b>XkJ foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk &amp;Hkkx&amp;2**</b>	35
<b>bdkbZ 3 (Unit-3)</b>	<b>1½ y{eh dk Lokxr&amp;,dakdh &amp;misUnzukFk ^v'd* 2½ vHkko&amp;dgkuh&amp;fo".kq izHkkdj 3½ vdsyh&amp;dgkuh&amp;eUuw HkaMkjh 4½ ?kj dh ryk'k&amp;dgkuh&amp;jktsUnz ;kno 5½ ydh &amp;dgkuh&amp;eerk dkfy;k</b>	35
<b>bdkbZ 4</b>	<b>ij foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk Hkkx&amp;2**</b>	
	<b>1½ xhr &amp;Qjks'k&amp;Hkokuhizlkn feJ 2½ Lof.kZe ijkx&amp;lqfe=kuUnu iar 3½ /kjrh LoxZ leku&amp;xksikynkl ^uhjt*</b>	
	<b>4½ [kksus dks ikus vk;s gks\&amp;ek[kuyky prqosZnh</b>	

<p><b>(unit-4)</b></p> <p>5½ &gt;k;jlh dh jkuh dh lekf/k ij&amp;lqHknzkdqekjh pkSgku</p> <p><b>vU; ikB~; lkexzh%&amp;</b>  <b>1½ izfrosnu ys[ku ¼Report Writing½&amp; vFkZ ,oa</b>  ifjHkk"kk] mn~Hko vkSj fodkl] fo'ks"krk,j] izdkj ,oa  rRo] izfrosnu rS;kj djrs le; /;ku nsus ;ksX; ckrsaA  <b>2½ lekpkj ys[ku ¼News Writing½&amp; lekpkj&amp;i= ds</b>  fy, lekpkj ys[ku] izeq[k vk;ke ,oa izk:lk rS;kjdjuk]  foKku&amp;fopkj] laln lekpkj] lekpkj vkSj laln] vijk/k  lekpkj] [ksy lekpkj] jkstxkkj lekpkj] lkekfd;d ,oa O;fDrxr  lekpkj] 'kqHk voljksads lekpkj] e`R;q lekpkj] foKkiu  lekpkj vkfnA  Lkekpkj ys[ku esa vko';d ckrsa ij /;ku nsuk  &amp;'kh"kZiafDr(Head line)] lekpkj ys[ku izfØ;k] vPNs  lekpkj dhfo'ks"krk,j] Hkk"kk&amp;'kSyh] vPNs laoknnkrk  dh ;ksX;rk,jA</p> <p><b>fVli.kh%&amp;</b> bdkbZ&amp; 4 dh lkexzh v/;u vkSj v/;kiu ds  ek/;e ls rS;kj dh tk;sA</p>	<p><b>10</b></p>
--	------------------

**iz'u&i= dk izk:lk ,oa vad foHkktu**

**prqFkZl=**

**4T6.3-fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%&80**

iz'u&1 lkfgfR;d fo"k;ksa] Hkkjrh; R;kSgkjksa rFkk LokLF; laca/kh  
**fo"k;ksa ij vk/kkfjr fuca/kAvad&16**

½ fdUgha pkj esa ls ,d fo"k; ij & 'kCn e;kZnk 400 rd½

iz'u&2 x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
**vad&16**

½nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½

iz'u&3 ij& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh  
**iz'uAvad&16**

**½nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx ls o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gSSA**

**4 x4vad=vad&16**

**iz'u&5 blds vUrXZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA **izFke iz'u  
x| ls] f}rh; iz'u i| ls] r`rh; iz'u lkzfrosnu ys[kuls vkSj prqFkZ iz'u  
Iekpkj&ys[ku ls iwNs tk;saxsa A lHkh iz'uksa ds mRrj visf{kr gSA****

**4 x 4vad=vad&16**

**vkUrfjd ewY;kdau & 20 vad**

**dqy vad foHkktu%&**

**fucU/k&16 vad**

**x| foHkkx & 28 vad**

**i| foHkkx &28 vad**

**vU; ikB~; lkexzh& 08 vad**

**dqy vad &80 vad**

### **Vocational Course**

#### **Semester IV**

**(Same syllabus for all vocational group subjects in B.Com – I)**

**4T7-- Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge about small business and environment consideration.

---

#### **Unit-I**

##### **Small Enterprises**

Definition, Characteristics, Relationship between Small and Large Units, Objectives, Scope, Role of Small Enterprises in Economic Development.

#### **Unit-II**

### **Selection of Types of Organisation**

Sole proprietorship, Partnership, Joint stock company, Factors influencing the choice of organization

### **Unit-III**

Legal Aspects of Small Business – Major provisions of Income Tax, Sales Tax, Patent Rules, Excise Rules – Factory Act and Payment of Wages Act.

### **Unit-IV**

Environmental considerations – Concept of ecology and environment – Factors contributing to Air, Water, Noise pollution – Air, Water and Noise pollution standards and control – regulatory bodies. Personal Protection Equipment (PPEs) for safety at work places.

### **Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

### **Group – I : Computer Applications**

#### **4T8.1 : Computerized Accounting (C/A)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

### **Unit-I :**

Introduction to Accounting, Advantages of accounting, Books of accounts, Classification of Accounts, Financial Statements, Inventory management, Computerized Accounting, Need of Computerized Accounting, Accounts Organization, Accounts group, Loans Liabilities, Assets and Budget.

### **Unit-II :**

Accounting Software's Introduction to tally Software, Features of Tally Screen, Company information, Creating new Company, Gateway, Selection of Company, selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features,

Configuration- General, Numeric Symbols, Voucher Entry, Creation of Voucher Screen, invoice Order Entry, Printing.

### **Unit-III :**

Accounts info menu, Account Groups- create new group, creation of primary group. Normal and advance information, Ledger Accounts, cost categories, Cost Centers. Creation of Budget, Types of budget. Voucher- Voucher Entry, creation of Vouchers Screen, types of Voucher, Selection of Voucher types, Post Dated Voucher, printing of Vouchers, Cheque Printing.

### **Unit-IV :**

Inventory info, Features of Inventory info. Configure- Inventory Info, balance Sheet, Audit Trail, Ratio Analysis. Display-Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export, Export of Data.

### **Practical : Practical will be based on Tally S/W**

Tally Software – All Accounting Problems Viz. Balance sheet, Profit & Loss, Cash Book, Loans, Cost Accounting, Vouchers, Budget, Sales and Purchase, Assets & Liabilities, Inventory Management, Financial Statements, Books of accounts, Ledger, etc.

### **Books Recommended:**

1. Accounting with Tally : K.K. Nadhani, BPB Publication
2. Tally Tutorial : K.K. Nadhani and A.K. Nadhani, BPB Publication.
3. Advances Accounts Vol-I: M.C. Shukla, T.S.Grewal and S.G.Gupta, S.Chand & Company, Delhi.
4. Accounting Principles: Anthony R.N. and J.S. Richard, Irwin Inc.
5. Advanced Accountancy By P.C. Tulsian, Tata McGraw HILL Publication.
6. Tally By S.B. Kishor (Dasganu)
7. Fundamentals of Computers – ITL Education Solutions Ltd. (Pearson)

**Group - II: Principles & Practice of Insurance**  
**4T8.2- General Insurance – Paper II (Semester – IV)**

Time : 3 Hours]

Theory : 80 Marks

Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about General Insurance.

**Unit - I**

- Nature of Marine Insurance, Marine insurance contract, Marine insurance policies, premium calculation, kinds of Marine insurance policies.

- Types of Marine losses, payment of claims, proximity clause, voyage warranties, progress of Marine insurance business in India.

### **Unit - II**

- Policy conditions for Marine Insurance, Procedure of taking out Marine Policy
- Settlement of claim of Marine loss, Growth of Marine Insurance Business

### **Unit -III**

- Nature of insurance benefits, insurers liability, resources to life and general table, value of benefits, basic plan of assurance.
- Temporary assurance and pure endowment.

### **Unit- IV**

- Fidelity Guarantee Insurance, Public liability, Health Insurance, Personal Accident and Sickness Insurance
- Growth of Miscellaneous Insurance business in India
- Growth of General Insurance Business after Privatisation.

#### **Recommended books:**

Fundamental<sup>□□</sup> Of Insurance, R.K. Gupta, Himalaya Publishing House.

Principles<sup>□□</sup> & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House

Insurance Principle and Practice, M.M. Mishra and Dr. S.B. Mishra, S. Chand Publication

Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House

बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल – हिमालया पब्लिशिंग हाउस

### **Group-III**

#### **4T8.3-Advertising, Sales Promotion and Sales Management - IV**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

### **Unit-I**

- **Advertising Budget:** Consideration to be kept in mind while deciding the budget, different methods. The budget-making process.

### **Unit-II**

- **Media planning:** Importance of the exercise, Evaluation of important media-print, audio-visual, outdoor, direct mail, advertising on internet misc. media, the media planning process, important considerations- cost, coverage, flexibility, impact etc. computerized media selection, current Ad. Media scene in India.

### **Unit-III**

- Role of selling in planned economy, selling as a career

- Acquiring skills and developing new qualities for salesmen and to improve growth chances.
- Tips and suggestions to improve personal ability, skills for salesmen, product knowledge, planned selling system.
- Practical suggestions to improve day to day field working, customer psychology, buying motives, trade relations, effective distribution network.
- Sales organizations- types, principles, aims and objectives.

#### **Unit-IV**

- Selection and training of sales force, latest techniques in training.
- Motivation and compensation plans
- Sales planning (forecasting) methods, budgets, implementation, review techniques.
- Communication, how to develop skills for effective communication, principles, objectives and methods.
- Sales managers/supervisors - their role, authority and responsibility

#### **Recommended books:**

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
- ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
- ✓ Stanton, William J & Buskrit, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskrit, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)
- ✓ Rajiv Batra, Myers, David Aaker, Advertising Management (Prentice Hall India Pvt. Ltd., New Delhi)

### **SEMESTER IV QUESTION PAPER PATTERN FOR All Vocational Subjects**

#### **Computer Application, Insurance & Entrepreneurial Development & ASM**

**TIME:- 3 Hours]** **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

#### Q.5. Answer in Brief

(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

### B.Com. – Third Year Semester-V **5T1- : Financial Accounting – IV**

#### **Unit – I**

##### **Amalgamation and Absorption of Companies**

Introduction, Meaning, Characteristics, Objectives, Methods of purchase Consideration, Accounting Procedure of Amalgamation and Absorption.

**(Theory & Numericals)**

#### **Unit – II**

##### **Reconstruction of Companies.**

(Internal and External Reconstruction of Companies)

Meaning, Characteristics, Objectives, Difference between Reconstruction and Reorganization, Accounting Procedure of Reorganization and Reconstruction.

**(Theory & Numericals)**

### **Unit – III**

**Accounts of Public Utility Companies (Electricity, Gas and Water Supply Companies)** According to Double Accounting System-  
 Meaning, Main features of Double Accounting system, Objective of Double Accounting System, Difference between Double Accounting System and Single Accounting System, Merits, Demerits of Double Accounting System, Preparation of Final Accounts.  
**(Theory & Numericals)**

### **Unit – IV**

#### **Valuation of Shares**

Meaning, Need of Valuation of Shares, Factors affecting the value of shares, Methods of valuation of shares, Net Assets Method/Intrinsic Value Method, Yield Method.  
**(Theory & Numericals)**

**The Financial year ends on 31<sup>st</sup> March.**

#### **Books Recommended**

- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya PublicationHouse
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency,Kolkata)
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- Dr. L. S. Porwal : Accounting Theory (Tata McGraw Hill)
- Robert Anthony, D. F. Hawkins & K. A. Merchant : Accounting Text & Cases (Tata McGraawHill)
- Dr. S. N. Maheshwari : Corporate Accounting (Viakas Publishing House Pvt.Lit. New Heldi)
- Dr. Ashok Sehgal& Dr. Deepak Sehgal : Advanced Accounting (Taxmann,New Delhi)

**Question Paper Pattern  
Semester -V  
5T1-Financial Accounting – IV**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours

Marks-80

Q. No. 1 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

Q. No. 2 – Unit II	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 3 – Unit III	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 4 – Unit I	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 5	a)      Unit- I b)      Unit –II c)      Unit-III d)      Unit-IV	Problem 04 Marks Problem 04 Marks Problem 04Marks Problem 04 Marks

## **5T2– :Cost Accounting**

### **Unit – I**

#### **Cost Accounting :-**

Meaning, Importance, Element of Cost, Cost-Absorption, Allocation of Overheads and Methods of costing, Difference between Cost Accounting and Financial Accounting. Simple Problems on Cost Sheet, Tender and Quotations. (**Theory & Numericals**)

### **Unit – II**

#### **Reconciliation of Profit /Loss shown by Cost and Financial Accounts:**

Need for reconciliation of profit, reason for the difference between cost accounts and financial accounts, objectives of reconciliation statement, methods of preparation of reconciliation statement. (**Theory & Numericals**)

### **Unit – III**

## **Process Cost Accounting :**

Methods of costing, advantages and limitations of process costing, difference between job costing and process costing, Normal loss, Abnormal loss and Abnormal effects, **(Theory & Numericals)**

Unit -IV

## **Contract Costing:**

Features of contract costing, Types of contracts, Elements of contract cost, Nature of contract-completed contract, incomplete contract(**Theory & Numericals**)

### - Books Recommended -

- S. N Maheshwari : Cost Accounting Theory and problems –Shri Mahavir Book Depot, New Delhi
  - V.K. Saxena : Cost Accounting Text Book- Sultan Chand and Sons New Delhi
  - M.C. Shukls – T.S. – Grewal, M.P. Gupta – Cost Accounting – S. Chand , NewDelhi
  - R. S. N. Pallai, V Bhagavathi – Cost Accounting – S. Chand, New Delhi
  - S. M. Shukla :- Cost Accounts (Hindi)
  - Nigam R. S. – Advanced Cost Accounting , S. Chand & Company
  - Jain S. P. – Advanced Cost Accounting – Kalyani Publication
  - Gawada, J Made – Advanced Cost Accounting – Himalaya Publication House

# **Question Paper Pattern Semester –V 5T2-Cost Accounting Compulsory Paper- II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q. No. 1 – Unit I

a) Theory 08 Marks

b) Problem	08 Marks
<b>OR</b>	
c) Problem	16Marks

Q. No. 2 – Unit II

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 3 – Unit III

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 4 – Unit I

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 5 -	Unit- I	a)	Problem 04 Marks
	Unit –II	b)	Problem 04 Marks
	Unit-III	c)	Problem 04Marks
	Unit-IV	d)	Problem 04 Marks

## 5T3-MANAGEMENT PROCESS

**Objective:** To equip the students with the knowledge of Management Process and inspire them to acquire required quality to face the managerial challenges.

### **Unit I:-**

**Management and Administration:** - Management concept, levels of management, importance & functions of various levels of management. Administration- meaning, concept and functions of administration. Differences between Management and Administration.

### **Unit II:-**

**Managerial Development & Group Dynamics:** - Need for developing managerial skills, skills required of a manager, classification of managerial skill, methods of developing skills of managers, group dynamics ,meaning & significance, types of groups, group formation development, group composition.

### **Unit III:-**

**Managerial Style:** - Meaning and types of managerial styles X and Y Theory of Macgregor, factors' influencing managerial style, organization conflict- traditional and modern approaches to conflict, Management as a profession, significance of professional manager in current scenario,

### **Unit IV:-**

**Motivation:** Definition, Meaning and concept of motivation, kinds of motivation and its importance, Theories of motivation- Maslow's theory of need hierarchy, Herzberg's theory of motivation, relationship between motivation & productivity.

### **Refefence:**

1. Sherlekar "Management Value Oriented Holistic Approach" Himalaya Publishing.
2. Stephen Robbins : Organizational Behaviour, Prentice Hall of India.
3. Terry George: Principles of Management.
4. R.S.Dewedi "Human Relation and organizational behaviour.
5. Shejwalkar and Ghanekar : Principal and Practices of Management
6. Sharma, : Organisational behaviour
7. Saxena, Principal and Practices of Management

**QUESTION PAPER PATTERN**  
**BCOM – III: SEMESTER V**  
**5T3-Management Process**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **5T4: Indian Economy – I**

### **Unit I:**

#### **Indian Economy & Planning**

Economic Planning- Characteristics, Rationale, Features, Objectives of Economic Planning. Strategy of India's Development Plans. Objectives and Evaluation of 11<sup>th</sup> Plan. Objectives of 12<sup>th</sup> Plan. Resources allocation and financing of five years plans. Regional Planning in India- Aspects of regional planning , Conceptualization, Magnitude & Challenges. Achievements and shortcomings of India's Economics Planning. NITI Aayog-Aims, Objectives & Structure. From Economic Planning to NITI Aayog- Differences in the two Approaches.

### **Unit II:**

#### **Indian Economy & Policy**

Concept of Economic Growth & Economic Development. Characteristics of underdeveloped/ developing countries. Broad features of Indian economy. Natural resources- Land, soil, water, forest, mineral. Infrastructure - Sources of Energy in India. Power, Coal, Oil and Gas, Atomic, Non-conventional Sources, India's Energy Strategy. Transport System in India- Railways, Road, Water & Air Transport.

### **Unit III-**

#### **Population & Unemployment**

India's Population: Size and Growth Trends, Causes of Population Explosion, Consequences on Economic Development, Remedies, Population Policy. Employment and Unemployment- Trends, Structure of Employment in India. Nature & Estimates of Unemployment. Urban & Rural Unemployment- Causes, Effect, Government Policy for Removing Unemployment.

### **Unit IV:**

#### **India's Public Finance**

Public Expenditure-Classification, Role of Public Expenditure in India, Causes of increase in Public Expenditure. Public Revenue-Sources of Public Revenue in India. Public Debt- Meaning, Concept, Classification, Role, Problem and Remedies. India's Fiscal Deficit-Causes, Recent Policy Measures towards Controlling Fiscal Deficit.

### **Books Recommended:**

1. Indian Economy, Datt & Sundharam, S Chand
2. The Indian Economy: Problems and Prospects, D .R.Gadgil.
3. Globalization And Indian Economy, R.Chaddha, Sumit Enterprises.
4. Indian Economy : Problems of Development and Planning, A.N.Agrawal, New Age International.
5. Indian Economy, Misra & Puri, Himalaya Publishing House Pvt. Ltd.
6. Government of India- Five Year Plans.
7. Government of India- Economy Survey.
8. Reserve Bank of India- Annual Reports on Currency and Finance.
9. Indian Economics, Rashi Arora, Mumbai

**Question Paper Pattern**

**Semester –V**

**Elective–I**

**5T4- Indian Economics – I**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

OR

- (c) UNIT – I 16Marks

Q.2.

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT – I 16Marks

Q.3.

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT – I 16Marks

Q.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT – I 16Marks

Q.5.

- a) UNIT – I 04 Marks  
b) UNIT – II 04 Marks  
c) UNIT – III 04Marks  
d) UNIT – IV 04 Marks

## **5T5.1 : Marketing Management**

### **Unit – I**

**Introduction:** Meaning and Concept of Marketing and Marketing Management. Traditional and Modern concept of Marketing, Functions and importance of Marketing Management, Market segmentation: - evaluation, criteria's, advantages and disadvantages of market segmentation, types

### **Unit-II**

**Market and pricing policies:** Meaning, concept and characteristics of Consumer Market, Industrial Market and Service Market, their difference, government and reseller market, online market: - issues and challenges **Pricing policies:** - meaning, types and factors governing them.

### **Unit – III**

**Product Planning and Distribution:** Product Planning – New Product Development – Product Life Cycle – Branding and Packaging , Distribution Channels for Consumer Product, Industrial Product and Service Product, Function of Distribution of Channels, Factors Affecting Distribution of Channels.

### **Unit – IV**

#### **Consumer behavior and Promotion:**

Consumer behavior: - Meaning, concept and factors affecting consumer behavior, Customer Satisfaction, measurement of Customer Satisfaction, After Sales Services and its role in modern business, **Promotion:** techniques of promotion, Personal Selling; Advertising, Direct Marketing. E-marketing

#### **Suggested Books:**

1. Marketing Management, Philip Kotler and Kevin Lane Keller: Prentice Hall of India / Pearson Education, New Delhi.
2. Marketing Management, V. J. Ramaswami and S. Namakumari:, Macmillan Business Books, Delhi.
3. Principles of Marketing Management, Dr. Arvind Shende, Dr. Dilip Vairagade, Anuradha Prakashan, Nagpur.
4. Services Marketing; S M Jha; Himalaya Publishing House.
5. Industrial Marketing Practices in India- S.L. Gupta, Sanjeev Bahadur and Hitesh Gupta Excel Books, New Delhi.
6. [foi.ku O;oLFkkiu&MkW-es?kk ukusVdj&lkbZukFk izdk](http://www.foi.ku.O;oLFkkiu&MkW-es?kk ukusVdj&lkbZukFk izdk)ku]ukxiqj

**Question Paper Pattern**  
**Semester –V**  
**Elective Group–I**  
**5T5.1- Marketing Management**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **Elective Group-I**

### **5T5.2 : Computerized Accounting**

#### **Unit-I**

**Introduction** - Computerized Accounting, Advantages of Computerized Accounting, Manual Vs Computerized Accounting, Need of Computerized Accounting, Accounts Organization, Accounts group, Loans, Liabilities, Assets and Budget.

#### **Unit-II**

**Accounting Software's**, - Introduction to Tally Software, Features of Tally, Tally Screen, Company Information, Creating new Company, Gateway, Selection of Company, Selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features, Configuration – General, Numeric Symbols, Voucher Entry, Invoice Order Entry, Printing.

#### **Unit-III**

**Accounts Info Menu, Account Groups** – Create new group, creation of Primary group. Normal and Advance Information, Ledger Accounts, Cost Categories, Cost Centers. Creation of Budget, Types of Budget. Voucher – Voucher Entry, Creation of Voucher Screen, Types of Voucher, Selection of Voucher Types, Post Dated Voucher, Printing of Vouchers, Cheque Printing, advance Features of account Voucher.

#### **Unit-IV**

**Inventory Info, Features of Inventory Info. Configure** – Inventory Info, Balance Sheet, Audit trail, Ratio Analysis. Display – Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export of Data. Maintenance – Bank Reconciliation, House Keeping, Data Maintenance. Security – Users and Password, Security Controls, Types of Security, Creation New Security Levels and Tally Audit.

#### **Books Recommended:**

- Accounting with Tally : K.K. Nadhani, BPB Publication.
- Tally. ERP 9 : Prof. C. M. Tembhurnekar& Dr. D. N. Khadse , Saiyyoti publication , Nagpur.
- Tally Tutorail : K.K. Nadhani and A.K. Nadhani, BPB Publication.
- Advances Accounts Vol-I: M.c.Shukla, T.S.Grewal and S.G, Gupta, S. Chand& Company, Delhi.
- Accounting Principles: Anthony R.N. and J.S. Richard, Irwin Inc.
- Advanced Accountancy By P.C. Tulsian, Tata McGraw HILL Publication.
- Microsoft Office -2000/2007- Gini Courter, Annelte Marquis BPB.
- It Today (Encyclopaedia) - S.Jaiswal.
- Gulhane, Dr., Tiwari, Naidu Computerized Accounting, Sheth Publishers Pvt. Ltd. Mumbai
- A First Course In Computers - Sanjay Saxena.
- First Text Book On Information Technology – SrikantPatnaik.

**Question Paper Pattern**  
**Semester –V**  
**Elective Group-I**  
**5T5.2-Computerized Accounting**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **Foundattion Group—I**

### **5T6.1 : Business Finance -I**

**Unit –I Business Finance**-Meaning, Nature, Significance, Objects and Scope of Business Finance, Functions of Financial Executive in an Organization.

**Sources of Business Finance**-Long- Medium and Short Term Sources of Finance, Equity, Preference shares, Sweat equity shares, Shares with differential rights, debentures & Bonds .**(Theory)**

**Unit – II Project Financing**: Meaning, Steps involved in Project Financing, Appraisal of project, Means of Project finance, Aspect of Project Appraisal. **(Theory)**

**Inventory Management** : Need and Cost of Inventory , Economic Order Quantity under constant price and with varying price , Various inventory levels. **(Theory & Numericals)**

**Leverages** -Concept of Leverages, Operating and Financial Leverages. **(Theory & Numericals)**

### **Unit – III Management of Working Capital.**

Meaning & Concept ,Need or Objects of Working Capital, types, and Advantages of Working Capital , disadvantages of Excessive Working Capital, Determinant's , assessment of Working Capital requirements**(Theory & Numericals)**

**Unit – IV Debtors Management**.: Introduction to Debtors Management, Cost of extending credits, Credit / discount policy, Effective cost of bill discounting . **(Theory & Numericals)**

**Creditors Management**: Introduction, Cost of Credit, Accruals / expenses payable as source of finance. **(Theory & Numericals)**

**Venture Capital Financing**: Meaning, Methods of Venture Financing, Problem areas facing the Venture Capital Industry. **(Theory)**

#### **Books Recommended:**

1. Financial Management Problems &Solutions :- Kishore Ravi M (Taxman Allied Service (p) Ltd.)
2. Fundamentals of Financial Management :- Chandra Prasanna (Tata McGraw Hill Publishing Co. Ltd.)
3. Management Accounting & Financial Management :-Arora M N (Himalaya Publishing House Pvt. Ltd.)
4. Business Finance : Dr.Jain V. K. ,And Sharma D.G. (Shethe publishers PVT. LTD.

# **Question Paper Pattern**

## **Semester –V**

## **Foundattion Group-I**

## **5T6.1-Business Finance -I**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Theory 08 Marks

**OR**

c) Theory 08Marks  
 c) Theory 08Marks

## **Q. No. 2 – Unit II**

- a) Theory 08 Marks  
b) Theory 08 Marks

**OR**

c) Problem 08 Marks  
d) Problem 08 Marks

O. No. 3 – Unit III

- a) Theory 08 Marks  
 b) Theory 08 Marks

**OR**

c) Problem 08 Marks  
 d) Problem 08 Marks

## O. No. 4 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

c) Problem 08 Marks  
 d) Problem 08 Marks

**Q. No. 5 -** Unit- I  
Unit -II  
Unit-III  
Unit-IV

- a) Theory 04 Marks
  - b) Problem 04 Marks
  - c) Problem 04Marks
  - d) Problem 04 Marks

## **5T6.2 : Auditing**

### **UNIT- I: Basic of Auditing**

(i) **Audit, Auditing and Auditor:** Meaning, definition, object and scope of Audit and auditing, basic principles governing an audit, Advantage and Disadvantages of Audit, Difference between Internal Audit and External Audit, **Types of Audit:** Meaning, Objective and Importance of Continuous Audit, Annual Audit, Periodical Audit, Internal Audit.

(ii) **Internal Control and Internal Audit System:** Meaning, definition, advantages and disadvantages of Internal Control, Internal Check, Internal Audit, EDP Audit: Meaning of EDP audit, Control in EDP (Electronic Data Processing) Environment- General EDP Control, Application Control

### **UNIT- II: Audit Working and Procedure.**

i)**Audit Planning, Evidence** Audit programme: Meaning and Definition, Objective, Advantages and Disadvantages of Audit Programme, Formulation of audit programme, precaution to be taken for preparation of audit programme.

ii)**Audit Documentation and Evidence:** Meaning, definition, content, advantages of audit note book, audit working paper, essential of good audit working paper, Ownership and custody of audit working paper, Audit evidence, Method of obtaining audit evidence

### **UNIT-III**

(i) **Standard on Auditing:** Standard Auditing Policies- Introduction of auditing standard issued by ICAI (From AAS-1 to AAS -30 and AAS-34)

#### **ii) Vouching & Verification**

**Vouching:** Meaning and definition of vouching, objective, importance and limitation of vouching, Vouching procedure and precaution to be taken for vouching of - Cash book, purchase book, sales book.

iii) **Verification of Assets and Liabilities:** Meaning, object, importance and limitation of Verification. Audit of Fixed Assets, Current Assets, General principle regarding verification of assets, Audit of Liabilities, General principle of regarding verification of liabilities.

### **UNIT- IV: Company Audit & Audit Report**

(i) **Company Auditor:** Legal provision related with appointment of auditor under Companies Act 2013, Qualification and disqualification of auditor, Right, Power, and liabilities of company auditor, civil and criminal liabilities of company auditor, Legal provision related with remuneration, removal of company auditor.

(ii) **Company Audit :**Meaning, definition, feature, objective, advantages and criticism of Financial audit, Management audit, Special audit, Cost Audit, Difference between Financial audit and cost audit, Management audit and financial audit.

iii) **Audit report and Certificate:** Meaning, definition, content, scope and significance of audit report

#### **Reference Books:**

- Aruna Jha: Students Guide to Auditing and Assurance, Taxman Publication, New Delhi
- S.D. Sharma: Auditing Principle and Practice, Taxman Publication , New Delhi
- Dr. Arvind shende, Dr. Dilip Vairagade; Auditing-Anuradha Prakashan, Nagpur.
- L. N. Chopde, D.H. Choudhari, Dr. Baban Taywade: Auditing – Sheth Publishers
- Dr. K. R. Dixit: Auditing – Vishwa Publishers & Distributors, Nagpur
- B. N. Tandon, S. Sudharsanam, S. Sundharabahu: Practical Auditing – S. Chand & Company Ltd.
- S. K. Mehta: Auditing , Diamond Publication Pune

**Question Paper Pattern**  
**Semester –V**  
**Foundattion –I**  
**5T6.2Auditing**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for all subjects-**

<b>1a</b>	<b>Two periodical class tests</b>	<b>08marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>08marks</b>
<b>1c</b>	<b>Overall conduct as a responsible learner</b>	<b>04marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I      20 marks</b> <b>Unit-II      20 marks</b> <b>Unit-III      20 marks</b> <b>Unit-IV      20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Vocational Course: Semester V**  
**(Same syllabus for all vocational group subjects in B.Com - I)**  
**5T7:Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge regarding documentation franchising and business plan.

---

**Unit-I**

Documents:- Types of documents - Commercial, Regulatory and Assistance Document, procedure of processing of an export order.

**Unit-II**

Franchising and Financing:- Definition, Advantages, Disadvantages of franchising in India, Financing of new ventures – Types of finance – Short, Medium and Long Term.

**Unit-III**

Business Plan – Meaning of Business Plan, Importance and Preparation of Business Plan, Financial and Social aspects of Business Plan.

**Unit-IV**

Meaning and Concepts – Management, Marketing, Accounting, Inventory Management, Working Capital Management, Human Resource Management and Total Quality Management.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.

Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House

**Group – I : Computer Applications**  
**5T8.1 : Web Designing using HTML (WD)**  
**Paper - I**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I :**

**HTML** : Introduction, Designing web site, Advantages and Disadvantages of HTML, Flow of Web Information, Role of Web Browser and Web Server, Process of Web Publishing,

**Creating a Simple Static Web Page** : About HTML, Basic elements : <html>, <head>, <title>, <p>, <br>, <h1> to <h6>, <ol>, <ul>, <li>, <dl>, <pre>, <marquee>, <hr>, Physical and Logical tags **Path** : Relative and Absolute path, Comments, Special Characters, Text Formatting tags, <center>

**Unit –II :**

Hyperlinks <a href ...>, Creating links to web pages and URLs, Creating links within the same page, various types of URLs that can be used in links, Image tag and their related attributes, Inline images, Links to (external) images, Using Inline images, Using images as hyperlinks, Popular images formats for internet and HTML.

**Tables** : Basic table tags and their related attributes.

**Unit –III :**

**Frames, Image Map and Web Font Creator** : Frames and their creation, the <Frame> and <Frameset> tags, Frame linking, Floating or Inline Frames, Image Maps <map> and <area> tags, Client – Side and Server – Side image maps.

**Unit –IV :**

Form designs, Form Controls, Text controls, password fields, radio buttons, checkboxes, reset and submit buttons, form control selection, option processing and textarea.

**Practical** : The Practical will be based on HTML

**BOOKS RECOMMENDED :**

1. Web Publishing : Monic D'souza and J D'souza
2. Complete HTML : BPB
3. E-Commerce : Bhushan Dean – S. Chand
4. HTML – 4 Unleashed : SAMS
5. Dynamic HTML : O'RELLY (SPD)

(Semester – V)

**Group - II: Principles & Practice of Insurance  
5T8.2-Insurance and Actuarial Science – Paper I**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Insurance and Actuarial Science

**Unit - I**

- Investment of Insurance Funds
- Nature and Method of According procedure in Life Insurance and General Insurance
- Meaning of policy values, retrospective policy value, prospective policy value, symbols of policy value, calculation of policy value, progress of policy value

**Unit - II**

- Risk selection, Identification of Risk, Principles of Risk Management, Sources of Risk Information
- Rate Making, Types of Rate Making ,Principles of Rate Making

**Unit -III**

- Actuarial Science : Meaning ,Nature of actuarial science, scope of actuarial science in Finance, economics, statistics, Mathematics and computer science
- Concept of terms: Accumulated value and present value ,Nominal and effective rates of Interest, Discount and Discounted value, Redemption of Loan, Sinking fund.

**Unit- IV**

- Annuities : Meaning and classification of Annuities, perpetuities, immediate annuities
- Mortality ,Meaning, Nature of Mortality, Factors included in construction of Mortality Table I and II, Survival rate , Death rate

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळ अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

## **V - Semester**

### **5T8.3- Advertising, Sales Promotion and Sales Management – III**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

#### **OBJECTIVES:**

To expose students to the principles and practices of advertising and sales promotion and develop the conceptual abilities in this functional area of marketing.

To develop the skills of the students, which will help them to prepare effectively for a career in the advertising and sales promotion function of any company or in the advertising agency.

#### **CONTENT:**

##### **Unit-I**

- Communication Process - Communication models for rural communication and urban communication

##### **Unit-II**

- Advertising - Organizational structure of advertising agency and its functions. Evaluation of agency functioning, Creativity in Advertising including Message development, copy righting, layout; Media selection

##### **Unit-III**

- Advertising Research. Effectiveness of advertising- methods of measurement. Rationale of testing Opinion and Attitude Tests, Recognition, Recall

##### **Unit-IV**

- Message Strategy: Attention and comprehension, Associating Feelings with the Brand, Brand Equity, Image and Personality and Group Influence and word of month advertising

##### **Recommended books:**

- Advertising Management – Concepts and Cases, Manendra Mohan (Tata McGraw Hill)
- Sales Promotion and Advertising Management (6thEd.)Himalaya Publishing House
- Advertising Excellence by Bovee, Thill, Dovel and Wood (McGraw Hill)
- Advertising Management – Shelekar, Victor & Nirmala Prasad (Himalaya Publishing House)
- Foundations of Advertising – Theory & Practice – S.A. Chunawala
- Brand Positioning – Subroto Sengupta, Tata McGraw Hill

**SEMESTER V**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**      **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.2.(a)**

- |     |          |         |
|-----|----------|---------|
|     | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.3.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.4(a)** UNIT – I

8Marks

- |     |          |         |
|-----|----------|---------|
| (b) | UNIT – I | 8 Marks |
|-----|----------|---------|

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.5.** Answer in Brief

- |     |            |         |
|-----|------------|---------|
| (a) | UNIT – I   | 4 Marks |
| (b) | UNIT – II  | 4 Marks |
| (c) | UNIT – III | 4 Marks |
| (d) | UNIT – IV  | 4 Marks |

**B.Com. Third Year**

**Semester-VI**

**6T1-Financial Accounting- V**

**Unit-I-** Accounts of Holding Company-

Introduction, Meaning of Wholly-owned subsidiary, partly-owned subsidiary, preparation of Consolidated Balance Sheet and Profit and Loss Account, simple problem on involving two companies only.

**Unit-II-** Insurance Claims

Introduction,oss of stock Average clause practical problem on loss of stock.

**Unit-III-** Investment Accounts

Meaning , Need,Utility and objectives, Sales and Purchase of different types of Securities, Simple problem on Investment and Securities.

**Unit-IV-** Profit prior to incorporation-

Meaning Methods of ascertain the pre-incorporation profit, Issue and Redemption of preference shares Redemption out of new issue of shares Redemption at premium out of new issue of shares, Redemption out of profit.

**Books**

S. N. Maheshwar :- Financial Accounting – Vikas Publishing House, New Delhi

□□Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons

□□Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House

□□Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)

□□Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)

□□Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata)

□□R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)

□□M. A. Arulnandam :- Advance Accounting – Himalay Publication

24

□□Prof. PradeepWath, Dr. R. D. Mehta, Dr. DilipGotmare :- Financial Accounting– Payal Prakashan

**Question Paper Pattern  
Semester -VI  
6T1-Financial Accounting – V**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 3 – Unit III**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

## **Q. No. 4 – Unit I**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 5**

- a) Unit- I Problem 04 Marks
  - b) Unit –II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

**Semester-VI**  
**6T2-Management Accounting**

**Unit\_I**

**Management Accounting :-**

Meaning, Scope, Importance, and Limitations of Management Accounting. Difference between Cost Accounting and Management Accounting, Role of Management Accounting. Break -Even Point Analysis (**Theory & Numericals**)

,

**Unit – II**

**Business Budget & Budgetory Control:**

Meaning, Characteristics, Objectives ,Advantages, Limitations. Classification &Types of Budgets. Problems on Cash Budget and Flexible Budget Only (**Theory & Numericals**)

**Unit – III**

**Ratio Analysis:**

Meaning, Importance and Limitations of Ratio Analysis, Classification of Ratio, Computation of Profitability Ratio, Financial Ratio with special reference to Current Ratio, Acid Test/ Liquid Ratio, Inventory Turnover Ratio Debtors and Creditors Turnover Ratio, Fixed Assets Turnover Ratio, Debt-Equity Ratio, Working Capital Ratio, , Earnings per Share Ratio. (**Theory & Numericals**)

**Unit – IV**

**Fund Flow Analysis:**

Meaning, Sources of fund, Uses of fund, Distinguish between fund flow statement and Balance Sheet. Preparation of Statement showing Changes in Working Capital, Profit from operation, Fund flow Statement (**Theory & Numericals**)

**Books Recommended –**

- S. N Maheshwari : Cost Accounting Theory and problems –Shri Mahavir Book Depot, New Delhi
- V.K. Saxena : Cost Accounting Text Book- Sultan Chand and Sons New Delhi
- M.C. Shukls – T.S. – Grewal, M.P. Gupta – Cost Accounting – S. Chand , New Delhi
- R. S. N. Pallai, V Bhagavathi – Cost Accounting – S. Chand, New Delhi
- S. M. Shukla :- Cost Accounts (Hindi)
- Nigam R. S. – Advanced Cost Accounting , S. Chand & Company
- Jain S. P. – Advanced Cost Accounting – Kalyani Publication
- Gawada, J Made – Advanced Cost Accounting – Himalaya Publication House
- Pillai R. S. N. – Management Accounting – S. Chand & Co. Pvt. Ltd.
- Agrawal N. K. – Managements Accounting – Galgotia Publication
- Singh, Jagwant - Managements Accountings – KitabMahal
- Rathnam P. V. - Managements Accountings – KitabMahal
- Sharma R. K. - Managements Accountings – Kalyani Publication

**Question Paper Pattern**  
**Semester –VI**

## **6T2-Management Accounting**

**Time :- 3 hours**

**Marks-80**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q. No. 1 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16Marks  |

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16 Marks |

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16 Marks |

**Q. No. 4 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
| <b>OR</b>  |          |
| c) Problem | 16 Marks |

- Q. No. 5 -**
- |          |    |                  |
|----------|----|------------------|
| Unit- I  | a) | Problem 04 Marks |
| Unit –II | b) | Problem 04 Marks |
| Unit-III | c) | Problem 04Marks  |
| Unit-IV  | d) | Problem 04 Marks |

**Semester VI**  
**6T3-Advanced Statistics**

**Unit I**

Correlation- Types of correlation, Karl Pearson's coefficient of correlation in Bivariate frequency table, probable error, interpretation of 'r', Rank Correlation Method.

**Unit II**

Regression Analysis- Lines of Regression/Regressions Equation, Coefficient of regression for a Bivariate frequency table.

**Unit III**

Index Number- Uses of I N, Types of I No. Methods of Index Number.Test of consistency of Index No.- unit test Time Reversed Test, Factor cost of living Index No.

**Unit IV**

. Time series Analysis-Introduction components of a Time series- a) Trend b)Short Term Variation c)Irregular variation d)Measurement of Trend- (Simple Problems)

Graphic Methods ,Methods of Seminar,Methods of Curve by the square

Methods of Movig Average

## **6T4- Indian Economy – II**

### **Unit I: Indian Agriculture**

Nature, Role of Agriculture in Indian Economy. Cropping Pattern in India and its Determining Factors. Land Reforms. Cooperative Farming & Marketing. Green Revolution: Impact and Constraints. Cause & Remedies to Low Agricultural Production and Productivity. Agriculture Marketing-Problems & Remedies. Agricultural Labour - Problems & Remedies. Sources of Agriculture Finance. NABARD ( National Bank for Agriculture and Rural Development). Financial Inclusion. Agricultural Price Policy- Objectives and Constituents. Agricultural Subsidies in India. Crop & Live Stock Insurance -Problems and Remedies.

### **Unit II: Indian Industry**

Industrial Policy 1991. Small Scale and Cottage Industries- Role, Performance, Problems and Remedies. Public Sector Industries - Role, Performance, Problems and Remedies. Privatization of Public Sector Industries: Meaning, Methods of Privatization Policy in India. Arguments in favor and against privatization. Policy of Disinvestment. Industrial Sickness in India- Definition, Causes, Effects, Remedial Measures. Indian Trade Union Movement: Role, Functions, Strength and Weaknesses.

### **Unit III: Indian Service Sector**

Growth of Services Sector in India. Nature, Scope, Trends & Importance of Service Sector in Current Scenario. Share of Service Sector in India's Employment Generation. Contribution of Service Sector to India's GDP. Government's reforms in various Services. IT & ITES Sector-Trend, Role & Importance. Challenges and Opportunity in IT & ITES Sector. Banking & Insurance Sector- Importance of Banking and Insurance Industry in India's Service Sector, Challenges and Opportunities.

### **Unit IV: India's International Trade**

Foreign Trade -Concept and Meaning, Advantages, Disadvantages, Composition and Direction of India's Exports & Imports. Special Economic Zones- Concept, History, Benefits, Arguments against SEZS. Foreign Capital and Aid- Need, Role, Problems. India's External Debt. Multinational Corporations(MNCs)- Role, Importance, Advantages and Disadvantages. Impact of MNCs on Indian Economy. Liberalization, Privatization, Globalization(LPG)- Meaning, Role, Impact of LPG on Indian economy. World Trade Organization (WTO)- Objectives, Working and Functions, WTO & India.

### **Books Recommended:**

1. Indian Economy, Datt & Sundharam, S Chand.
2. The Indian Economy: Problems and Prospects, D .R.Gadgil.
3. Globalization And Indian Economy, R.Chaddha, Sumit Enterprises.
4. Indian Economy : Problems of Development and Planning, A.N.Agrawal, New Age International.
5. Indian Economy, Misra & Puri, Himalaya Publishing House Pvt. Ltd.
6. Government of India- Five Year Plans.
7. Government of India- Economy Survey.
8. Reserve Bank of India- Annual Reports on Currency and Finance.

**Question Paper Pattern  
6T4- Indian Economy – II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

QR

- (c) UNIT – I 16Marks

**Q.2.**

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT - I 16Marks

**Q.3.**

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT - I 16Marks

0.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT - I 16Marks

Q5.

- a) UNIT – I 04 Marks  
b) UNIT – II 04 Marks  
c) UNIT – III 04Marks  
d) UNIT – IV 04 Marks

**Elective Group- II**  
**6T5.1- Human Resource Management**

**UNIT-I**

**Introduction**

Human Resource Management, Definition, Objectives, Functions, Scope, Importance.  
Quality of a ideal Human Resource Managers

**UNIT-II**

**Recruitment selection and training**

**Recruitment:** - meaning, source; selection process and importance, placement and induction, career planning v/s manpower planning

**Training:** - meaning, method, training and development,

**UNIT-V**

**Labour welfare and Collective bargaining**

**Labour welfare:** - Safety and Health Measures Workers Participation in Management - Objectives for Wage Incentive - Fringe Benefits

**Collective Bargaining** - Features - Pre-requisite of Collective Bargaining - Agreement at different levels, Successful Participation of workers in Management.

**UNIT-IV**

**Human resource planning and accounting**

Human Resource Planning - Human Capital Investment - Expenditure vs. Productivity  
Meaning and Definition of Human Resource Accounting, Importance; Human Resource Accounting - Measurement of Human Value addition into Money Value

**Suggested Books:**

1. Human Resource Management - Dr. C.B. Gupta - Sultan and Sons.
2. Personnel & Human Resource Management - P. Subba Rao - Himalaya Publishing House.
3. Human Resource and Personnel Management - K. Aswathappa - Tata Mc Graw Hill Publishing Co. Ltd.

Human Resource Management, Dr. Arvind shende, Dr. Dilip Vairagade, Dr. Devendra. Mohture, Anuradha Prakashan, Nagpur.

4. Personnel Management & Human Resources - C.S. Venkata Rathnam & B.K. Srivastava. TMPL.

5. ekuoh; lallk/ku O;oLFkkiu & MkW-es?kk ukusVdj&lkbZukFk izdk"ku]ukxijqj

## **Question Paper Pattern 6T5.1- Human Resource Management**

N.B. – 1) All questions are compulsory.  
           2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

QR

- (c) UNIT – I 16Marks

Q.2.

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT = I 16Marks

Q.3.

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT - I 16Marks

0.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT = J 16Marks

0.5.

- a) UNIT – I 04 Marks
  - b) UNIT – II 04 Marks
  - c) UNIT – III 04Marks
  - d) UNIT – IV 04 Marks

**Semester-VI**  
**6T5.2-Indirect Taxes**

**UNIT-I: Central Excise Laws**

Basis of chargeability of duties of central excise-goods, manufacture, classification and valuation of excisable goods; Registration and routine procedures in central excise, payment of duties of excise and removal of goods, Cenvat on inputs and on capital goods, excise and small scale industries.

**UNIT-II: Customs Laws**

Nature of customs duty, types of customs duty, classification for customs and rate of duty, valuation for customs duty, procedures for import and export.

**UNIT-III: Service Tax**

Charging of service tax, Services on which tax is payable, registration, records to be maintained by the assessee, returns and payment of tax, Provisions of law and procedures.

**UNIT-IV: State Sales Tax Law**

Basic Concepts, value added tax on sale or purchase of goods, levy or incidence of tax, goods liable to tax, rate of tax and exemptions, dealer and registration method of computing tax liability, credit, set-off and refunds, documents, records and maintenance of accounts, returns and assessments (the state sales tax law applicable will be the Bombay Sales Tax Act or the new sales tax enactment in its place).

**Central Sales Tax Act, 1956**

Definitions, Concepts of inter-state sales, Sale outside the state, sale in the course of export and import, Liability to tax and rate of tax, Registration of dealers.

**Reference Books**

Dr. H. C. Mehrotra and S. P. Goyal : Direct and Indirect Taxes ( Sahitya Bhawan, Agra)

V. S. Datey : Indirect Taxes Law and Practice ( Taxman, New Dehli)

V. Balchandran : Indirect Taxes ( Sultan Chand & Sons, Dehli)

C. A. Farooq Haque : Indirect Tax (Sheth Publishers Ltd., Mumbai)

# **Question Paper Pattern Semester -VI 6T5.2-Indirect Tax**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

Q. No. 1 – Unit I

- a) Theory 08 Marks  
b) Problem 08 Marks

OR

- a) Theory 08 Marks  
b) Problem 08 Marks

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
b) Problem 08 Marks

OR

- a) Theory 08 Marks
  - b) Problem 08 Marks

### **Q. No. 3 – Unit III**

- a) Theory                            08 Marks  
b) Problem                        08 Marks

OR

- a) Theory 08 Marks  
b) Problem 08 Marks

### **Q. No. 4 – Unit I**

- a) Theory 08 Marks
  - b) Problem 08 Marks

OR

- a) Theory 08 Marks  
b) Problem 08 Marks

**Q. No. 5**

- a) Unit- I Problem 04 Marks
  - b) Unit -II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

## **Foundation Group II**

### **6T6.1- Business Finance – II**

#### **Unit – I**

**Financial Market in India** : significance of Financial Markets, Objectives and functions of the financial System, Types of Financial Markets,

**Money Market**- Meaning , features, functions, Composition

**Capital Market**- Meaning ,Composition & Structure of Capital Market Market segment. Products and Participant's in Primary market. Regulatory authorities governing financial and capital market.

**SEBI** - ( Security Exchange Board of India)Organisational structure of SEBI, Role and Functions of Stock Exchange and SEBI, Regulation issued by SEBI, Achievements of SEBI.(**Theory**)

**Unit – II Primary Market:** Meaning, Functions, Scope & Significance of PrimaryMarket,Developments in the Primary Market, Primary Market Intermediaries.

**Secondary Market:** Meaning , Difference between Primary Market & Secondary Market, Products dealt in the Secondary Market, Stock Exchange, Secondary Market Intermediaries. Listing Procedure. NSE and BSE. (**Theory** )

**Capital Budgeting** - Meaning, Nature and Importance of Capital Budgeting, Investment Appraisal Techniques, Pay Back Period Method, Rate of return method, Net Present Value Method, Discounted Cash Flow Method, (**Theory & Numericals**)

**Unit – III NBFC's-** Meaning, Formation of NBFC's , Types and Regulation of NBFC's,

**Credit Rating:** Meaning /Concept, Scope & Significance of credit rating, Benefits to Investors. Credit Rating Agency in India CRISIL, ICRA, CARE. (**Theory**)

**Dividend Policies**- Essentials of Sound Dividend Policy, Determination of Dividend Policy and its types ,Surplus and Reserve Policy, (**Theory & Numericals**)

**Unit -I V** - Cash Flow for Investment Analysis- Meaning, Benefits and Uses of Cash Flow Statement. Significance ,Limitations of Cash Flow Statement.

Format of Cash Flow Statement as per AS-3. (**Theory & Numericals**)

#### **Books Recommended:**

Financial Management Problems &Solutions :- Kishore Ravi M (Taxman Allied Service (p) Ltd.)

Fundamentals of Financial Management :- Chandra Prasanna (Tata McGraw Hill Publishing Co. Ltd.)

Management Accounting & Financial Management :-Arora M N (Himalaya Publishing House Pvt. Ltd.)

Business Finance : Dr.Jain V. K. ,And Sharma D.G. (Shethe publishers PVT. LTD.

**Question Paper Pattern  
Foundation Group II**

**6T6.1- Business Finance – II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours

Marks-80

**Q. No. 1 – Unit I**

- |           |          |
|-----------|----------|
| a) Theory | 08 Marks |
| b) Theory | 08 Marks |

**OR**

- |           |         |
|-----------|---------|
| c) Theory | 08Marks |
| c) Theory | 08Marks |

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 4 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

- |                   |                 |    |                  |
|-------------------|-----------------|----|------------------|
| <b>Q. No. 5 -</b> | <b>Unit- I</b>  | a) | Theory 04 Marks  |
|                   | <b>Unit –II</b> | b) | Problem 04 Marks |
|                   | <b>Unit-III</b> | c) | Problem 04Marks  |
|                   | <b>Unit-IV</b>  | d) | Problem 04 Marks |

## **Foundation Group II**

### **6T6.2- Industrial Law**

**Level of Knowledge:** Basic Conceptual Knowledge

**Objective:** To make students aware about Various Laws relating to Industries [with amendments up to June 2016 in respective Acts]

#### **Unit -I**

- (i) Indian Factories Act-1948: Important Definitions, Object & Scope, Provision regarding workers Health, Provision regarding Safety of Workers,
- (ii) Rules regarding Labour Welfare, Provision regarding Adults, women workers and Young Workers.
- (iii) Industrial Dispute Act-1947: Concept, Objectives and Significance, Authorities for settlement of Industrial Dispute-their work procedure & Powers,
- (iv) Concept and Distinction between Strike, Lockouts, Layoff & Retrenchments

#### **Unit-II**

- (i) Law relating to Wages: Object, Scope and Application of Minimum Wages Act-1948 and Payment of Wages Act 1936
- (ii) Law Relating to Bonus and Gratuity: Object, Scope and Application of Payment of Bonus Act 1965 and Payment of Gratuity Act 1972
- (iii) Law Relating to Employee State Insurance and Provident Fund: Object, Scope and Application of The Employee's State Insurance Act 1948 and Employee's Provident Fund & Miscellaneous Provision Act 1952
- (iv) Law Relating to Workmen Compensation and Maternity Benefits: Object, Scope and Application of Workmen Compensation Act-1923 and Maternity Benefits Act 1961

#### **Unit-III**

- (i) Child Labour (Prohibition and Regulation) Act 1986: Object Scope and Application
- (ii) Trade Union Act 1926: Object Scope and Application. Registration of Trade Union.
- (iii) International Labour Organization (ILO): Background and Importance of ILO and its impact on Indian Labor Laws
- (iv) Contract Labour Act: Object Scope and Application

#### **Unit-IV**

- (i) Meaning and Nature of Industrial Estate, Software Technology Park, SEZ, Co-operative Industrial Estate
- (ii) Intellectual Property Rights Law In India: Object and Scope of Patent, Copyrights, Trademark and Industrial Design
- (III) Procedure for registration of Trademarks and Copyrights.
- (IV) Environment Protection Act 1986: Objective and Scope, Location of Industries, Processes & Operation, offense and Penalties

#### **Reference Books:**

- Business Law Including Company Law, Gulshan, S S and Kapoor, G K: , New Age International (P) Ltd., Publishers
- Business Law, M.C. Kuchhal and Vivek Kuchhal , Vikas Publishing House, New Delhi
- Business and Corporate Laws, V.S. Datey, Taxman, New Delhi
- Mercantile Law, N.D. Kapoor, Sultan Chand & Sons, Educational Publishers, New Delhi.
- Business & Industrial Law , Dr. Arvind shende, Dr. Mohture, Dr. Dixit, Anuradha Prakashan Nagpur.

**Question Paper Pattern  
Foundation Group II  
6T6.2- Industrial Law**

**TIME:- 3 Hours]**      **[Full Marks:- 80**

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for all the subjects**

<b>1a</b>	<b>Two periodical class tests</b>	<b>08marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>08marks</b>
<b>1c</b>	<b>Overall conduct as a responsible learner</b>	<b>04marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination</b>  <b>marks</b>	     <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Vocational Course : Semester VI**  
**6T7- Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

**Unit-I**

Government policy and schemes for setting up agricultural & rural industries, financing schemes for khadi and village industries, small scale industries. WTO and small & village industries.

**Unit-II**

Incentives and Subsidies – Meaning of Incentives and Subsidies, Need and problems of Incentives and Subsidies, Incentives for development of backward areas.

**Unit-III**

Entrepreneurial systems – Search for a business ideas, sources of ideas, idea processing and selection, role of industrial fairs.

**Unit-IV**

Concept of cyber space and internet – importance of cyber marketing, internet usage applications, Technology as driver for entrepreneurship.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I: Computer Applications**  
**6T8.1 : Introduction to Visual Basic (IVB)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I**

Introduction to Visual Basic, Event driven programming, Programming constructs - Variables, Types of Variables, Data Types, Scope of Variables, Constants, system defined functions, Operators (Precedence and Associatively), Creating User Interface, VB Controls (Label, Text box, Command button, Frame, Check box, Option button,

**Unit –II**

List box, Combo box, Timer, Drive list box, Directory list box, File list box, Horizontal and vertical scroll bars, Image, Picture box, Shape, Line, Data, OLE container), Microsoft windows common controls (Tab Strip, Tool bar, Status Bar, Progress Bar, Tree View, List View, Image List, Slider, Date Picker, Month View)

**Unit –III**

Working with Procedure, Function and Modules (Form, Class, Standard Modules)  
Scope of Procedures, Calling Procedures, Calling Functions, Passing Arguments,  
Control Structures : If-Then, If-Then-Else, Select Case, Loops Structures : Do-While, While - Wend, For-Next, For-Each, With-End With.

**Unit – IV**

Arrays : Declaring an Array, Types of Array (Fixed arrays, Single-dimensional arrays, Multidimensional arrays, Dynamic arrays), Control Array.

Menus : Creating Menus, Adding Menu Items, Adding Code for the Menus, Modifying menus at run time, Creating Pop-Up Menus.

Database connectivity through data access object. Types of recordset , setting properties and record editing & updating , searching records.

**Practical : Practical will be based on Visual Basic**

**BOOKS RECOMMENDED :**

1. PAUL SHERIFF TEACHES VB-6 BY SHERIFF (PHI)
2. VISUAL BASIC: PETER WRITES
3. LEARN VB 6 BY HALVARSON ( MICROSOFT/PHI)
4. VB PROGRAMMING FOR A ABSOLUTE BEGINNER – MICHAEL VINE (PHI)
5. VISUAL BASIC: SUPPER BIBLE TECH MEDIA
6. VISUAL BASIC: STEPHEN SOLOSKY (PHI)
7. COMPLETE REFERENCE VISUAL BASIC – TATA MCGROW HILL

8. FRONT END DEVELOPMENT USING VISUAL BASIC BY DR.  
S.B.KISHOR(DASGANU)

9.

**Group –: Principles & Practice of Insurance**  
**6T8.2 -Insurance and Acturial Science – Paper II (Semester – VI)**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20

Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Insurance and Acturial Science

**Unit – I--** Privatisation of Insurance Business in India, Contribution of Private sector, Liberalisation required for privatization, Effect of globalization on Insurance sector.

- Methods of payment of amount insured, premium as consideration for insurance benefits, , nature of installment premiums.

**Unit – II**

- General Insurance Corporation(GIC) of India : Background ,main provisions of General Insurance Act 1972,Establishment and objectives, Functions of subsidiary companies
- Banc assurance - Meaning, nature and scope
- Insurance Innovation – Innovation ,use of Technology by Insurance Industry\

**Unit – III**

- Policy Value – Meaning ,Types of Policy value, equation, Alteranation of policy contracts
- Special reserves : Meaning, types of services maintained in Insurance
- Valuation of liability – Meaning and Importance

**Unit – IV**

- Probability – Meaning and nature, its use in insurance business
- Surrender of policy , surrender value , Lapse of policy ,Reserve for Revival of Lapse Policy

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House

बीमा के सिधांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

## VI - Semester

### **6T8.3-Advertising, Sales Promotion and Sales Management – III**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

#### **Unit-I**

- Sales Territories - Concept of Sales territory - Procedures for setting up Sales territories - Deciding assignment of sales personnel to territories.

#### **Unit-II**

Sales Budget and Sales Quota - Sales budget - Purpose, form and content of sales budgets, Sales Quota - Concept, Types of quota, Quota setting procedures, Administering the quota system.

#### **Unit-III**

- Consumer Promotions and Trade Promotions – Their purpose and types How to plan and evaluate a successful promotion, The relationship between advertising and promotions. Introduction to Global Marketing, Advertising and sales promotion.

#### **Unit-IV**

Laws for protection against Malpractices: Introduction, civil and penal codes Applicable to Advertising; laws relating to Intellectual Property Rights. Consumer Protection Act 1986. Monopolies and restrictive trade practices Act 1969. Regulation Governing Broadcast Media Advertising.

#### **Recommended books:**

Advertising Management – Concepts and Cases, Manendra Mohan (Tata McGraw Hill)

Sales Promotion and Advertising Management (6thEd.)Himalaya Publishing House

Advertising Excellence by Bovee, Thill, Dovel and Wood (McGraw Hill)

Advertising Management – Shelekar, Victor & Nirmala Prasad (Himalaya Publishing House)

Foundations of Advertising – Theory & Practice – S.A. Chunawala

Brand Positioning – Subroto Sengupta, Tata McGraw Hill

Cases in Marketing Management – M.L. Bhasin, Excell Books

Sales & Distribution Management (Units 12-16 for Sales Promotion) F.L. Lobo, Global Business Press

**SEMESTER VI**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.2.(a)**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.3.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.4(a)**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.5. Answer in Brief**

- |     |            |         |
|-----|------------|---------|
| (a) | UNIT – I   | 4 Marks |
| (b) | UNIT – II  | 4 Marks |
| (c) | UNIT – III | 4 Marks |
| (d) | UNIT – IV  | 4 Marks |



## **jk"V<sup>a</sup>lar rqdMksth egkjkt ukxiwj fo|kihB] ukxiwj**

^^ ¼lsav<sup>a</sup>y izksfOgUlsI 'kklu f'k{k.k foHkkxkph vf/klwpuk Øekad 513 fnukad 1 vkWxLV] 1923 }jkj LFkkfir o egkjk"V<sup>a</sup> fo|kihB vf/kfu;e] 1994 }jkj lapkfyr jkT; fo|kihB½\*\*  
¼fo|k foHkkx½

**N=irh f'kokth egkjkt iz'kkldh; ifjljl jfoUnzukFk V<sup>k</sup>xksj ekxZ] ukxiwj & 440 001-  
nwj/ouh Øekad% dk;kZy;% 0712&2532063 QWDI % 0712&2555701**

**Ø- jkrqeukfo@fo|k@16@1170  
03 IIVsacj] 2016**

**fnukad**

### **vf/klwpuk**

IoZ laca/khrkaP;k ekfgrhdjhrk lqfpr dj.;kr ;srs dh] okf.kT; fo|k'kk[ksvarxZr ;s.kkjs ch-dkWe- inoh vH;kldze I= **2016&2017** iklqu I= ijfrus ykxw dj.;kr ;srs vkgs- Inj vH;kldzekaP;k ifj{kk ;kstuk o vH;kldzehdsyk ek- dqyxq: egksn;kauh egkjk"V<sup>a</sup> fo|kihB vf/kfu;e 1994 P;k dye **14½** varxZr fo}r ifjÔn vkf.k O;oLFkkiu ifjÔnsP;k orhus fnukad **02@09@2016** jksth ekU;rk iznku dsysyh vkgs- rlsp ek-dqyx:aauh Inj vH;kldzekyk I= ijrhuis dk;kZUohr dj.;kdfjrk egkjk"V<sup>a</sup> fo|kihB vf/kfu;e **1994** P;k dye **14½** varxZr ch-dkWe- vH;kldzekps funsZ'k dzekad **59** fnukad **02@09@2016** jksth fuxZfer dsyk vkgs-

ch-dkWe- inoh vH;kldzekaps funsZ'k] ifj{kk o vH;kldzehdk jk"V~lar rqdMksth egkjkt ukxiwj fo|kihB] ukxiwj-[www.naguniversity.org](http://www.naguniversity.org) ww;k ladsrLFkGkoj miyC/k dj.;kr vkysys vkgs-

d`lk;k laca/khrkuh ukasn ?;koh

**ek-dqyxq:aP;k**

**vkns'kkUo;s**

**Lok{kjhl@&  
¼Jh- iqj.kpnz esJke½  
dqylfpo  
jk"V<sup>a</sup>lar rqdMksth  
egkjkt  
ukxiwj fo|kihB**

**izfrfyih ekfgrh o iq<hy dk;ZokghIkBh vxzsfÔr:**

- 1-layfXur egkfo|ky;kaps IoZ izkp;Z@lapkyd@foHkkx izeq[k
  - 2- IoZ lHkkln] fo'ksÔ dk;Z lferh]
  - 3--ek- leUo;d] okf.kT; fo|kk'kk[kk]
  - 4- ek-ijh{kk fu;a=d]
  - 5 midqylfpo ¼iqoZ ifj{kk] iqokZRrj
  - 6-Lkgk;d dqylfpo ¼lk- lkjh{kk @ lk-
  - 7-Lkgk;d dqylfpo ¼xksiuh;½
  - 8- Lkgk;d dqylfpo ¼O;ko;k;hd
  - 9-vf/k{kd ¼v/;kns'k foHkkx½
  - 10-vf/k{kd ¼fudky foHkkx½
  - 11- izHkkjh vf/kdkjh ¼izdk'ku
- 
- ifj{kk] e-fo-½  
ifj{kk o pkSd'kh½  
jk"Clar rqdMksth egkjkt ukxiwj  
ijh{kk½  
foHkkx½

12-ek-dqyxq:aps Loh; lgk;d]  
13-ek- dqylfpokaps Loh; lgk;d]  
14-Jherh fouk izdk'ks] ekfgrk'kkL=

**Lok{kjhl@&  
¼MkW- vfuy  
fgjs[ku½  
midqylfpo ¼fo|k½  
jk"Valar rqdMksth  
egkjkt  
ukxiwj fo|kihB-**

# **R.T.M Nagpur University, Nagpur**

## **Syllabus**

### **B.Com -Semester-I**

#### **1T6.1-Supplementary English**

**Prescribed Text: English and Soft Skills by S.P.Dhanavel (Publisher : Orient BlackSwan)**

1. Listening Skills

**Story- The boy who broke the bank- Ruskin Bond**

2. Team Work Skills

**Story-Whitewashing the fence- Mark Twain**

3. Emotional Intelligence Skills

**Story-My Financial Career -Stephen Leacock**

4. Assertive Skills

**Story-The Verger – Somerset Maugham**

5. Learning Skills

**Story- Three Questions- Leo Tolstoy**

# **B.Com**

## **Question Paper Pattern**

## **1T6.1-Supplementary English (80 Marks)**

## VSAQ-Very short answer questions to be answered in one or two sentences

## **SAQ-Short answer questions to be answered in 75-100 words**

**Q.1 VSAQ Any Five out of Eight on Stories (5x3) ( 15Marks)**

**Q.2 SAQ Any Three out Five on Stories (3x5) (15Marks)**

**Q.3. Discuss the Situation given in the activity section with each softskill (Any TWO out of FOUR) (2x5) (10Marks )**

**Q.4. Workplace Softskills based on the text in 100 words any Three out of Five (3x5) (15Marks)**

**Q.5. Real Life Experience related to the prescribed skills mentioned in the text in 150 words any two out of Four (2x5) (10Marks)**

**Q.6. Explain any THREE out of FIVE Proverbs related to the prescribed softskills given in the text in 75 -100words (3x5) (15Marks)**

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation/Oral** of the same.

## **2 Assignments – 5+5 = 10 Marks**

**Power Point Presentation/Oral Presentation– 5 Marks**

## **Attendance – 5 Marks**

**TOTAL – 20 MARKS**

**B.Com**  
**Semester-II**  
**2T8.1 -Supplementary English**

**Prescribed Text: English and Soft Skills by S.P.Dhanavel (Publisher : Orient BlackSwan)**

6. Problem Solving Skills

**Story- The look-out man- Nicholas Bentley**

7. Interview Skills

**Story—The lighthouse keeper of Aspinwall- Henryk Sienkiewicz**

8. Adaptability Skills

**Story-Senor Payroll- W.E.Barett**

9. Non-Verbal Communication Skills

**Story-A real good smile -Bill Noughton**

10. Written Communication Skills

**Story- Gateman's Gift-R.K.Narayan**

# **B.Com**

## **Question Paper Pattern**

## **2T8.1-Supplementary English**

### **VSAQ-Very short answer questions to be answered in one or two sentences**

### **SAQ-Short answer questions to be answered in 75-100 words**

- Q.1 VSAQ Any Five out of Eight on Stories (5x3) ( 15Marks)

Q.2 SAQ Any Three out Five on Stories (3x5) (15Marks)

Q.3. Discuss the Situation given in the activity section with each softskill (Any TWO out of FOUR) (2x5) (10Marks )

Q.4. Workplace Softskills based on the text in 100 words any Three out of Five (3x5)  
(15Marks)

Q.5. Real Life Experience related to the prescribed skills mentioned in the text in 150 words any two out of Four (2x5) (10Marks)

Q.6. Explain any THREE out of FIVE Proverbs related to the prescribed softskills given in the text in 75 -100words (15Marks)

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation/Oral** of the same.

## **2 Assignments – 5+5 = 10 Marks**

Power Point Presentation/Oral Presentation– 5 Marks

### **Attendance – 5 Marks**

**TOTAL = 20 MARKS**

**B.Com**  
**3T6.1-Supplementary English**  
**Semester -III**

**Prescribed Text: English and Soft Skills Volume 2 by S.P.Dhanavel (Publisher Orient BlackSwan)**

1. Self Esteem Skills

**Story- Legal Alien- Rutangye Crystal Butungi**

2 .Empathy Skills

**Story-Action Will be Taken- Heinrich Boll**

3. Customer Relation Skills

**Story-The Letter-G.G.Joshi**

4. Honesty

**Story-Lemon-Yellow and Fig-Manohar Malgonkar**

5. Cross-Cultural Communication Skills

**Story- Changing India- Sudha Murty**

**B.Com**  
**Question Paper Pattern**

**3T6.1-Supplementary English**

**Semester-III**

**VSAQ-Very short answer questions to be answered in one or two sentences**

**SAQ-Short answer questions to be answered in 75-100 words**

Q.1 VSAQ Any Five out of Eight on Stories                  5x3                  ( 15Marks)

Q.2 SAQ Any Three out Five on Stories                  3x5                  (15Marks)

Q.3. Discuss the Situation given in the activity section with each softskill (Any TWO out of FOUR)                  (2x5)                  (10Marks )

Q.4. Workplace Softskills based on the text in 100 words any Three out of Five (3x5)  
(15Marks)

Q.5. Real Life Experience related to the prescribed skills mentioned in the text in 150 words any two out of Four (2x5)                  (10Marks)

Q.6. Explain any THREE out of FIVE Proverbs related to the prescribed softskills given in the text in 75 -100words                  (3x5)                  (15Marks)

**INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation/Oral** of the same.

**2 Assignments – 5+5 = 10 Marks**

**Power Point Presentation/Oral Presentation– 5 Marks**

**Attendance – 5 Marks**

**TOTAL – 20 MARKS**

**B.Com**

**4T6.1-Supplementary English**

**Semester –IV**

**Prescribed Text: English and Soft Skills Volume 2 by S.P.Dhanavel (Publisher : Orient BlackSwan)**

6. Positivity Skills

**Story- The Dispenser of Holy Water- Guy de Maupassant**

7. Reliability

**Story-A Career –R.K.Narayan**

8. Professional Skills

**Story-After Twenty Years-O.Henry**

9. Leadership Skills

**Story-The Power of a Plate of Rice- Ifeoma Okoye**

10. Holistic and Visionary Skills

**Story- Ilyas- Leo Tolstoy**

**B.Com**

**Semester -IV**

**4T6.1-Supplementary English**

**Question Paper Pattern**

**VSAQ-Very short answer questions to be answered in one or two sentences**

**SAQ-Short answer questions to be answered in 75-100 words**

Q.1 VSAQ Any Five out of Eight on Stories (5x3) = (15Marks)

Q.2 SAQ Any Three out Five on Stories (3x5) = (15Marks)

Q.3. Discuss the Situation given in the activity section with each softskill (Any TWO out of FOUR) (2x5) (10Marks )

Q.4. Workplace Softskills based on the text in 100 words any Three out of Five (3x5)  
(15Marks)

Q.5. Real Life Experience related to the prescribed skills mentioned in the text in 150 words any two out of Four (2x5) (10Marks)

Q.6. Explain any THREE out of FIVE Proverbs related to the prescribed softskills given in the text in 75 -100words (3x5) = (15Marks)

**INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize **2 topics/items** from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline as **Assignments**.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus and give a **Power Point Presentation/Oral** of the same.

**2 Assignments – 5+5 = 10 Marks**

**Power Point Presentation/Oral Presentation– 5 Marks**

**Attendance – 5 Marks**

**TOTAL – 20 MARKS**



## **RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

“(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Universities Act, 1994.)”

### **Directions, Subject Scheme and Syllabus**

**For**

### **Bachelor of Commerce**



**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**

**Direction No. 59 of 2016**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF  
BACHELOR OF COMMERCE (CREDIT BASE SEMISTER PATTERN) FACULTY OF  
COMMERCE**

(Issued under section 14(8) of the Maharashtra University Act 1994)

**WHEREAS**, Maharashtra University act No. xxxv of 1994 has come into force with effect from 22<sup>nd</sup> July 1994 and has been amended from time to time,

AND

**WHEREAS**, the University Grants Commission, New Delhi vide letter no. D.O. No. F-2/2008/(XI Plan), Dated 31<sup>st</sup> January 2008 regarding new initiatives under the XI Plan-Academic reforms in the University has suggested for improving quality of higher education and to initiate the Academic reform at the earliest.

AND

**WHEREAS**, faculty of commerce act its meeting held 14.3.2016 has decided to update the existing syllabus for award of the degree of Bachelor of Commerce commensurate with the curricula existing in the various universities in India and with a view to include the latest trends in the commerce stream as well as to design it to suit to the needs of the industries and corporate houses,

AND

**WHEREAS**, University Grants Commission, New Delhi has prescribed the Model Curriculum for award of the Bachelor degree in the Faculty of commerce and directed to implement the same from the academic session 2016-2017

AND

**WHEREAS**, Chairman of all the Board of Studies in the Faculty of Commerce in their meeting held on 5.4.2016 prepared the Scheme of Credit Based Semester pattern for conduct of the BCom. Examination,

AND

**WHEREAS**, Board of Studies viz. (1) Business Administration and Business Management, (2) Commerce, (3) Accounts and Statistics, (4) Business Economics and (5) Ad-hoc Board in Computer Application in its meetings held on 8.2.2016 respectively updated the existing Syllabi and recommended some modifications in the scheme of examination for graduate courses,

AND

**WHEREAS**, Coordinator of Task Force, Faculty of Commerce has consented to the changes in the syllabus and the scheme of examination for the award of B.Com Degree,

AND

**WHEREAS**, the Vice-Chancellor, Nagpur University, Nagpur approved the recommendations so made by the Special Task Committee in the Faculty of Commerce duly concurred by the Coordinator, Faculty of Commerce as required under Section 38 (a) of the Act on

AND

**WHEREAS**, As per the Advice of the Vice Chancellor, Coordinator, Faculty of Commerce & Coordinator, Special Task Committee in the meeting held on 14.3.2016 constituted sub-committee for syllabus restructuring of B.Com with CBCS pattern.

The Sub-committee submitted the Draft Syllabus of B.Com with CBCS pattern in meeting held on 5.4.2016

AND

**WHEREAS**, ordinance making involve a time consuming process, Now, therefore, I, Dr. S. P. Kane, Vice-Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of the powers vested in me under Section 14(8) of the Maharashtra University Act of 1994 do hereby issue the following direction:

This direction shall be called “**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF BACHELOR OF COMMERCE (CREDIT BASED SEMESTER SYSTEM) FACULTY OF COMMERCE RASHTRASANT TUKDOJI MAHARAJ NAGPURUNIVERSITY,NAGPUR**”.

- The Direction shall come into force with effect from the date of its issuance by Honorable Vice-Chancellor.

- The duration of the course shall be of **three** academic years consisting of the **six** semesters with university examination at the end of each semester namely
  - B.Com Semester I Examination
  - B. Com Semester II Examination
  - B. Com Semester III Examination
  - B.Com Semester IV Examination
  - B.Com Semester V Examination
  - B.Com Semester VI Examination

The examination shall be held at such places and on such dates which are notified by the University.

#### **I. ELIGIBILITY TO THE COURSE**

- The duration of B. Com. Course shall be of Three years consisting Semester-I &II in first year ,Semester-III &IV in second year and Semester-V &VI in third year
- Subject to compliance with the provisions of this direction and of other ordinances in force from time to time, an applicant for admission to this course shall have passed the XII Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education, with English at Higher or Lower level and any Modern Indian Language at higher or lower level with any combination of optional subjects;

#### **OR**

- XII Standard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only; OR any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed Minimum Competition vocation course (MCVC).
  -

#### **OR**

#### **Any other Equivalent Examination of any State in (10+2) pattern with English & any combination of subjects**

- The Examinations for Semesters I,II,III,IV , V and VI shall be held twice a year at Such places and on such dates as notified by the University.
- The fees for examination shall be as prescribed by the Rashtrasant Tukdoji Maharaj Nagpur University from time to time.

- Applicant for the examination pursuing the regular course of study leading to the Bachelor Degree in Commerce shall not be permitted to join any other course in this University or any other University simultaneously.
  - **ATKT Rules** for Admission for the B.Com. Course -An unsuccessful examinee at the any semester examination shall be **ALLOWED TO KEEP TERM in accordance to the following table:**

<b>Admission to Semester</b>	<b>Candidate should have filled in the examination form of the R.T.M. Nagpur University</b>	<b>Candidate should have passed at least 50% of the passing heads of following examinations</b>
I Semester	As provided eligibility to the course, as above in the direction.	-
II Semester	of semester I	-
III Semester	-	Semester I and II taken together i.e. 6 heads clear
IV Semester	of semester III	-
V Semester	-	Semester I & II all heads clear& semester III & IV together i.e. 6 heads clear
VI Semester	of semester V	-

**Note- The consideration of passing heads in respect of all the subjects, including languages, includes the University Theory Examination and Internal Assessment/Practical marks taken together for all subjects.**

**For providing teaching facility in the subjects of Foundation and Elective Groups minimum requirement of student is 5.**

## **II. CREDIT SYSTEM OF EVALUATION**

- The B. COM. programme shall consist of **Thirty Six** Papers/Subjects in old terminology

With the issuance of this Direction, The Direction No 46 of 2016 shall stand repealed.

Nagpur:

Sd/-  
( Dr. S.P. Kane )

Dated : 2/9/2016

Vice-Chancellor

**Subjects offered, contact hours, credits attached and allocation of marks shall be as follows:**

## **APPENDIX-I**

**Scheme of teaching and examination under credit based semester system for B.Com Course.**

### **Semester-I**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
1T1	Financial Accounting-I	Uni.	60	80	20	100	4
1T2	Business Organization	Uni.	60	80	20	100	4
1T3	Company Law	Uni.	60	80	20	100	4
1T4	Business Economics-I	Uni.	60	80	20	100	4
1T5	Compulsory English	Uni.	60	80	20	100	4
1T6	Second Language 1T6.1- Supplementary English 1T6.2- Marathi 1T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses : Semester -I**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
1T7	Entrepreneurship Development	60	80	20	-	40	100	4
1T8	2T8.1- Computer Application-II <b>or</b> 2T8.2- Principles and Practice of Insurance-II <b>or</b> 2T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

**Semester-II**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
2T1	Statistics and Business Mathematics	Uni.	60	80	20	100	4
2T2	Business Management	Uni.	60	80	20	100	4
2T3	Secretarial Practice	Uni.	60	80	20	100	4
2T4	Business Economics-II	Uni.	60	80	20	100	4
2T5	Compulsory English	Uni.	60	80	20	100	4
2T6	Second Language 2T6.1- Supplementary English  2T6.2- Marathi  2T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses : Semester -II**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni) Marks	Internal (College) Theory Paper	Practical (Uni) Marks	Practical (PR) Marks		
2T7	Entrepreneurship Development	60	80	20	-	40	100	4
2T8	2T8.1- Computer Application-II <b>or</b> 2T8.2- Principles and Practice of Insurance-II <b>or</b> 2T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

### **Semester-III**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
3T1	Financial Accounting -II	Uni.	60	80	20	100	4
3T2	Business Communication & Management	Uni.	60	80	20	100	4
3T3	Business Law	Uni.	60	80	20	100	4
3T4	Monetary Economics -I	Uni.	60	80	20	100	4
3T5	Compulsory English	Uni.	60	80	20	100	4
3T6	Second Language 3T6.1- Supplementary English  3T6.2- Marathi  3T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi** will be as per the Commerce Language Board.

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Gujarathi, Telgu, Bengali, Persian, Arebic Pali & Prakrit, Latin** will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.

**Vocational Courses :Semester-III**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni) Max Marks Theory Paper (TH)	Internal (College) Max Marks (IM)	Practical (Uni) Max Marks Practical (PR)	Min Passing Marks		
3T7	Entrepreneurship Development	60	80	20	-	40	100	4
3T8	3T8.1- Computer Application-II <b>or</b> 3T8.2- Principles and Practice of Insurance-II <b>or</b> 3T8.3- Advertising, Sales Promotion & Sales Management-II	60	80	20	-	40	100	4

#### **Semester-IV**

Course Code	Subjects	Internal /University Exam.	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
4T1	Financial Accounting -III	Uni.	60	80	20	100	4
4T2	Skill Development	Uni.	60	80	20	100	4
4T3	Income Tax	Uni.	60	80	20	100	4
4T4	Monetary Economics-II	Uni.	60	80	20	100	4
4T5	Compulsory English	Uni.	60	80	20	100	4
4T6	Second Language 4T6.1- Supplementary English  4T6.2- Marathi  4T6.3- Hindi	Uni.	60	80	20	100	4.
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Note-1. For rest of Indian Languages the code is as per syllabus of B.A. Semester –I**

**2. Second Language subject of B. Com. Semester ; I, II, III & IV shall be as follows:**

**A)The syllabus, question paper pattern and question paper of the following subjects :**

**1. Supplementary English, 2. Marathi, 3. Hindi will be as per the Commerce Language Board.**

**B) The syllabus , question paper pattern and question paper of the following subjects :**

**Sanskrit, Urdu, Guajarati, Telgu, Bengali, Persian, Arabic Pali & Prakrit, Latin will be as per the Boards of the faculty of Arts for B.A. Semester- I, II, III & IV respectively.**

**Vocational Courses :Semester-IV**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
4T7	Entrepreneurship Development-IV	60	80	20	-	40	100	4
4T8	4T8.1- Computer Application-IV <b>or</b> 4T8.2- Principles and Practice of Insurance-IV <b>Or</b> 4T8.3- Advertising, Sales Promotion and Sales Management-IV	60	80	20	-	40	100	4

**Semester-V**

Course Code	Subjects	Internal /Uni. Examination	Total Hours	Marks			Credits
				Semester End Exam.	Internal Assessment	Total Marks	
5T1	<b>Core Group</b> 1. Financial Accounting- IV 2.Cost Accounting 3.Management Process 4. Indian Economics- I	Uni.	60	80	20	100	4
5T3	5T2	Uni.	60	80	20	100	4
5T4	5T3	Uni.	60	80	20	100	4
5T5	<b>Elective Group -I</b> 5T5.1 Marketing Management <b>OR</b> 5T5.2 Computerized Accounting	Uni.	60	80	20	100	4
5T6	<b>Foundation Group- I</b> 5T6.1 Business Finance -I <b>OR</b> 5T6.2 Auditing	Uni.	60	80	20	100	4
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Vocational Courses :Semester-V**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
5T7	Entrepreneurship Development-V	60	80	20	-	40	100	4
5T8	5T8.1  Computer Application-V  <b>Or</b>  5T8.2  Principles and Practice of Insurance-V  <b>Or</b>  5T8.3  Advertising, Sales Promotion and Sales Management-V	60	80	20	-	40	100	4

**Semester-VI**

Course Code	Subjects	University Examination	Total Interna l /Hours	Marks			Credits
				Semester End Exam.	Internal Assessm ent	Total Marks	
6T1	<b>Core Group</b>  1. Financial Accounting -V	Uni.	60	80	20	100	4
6T2	2.Management Accounting	Uni.	60	80	20	100	4
6T3	3.Advanced Statistics	Uni.	60	80	20	100	4
6T4	4. Indian Economics - II	Uni.	60	80	20	100	4
6T5	<b>Elective Group-II</b> 6T5.1 Human Resource Management <b>OR</b> 6T5.2- Indirect Tax	Uni.	60	80	20	100	4
6T6	<b>Foundation Group- II</b> 6T6.1 Business Finance - II <b>OR</b> 6T6.2 Industrial Law	Uni.	60	80	20	100	4
<b>Total</b>			<b>360</b>	<b>480</b>	<b>120</b>	<b>600</b>	<b>24</b>

**Vocational Courses :Semester-VI**

Course Code	Subjects	Total Hours	Examination Scheme				Total Marks (TH. + PR + IM)	Credits
			Theory (Uni)	Internal (College)	Practical (Uni)			
6T7	Entrepreneurship Development-VI	60	80	20	-	40	100	4
6T8	6T8.1  Computer Application-VI  <b>Or</b>  6T8.2  Principles and Practice of Insurance-VI  <b>Or</b>  6T8.3  Advertising, Sales Promotion and Sales Management-VI	60	80	20	-	40	100	4

### **III Choice of Vocational Courses :**

Apart from doing General B.Com, students can opt for vocational courses in B. Com as under :

- **Vocational subjects:** The various vocational courses (mainly sponsored by UGC) which can be chosen by the students are given below. As per the UGC letter no. F.9-3/95 (Desk-VE) dated 23.12.1999 a course for **Entrepreneurial Development is compulsory** for students opting for vocational subjects. Thus with every vocational subject there will be one paper of Entrepreneurship Development.

#### **Group -I - Computer Applications**

- I. Entrepreneurship Development- Paper-I
- II. Computer Applications  
(2 papers in each year i.e. 6 papers in 3 years)

#### **Group -II - Principles and Practice of Insurance**

- I. Entrepreneurship Development- Paper-I
- II. Principles and Practice of Insurance  
(2 papers in each year i.e. 6 papers in 3 years)

#### **Group -III - Advertising, Sales Promotion And Sales Management**

- I. Entrepreneurship Development- Paper-I
- II. Advertising, Sales Promotion And Sales Management  
(2 papers in each year i.e. 6 papers in 3 years)

#### **NOTE :**

Students opting for UGC Vocational subject (any one group of the two mentioned above) may select the same in lieu of following mentioned subjects in the respective Semester.

#### **B.Com. Semester-I :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Company Law

#### **B.Com. Semester-II :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Secretarial Practice

#### **B.Com. Semester-III :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Business Communication and Management

#### **B.Com. Semester-IV :**

- a. Second Language subject i.e. Hindi, Marathi, Supp. English, etc.
- b. Skill Development

#### **B.Com. Semester-V :**

- a. Core Group-I
- b. Elective Group-I

#### **B.Com. Semester-VI :**

- a. Core Group-II
- b. Elective Group-II

### **Summary of the Total Marks and Credits**

<u>Sr. No.</u>		<u>Instruction Hours</u>	Total Marks ) Semester End Exam.	Credits
1	Semester—I	360	600	24
2	Semester—II	360	600	24
3	Semester—III	360	600	24
4	Semester—IV	360	600	24
5	Semester—V	360	600	24
6	Semester—VI	360	600	24
<b>Total</b>		2160	3600	144

- The Semester End written examination of all subjects shall be conducted by the University.

### **B.COM. Examination Semester—I**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting – I	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
2. Business Organization	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
3. Company Law	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
4. Business Economics-I	<i>University Theory Examination</i>	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	<i>University Theory Examination</i>	80	
	Internal Assessment	20	

	Total	100	40
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

### B.COM. Examination Semester-II

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Statistics &.Business mathematics	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Business Organization	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Company Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4. Business Economics-II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

**B..COM. Examination Semester-III**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting -II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Business Communication and Management	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Business Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4.Monetary Economics-I	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6.Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

**B..COM. Examination Semester-IV**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
1. Financial Accounting – III	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
2. Skill Development	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
3. Income Tax	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
4. Monetary Economics-II	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
5. Compulsory English	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
6. Second Language	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
Total		<b>600</b>	<b>240</b>

**B.COM. Examination Semester-V**

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks (Combined)
<b>Group</b> <b>1. Financial Accounting-IV</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>2. Management Accounting</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>3. Management Process</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>4. Indian Economics- I</b>	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>5. Elective Group-I</b> Marketing Management <b>OR</b> Computerized Accounting.	University Theory Examination	<b>80</b>	40
	Internal Assessment	20	
	Total	100	
<b>6. Foundation Group- I</b> Business Finance -I <b>OR</b> Auditing	University Theory Examination	<b>80</b>	40
	Internal Assessment	20	
	Total	100	
<b>Total</b>		<b>600</b>	<b>240</b>

## B.COM. Examination Semester–VI

Subject	Examination Scheme	Maximum Marks	Minimum Passing Marks ( Combined)
<b>Group</b>	University Theory Examination	80	
1.Financial Accounting -V	Internal Assessment	20	40
	Total	100	
2.Cost Accounting	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
3. Advanced Statistics	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
4. Indian Economics-II	University Theory Examination	80	
	Internal Assessment	20	40
	Total	100	
<b>3. Elective Group-II</b> Human Resource Management <b>OR</b> Indirect Tax	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>4. Foundation Group- II</b> Business Finance –II <b>OR</b> Industrial Law	University Theory Examination	80	40
	Internal Assessment	20	
	Total	100	
<b>Total</b>		<b>600</b>	<b>240</b>

## **APPENDIX-II**

### **I. GENERAL RULES AND REGULATIONS**

The scope of the subject, percentage of passing in theory will be governed as per following rules:

- In order to pass at the Semester I, II, III & IV examinations an examinee shall obtain not less than 40% marks in each paper. This is to say that out of total 100 marks student should score 40 marks jointly in university examination (80 Marks) and internal examination (20 marks).
- The results of successful candidates at the end of semester-VI shall be classified on the basis of aggregate marks obtained in all the six semesters.
- The candidates who pass all the semester examinations in the first attempt are eligible for ranks.
- The results of the candidates who have passed the Semester-VI examination but not passed the lower semester examinations shall be declared as NCL (not completed lower semester examinations). Such candidates shall be eligible for the Degree only after successful completion of all the lower semester examinations.
- Percentage of marks for declaring class:  
Distinction- 75% and above (First Class With Distinction).  
First Class- 60% and above  
Second Class 45% and above but less than 60%.  
Third Class 40% but not less than 45%
- An unsuccessful examinee at the any semester wise end examination shall be eligible for re-examination on payment of a fresh Examination fee prescribed by the University.

### **II.TEACHING NORMS FOR THEORY PAPERS**

- For all Theory Papers there shall be **FIVE Periods Per week per Subject of 48 Minutes duration** each. Each Theory Paper must cover minimum 60 Clock Hours of Teaching and 360Clock Hours for semester I, II, III IV, V & VI form awl the 6 papers and One Credit, subject of Theory will be of 1 Clock Hour
- No person shall be admitted to this Programme, if he has already passed the same Programme or an Programme of any other statutory University (which has been recognized as equivalent to this programme.)
- A candidate who fails in any of the semester examinations may be permitted to take the examinations again at a subsequent appearance as per the syllabus and scheme of

examination in vogue at the time the candidate took the examination for the first time. This facility shall be limited to the following two years i.e. 4 more attempts.

- Examinee successful at the Semester I, II, III, IV, V and VI examinations shall, on payment of the prescribed fee, receive a Degree in the prescribed form signed by the Vice-Chancellor.
- Qualification of Teacher shall be as per U.G.C. and State Government norms.

**APPENDIX- III**  
**Rashtrasant Tukdoji Maharaj Nagpur University**

**I. SUBJECTS FOR B.Com. EXAMINATION**

**Semester-I**

1. 1T1-Financial Accounting-I
2. 1T2- Business Organization
3.1T3 Company Law
4. 1T4 Business Economics -I
5.1T5 Compulsory English
6.1T6 Second Language

**Semester-II**

1. 2T1 Statistics and Business Mathematics
2. 2T2 Business Management
3. 2T3 Secretarial Practice
4. 2T4 Business Economics -II
5.2T5 Compulsory English
6.2T6 Second Language

**Semester-III**

1. 3T1 Financial Accounting-II
2. 3T2 Business Communication and Management
3. 3T3 Business Law
4. 3T4 Monetary Economics -I
5.3T5. Compulsory English
6. 3T6 Second Language

**Semester-IV**

1. 4T1 Financial Accounting-III
2. 4T2 Skill Development.
3. 4T3 Income Tax
4. 4T4 Monetary Economics -II
5. 4T5 Compulsory English
6.4T6 Second Language

**Semester-V**

<b>Core Group</b>	1. 5T1 Financial Accounting IV
	2.5T2 Management Accounting
	3. 5T3 Management Process
	4. 5T4 Indian Economics-I
<b>Elective Group-I</b>	5. 5T5 .1 Marketing Management <b>OR</b> <b>5T5.2 Computerizes Accounting</b>
<b>Foundation Group I</b>	6. 5T6.1 Business Finance 1 <b>OR</b> 5T6.2 Auditing

**Semester-VI**

<b>Core Group</b>	1.6T1 Financial Accounting -V
	2. 6T2 Cost Accounting
	3.6T3 Advanced Statistics
	4. 6T4 Indian Economics-II
<b>Elective Group-II</b>	5. 6T5.1 Human Resource Management <b>OR</b> 6T5.2 Indirect Tax
<b>Foundation Group II</b>	6. 6T6.1 Business Finance-II <b>OR</b> 6T6.2 Industrial Law

## Workload

**Workload Chart (70 periods per week) (Odd Semesters) ( July to November )**

B. Com. Semester - I			B. Com. Semester – III			B. Com. Semester – V		
S. No.	Subjects	N/o. of Periods	S. No . .	Subjects	No. of Period s	S. No.	Subjects	No. of Periods
1.	Financial Accounting-I	5	1.	Financial Accounting-II	5	1.	Core Group 1. Financial Accounting IV	5
2.	Business Organization	5	2.	Business Communication and Management	5	2 3 4.	Management Accounting Management Process Indian Economics	5
3	Company Law	5	3.	Business Law	5	5.	Elective Group - I Marketing Management <b>OR</b> Computerized Accounting	5
4.	Business Economics -I	5	4.	Monetary Economics -I	5	6.	Foundation Group - I Business Finance -I <b>OR</b> Auditing	5
<b>Total Periods</b>		<b>20</b>	<b>Total Periods</b>		<b>20</b>	<b>Total Periods</b>		<b>30</b>

**Workload Chart (70 periods per week)(Even Semesters)**

**( December to April)**

B. Com. Semester - II			B. Com. Semester – IV			B. Com. Semester – VI		
S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods	S. No.	Subjects	No. of Periods
1.	Statistics and Business Mathematics	5	1.	Financial Accounting-III	5	1.	Core Group Financial Accounting-V	5
2.	Business Management	5	2.	Skill Development.	5	2.	Cost Accounting	5
						3.	Advanced Statistics	5
						4.	Indian Economics-II	5
3.	Secretarial Practice	5	3.	Income Tax	5	5.	Elective Group-I Human Resource Management OR Indirect Tax	5
4.	Business Economics – II	5	4.	Monetary Economics –II	5	6.	Foundation Group- I Business Finance-II OR Industrial Law	5
<b>Total Periods</b>		<b>20</b>			<b>20</b>			<b>30</b>

**WEEKLY Workload Chart ( LANGUAGES ) ( For Semesters I, II, III & IV)**

<b>SUBJECT(S)</b>		<b>PERIODS</b>
<b>1.</b>	<b>Compulsory English</b>	<b>5 PERIODS OF THEORY</b> + <b>1 PERIOD OF TUTORIAL FOR A BATCH OF 20 STUDENTS</b>
<b>2.</b>	<b>Second Language - Supplementary English/ Hindi/ Marathi/ Sanskrit etc.</b>	<b>5 PERIODS OF THEORY</b>

**II. CONVERSION OF MARKS TO GRADES AND CALCULATIONS OF GPA (GRADE**

**POINT AVERAGE) AND CGPA (CUMULATIVE GRADE POINT AVERAGE) :**

In the Credit and Grade Point System, the assessment of individual Subjects in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grades by some mechanism wherein the overall performance of the Learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of Grade. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviations and formulae used are as follows:-

**Abbreviations and Formulae Used**

G : Grade

GP : Grade Points

C : Credits

CP : Credit Points

CG : Credits X Grades (Product of credits & Grades)

SGPA =  $\Sigma CG / \Sigma C$ : Sum of Product of Credits & Grades points /  $\Sigma C$ : Sum of Credits points

SGPA : Semester Grade Point Average shall be calculated for individual semesters. (It is also designated as GPA)

CGPA : Cumulative Grade Point Average shall be calculated for the entire Programme by considering all the semesters taken together.

While calculating the CG the value of Grade Point 1 shall be consider Zero (0) in case of learners who failed in the concerned course/s i.e. obtained the marks below 40. After calculating the SGPA for an individual semester and the CGPA for entire programme, the value can be matched with the grade in the Grade Point table as per the Five (05) Points Grading System and expressed as a single designated GRADE such as O,A,B,C, F. (Fail).

Marks	Grade	Grade Points
75& above	O (Outstanding)	10
60-74	A (Very Good)	09
45-59	B (Good)	08
40-44	C (Average)	07
39& Below	F (Fail)	00

CGPA	Grade	Division
<b>10</b>	O (Outstanding)	<b>Distinction</b>
<b>9-10</b>	A(Very Good)	<b>First</b>
<b>8-9</b>	B (Good)	<b>Second</b>
<b>7-8</b>	C (Average)	<b>Third</b>

**Note:** -

- Consider Grade Points equal to Zero for (C x G) calculations of failed Learner/s in the concerned course/s.

#### **The illustration for the conversion of marks into grades in a course and semester Illustrations of Calculation:- Pass**

Subjects	Total Maximum Marks	Total Minimum Marks	Total Marks Obtained	Grade(G)	Grade points (GP)	Credit of the Course(C)	(Credit) X (Grade points)( CX GP)	SGPA=ΣCG/ΣC
C-11	100	40	60	A	9	4	36	<b>SGPA</b> $=208/24$ $=8.67$ <b>Grade B</b> <b>RESULT</b> <b>=PASS</b>
C-12	100	40	50	B	8	4	32	
C-13	100	40	75	O	10	4	40	
C-14	100	40	70	A	9	4	36	
C-15	100	40	48	B	8	4	32	
C-16	<b>100</b>	<b>40</b>	<b>52</b>	<b>B</b>	<b>8</b>	<b>4</b>	<b>32</b>	
<b>Total</b>	<b>600</b>	<b>240</b>	<b>355</b>	--	<b>48</b>	<b>24</b>	<b>208</b>	

#### **Illustrations of Calculation:- Fail**

Subjects	Total Maximum Marks	Total Marks Obtained	Grade(G)	Grade points(GP)	Credit of the Course(C)	(Credit) X (Grade points)( CX GP)	SGPA=ΣCG/ΣC
C-31	100	32	F	0	4	00	<b>SGPA</b> $=102/24$ $=4.24$ <b>Grade</b> <b>FRESUL</b> <b>T</b> <b>-F A II</b>
C-32	100	34	F	0	4	00	
C-33	100	60	B	8	4	32	
C-34	100	75	O	10	4	40	
C-35	100	33	F	0	4	00	
<b>C-36</b>	<b>100</b>	<b>55</b>	<b>B</b>	<b>8</b>	<b>4</b>	<b>32</b>	
<b>Total</b>	<b>600</b>	<b>304</b>	--	<b>26</b>	<b>24</b>	<b>102</b>	

Provision of Direction No.44 of 2001 governing the award of grace marks for passing an examination, securing higher Grades shall apply to the examination

### **III. GUIDELINES FOR SETTING QUESTION PAPERS:**

- .The question paper should be set in such a manner so as to cover the complete syllabus as prescribed by the University.
- .The numerical questions in any of the subjects shall be set in ENGLISH only and the candidate shall have to answer such questions in ENGLISH only. The candidate may answer non-numerical questions in ENGLISH, MARATHI or HINDI.
- The duration of the Semester wise End Examination shall be **3.00** Hours per course.

## **ABSORPTION SCHEME –I**

### **Bachelor of Commerce (B.Com)(Old Course Before 2013-2014)**

It is notified for general information of all concerned that the failure students of **Bachelor of Commerce (B.Com) OLD course** shall be absorbed in the **New course** introduced from the session 2014-2015 examination with the following scheme.

1. Those who have completed & passed **B.Com Part - I as per Old course** are eligible for admission in the **B.Com Part - II New course**.
2. Failure students of **B.Com Part - I old course** and having ATKT as per rules are eligible to take admission in **B.Com Part-II New course**. They should clear their **B.Com Part - I old course backlog** papers in next **three attempts (Last Chance Winter 2016)**. If they fail to pass in **Winter-2016** attempt they will have to appear in parallel papers of **New course**

**Scheme** as per absorption scheme indicated in Appendix- I.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheetofB.Com Part - I**.

3. Those who have completed & passed **B.Com Part - I & B.Com Part -II as per Old course** are eligible for admission in the **B.Com Part - III**

**New course.**

4. Failure students of **B.Com Part - II old course** and having ATKT as per rules are eligible to take admission in **B.Com Part-III New course**. They should clear their **B.Com Part - II old course backlog** papers in next **three attempts (Last Chance Winter 2017)**. If they fail to pass in **Winter-2017** attempt they will have to appear in parallel papers of **New course**

**Scheme** as per absorption scheme indicated in Appendix- II.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in **old course marksheetofB.Com Part - II**.

5. Failure students of **B.Com Part-III old course** are having chances up to **Winter 2018** examination (**Last Chance**). So they should appear **B.Com Part-III old course examination &are required to clear their backlog**. After that those who will have backlog in the **B.Com Part-III old course** will have to appear in parallel papers of **New course scheme** as per the absorption scheme indicated in Appendix- III.

**Note:** The students who will appear in parallel papers of **New course scheme** paper with maximum theory marks 80, will get proportional marks out of 100 updated in old course mark sheet of **B.Com Part-III.**

6. The students opted for UGC vocational subjects in **B.Com (old course)** & failed will have to appear in respective vocational paper of **B.Com (new course)** as indicated in Appendix – IV.

#### Appendix- I B.Com Part- I

Sr. No	<b>Old course Before 2013-2014</b>	<b>Max. Marks</b>	Sr.No.	<b>New Course from 2014-2015</b>	<b>Max. Marks</b>
				<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – I	100	3	Financial Accounting - I	100
4	Basics of Computer & Statistical Techniques	100	4	Fundamentals of Statistics & Computer	100
5	Principles of business Management	100	5	Principles of Management	100
6	Business Economics	100	6	Business Economics	100
7	Optional Paper - I (Any Group)	100	7	Company Law & Secretarial Practice (CLSP)	100

**Appendix- II B.Com Part-II**

Sr.N o.	Old course Before 2013-2014	Max. Marks	Sr.No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – II	100	3	Financial Accounting - II	100
4	Cost & Management Accounting	100	4	Cost & Management Accounting	100
5	Company Law & Secretarial Practice	100	5	Business and Industrial Law	100
6	Monetary Economics	100	6	Monetary Economics	100
7	Optional Paper - II (Any Group)	100	7	Business Communication	80

**Appendix- III B.Com Part-III**

Sr.No . .	Old course Before 2013-2014	Max. Marks . .	Sr.No	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Financial Accounts & Auditing – III	100	1	Financial Accounting – III	100
2	Income Tax	100	2	Income Tax & Auditing	100
3	Business Law	100	3	Business Finance	100
4	Business Communication & Management	100	4	Functional Management	100
5	Indian Economics	100	5	Indian Economy	100
6	Optional Paper - III (Any Group)	100	6	Computerized Accounting	80

## Appendix- IV

### B.Com Part- I ( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Marks	Sr No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70
4	Group IV. Computer Applications MIS & IT – I	70	4	Group IV. Computer Applications Information Technology & MIS (IT & MIS)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70
6	Entrepreneurship Development – I	70	6	Entrepreneurship Development – I	70

B.Com Part- II ( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Mark s	Sr No.	New Course from 2014-2015	Max. Mark s
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice-II	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- II	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70
4	Group IV. Computer Applications MIS & IT – II	70	4	Group IV. Computer Applications Visual Basic & DBMS (VB & DBMS)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70
6	Entrepreneurship Development – II	70	6	Entrepreneurship Development – II	70

B.Com Part-III  
( Vocational Subjects )

Sr No.	Old course Before 2013-2014	Max. Marks	Sr No.	New Course from 2014-2015	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70	1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70	2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70
4	Group IV. Computer Applications MIS & IT – III	70	4	Group IV. Computer Applications E-Commerce & Web Development (EWD)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70
6	Entrepreneurship Development – III	70	6	Entrepreneurship Development – III	70

## **ABSORPTION SCHEME –II (Old Course 2014-2015 & New Course 2016-2017)**

Bachelor of Commerce (B.Com)(Old Course 2014-2015) The students of B. Com course of 2014-2015 who are not eligible for getting admission in B. Com part- II from B. Com part-I as per prevailing ATKT rules shall have to pass in the subjects given in the absorption scheme as below.

After becoming eligible they will be admitted in Semester III of CBCS2016-2017

Similarly, those students who are not eligible for getting admission in B. Com part-III from B. Com-II shall have to pass in the subjects given in the absorption scheme II as below. After becoming eligible they will be admitted in semester V of CBCS 2016-2017.

Only three attempts of successive examination shall be given to such students

For example- If the student fails in B. Com part –I in summer 2016 shall get winter 2016, Summer 2017, and Winter 2017 attempts only

### **Appendix- I B.Com Part- I**

Sr. No	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
				Theory	
1	Compulsory English	100	1	Compulsory English	100
2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II <sup>nd</sup> Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting – I	100	3	Financial Accounting - I	100
4	Fundamentals of Statistics & Computer	100	4	Statistics & Business Mathematics	100
5	Principles of business Management	100	5	Business of Management	100
6	Business Economics	100	6	Business Economics-I	100
7.	Company Law & Secretarial Practice(CLSP)	100	7	Company Law	100

**Appendix- II B.Com Part-II**

Sr.N o.	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Compulsory English	100	1	Compulsory English	100
2	II nd Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100	2	II nd Language (Other Indian language as per syllabus) (Hindi, Marathi, etc.)	100
3	Financial Accounting - II	100	3	Financial Accounting - II	100
4	Cost & Management Accounting	100	4	Cost Accounting	100
5	Business Communication	100	5	Business Communication & Management	100
6	Monetary Economics	100	6	Monetary Economics-I	100
7.	Business & Industrial Law	100	7	Business Law	100

**Appendix- III B.Com Part-III**

Sr.No.	Old course(2014-2015)	Max. Marks	Sr.No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Financial Accounts – III	100	1	Financial Accounting – III	100
2	Income Tax& Auditing	100	2	Auditing	100
3	Functional Management	100	3	Management Process	100
4	Indian economy	100	4	Indian Economics -I	100
5	Business Finance	100	5	Business Finance - I	100
6	Computerized Accounting	80	6	Computerized Accounting	100

## Appendix- IV

### B.Com Part- I (Vocational Subjects)

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – I	70	1	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- I	70	2	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70	3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – I	70
4	Group IV. Computer Applications MIS & IT – I	70	4	Group IV. Computer Applications Fundamentals of Information Technology (FIT )	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – I	70	5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – Life Insurance	70
6	Entrepreneurship Development – I	70	6	Entrepreneurship Development – I	70

B.Com Part- II \_\_\_\_\_ ( Vocational Subjects )

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	<b>Theory</b>			<b>Theory</b>	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – II	70	1	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice-II	70	2	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – II	70	3	<b>Advertising, Sales Promotion and Sales Management.</b> <b>Advertising, Sales Promotion and Sales Management – II</b>	70
4	Group IV. Computer Applications MIS & IT – II	70	4	Computer application- Software Packages (Word & Excel)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – II	70	5	<b>Principles &amp; Practice of Insurance</b> <b>General Insurance – Paper I</b>	70
6	Entrepreneurship Development – II	70	6	Entrepreneurship Development – II	70

B.Com Part-III  
(Vocational Subjects)

Sr No.	Old course(2014-2015)	Max. Marks	Sr No.	New Course ( 2016-2017)	Max. Marks
	Theory			Theory	
1	Group I. Tax Procedures & Practice Tax Procedures & Practice – III	70	1	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
2	Group II. Office management and Secretarial Practice Office Management & Secretarial Practice- III	70	2	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
3	Group III. Advertising, Sales Promotion and Sales Management. Advertising, Sales Promotion and Sales Management – III	70	3	<b>Advertising, Sales Promotion and Sales Management.</b> <b>Advertising, Sales Promotion and Sales Management. III</b>	70
4	Group IV. Computer Applications MIS & IT – III	70	4	Group IV. Computer Applications Web Designing using HTML (WD)	70
5	Group V. Principles and Practice of Insurance Principles and Practice of Insurance – III	70	5	<b>Principles &amp; Practice of Insurance</b> <b>Insurance and Actuarial Science – Paper I</b>	70
6	Entrepreneurship Development – III	70	6	Entrepreneurship Development – III	70

The students of old course shall be given 03 attempts to pass their examination with old course starting from implementation of New Course.

***Proposed New syllabus For B. Com***  
From the Academic session 2016-2017  
**B.Com. – First Year**  
**Semester-I**  
**1T1: Financial Accounting-I**

**Unit – I Financial Accounting**

Meaning, objectives and principles of Accounting, Accounting concepts & Conventions, Accounting Standards- AS 1 to AS 10. Final accounts of Sole Traders. (**Theory & Numerical**)

**Unit – II Hire Purchase Accounts**

Meaning of Hire Purchase Accounts, Features, Merits and Demerits of Hire Purchase System, Distinction between Hire Purchase and Instalment System.

(**Theory & Numerical Excluding Instalment System and Repossession of Assets**)

**Unit – III**

**Final Accounts of Co - Operative Societies:** ( As per Maharashtra Co-Operative Societies Act 1960)- Introduction, Types of Co-operative societies Preparation of Trading & Profit and Loss A/C and Balance Sheet. (**Theory & Numerical**)

**Unit – IV**

**Joint Venture Accounts**

Meaning, Distinction between Joint venture and Partnership, Methods of joint venture accounting. (**Theory & Numerical on Centralized & Decentralized Method**)

**The Financial year ends on 31<sup>st</sup> March.**

**Reference Books :**

- S. N. Maheshwari :- Financial Accounting – Vikas Publishing House, New Delhi.
- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons.
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House.
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi).
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana).
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata).
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers).
- M. A. Arulnandam :- Advance Accounting – Himalay Publication
- Gulhane, Navghare And Others- Financial Accounting –I, Sheth Publishers Pvt. Ltd. Mumbai.
- Prof. PradeepWath, Dr. R. D. Mehta, Dr. DilipGotmare :- Financial Accounting– Payal Pakashan.
- Advanced Accounts (volume –I), M. C. Shukla, T.S. Grewal, Revised by S. C. Gupta. S, Chand Publishing.

## **1T1-Financial Accounting – I**

# Paper Pattern

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

OR

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

**OR**

### **Q. No. 3 – Unit III**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

**OR**

### **Q. No. 4 – Unit I**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

OR

### **Q. No. 5**

- a) Unit- I Problem 04 Marks
  - b) Unit -II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

## **1T2: Business Organization**

### **Unit – I**

Nature and scope of business: Meaning and definition of business, characteristics, objectives of business, classification of business activities, Industry, Service, Commerce & Trade. Social Responsibility of Business towards different groups.

### **Unit – II**

**Forms of Business Units:** Meaning, Characteristics, Advantages and Disadvantages of Sole Trader, Partnership, One Person Company, Private Company, Joint Stock Company- Concept, Classification, Service sector business: - meaning, types including BPO and KPO, advantage its role in economy

### **Unit - III**

**Organization:** Meaning, Definition ,Concept and functions of Organization, Principles of Organization, Types of Organization- Line and Staff, Modern types of organizations- Project, Matrix, Formal and Informal Organization, Advantages and Disadvantages.

### **Unit IV**

**Recent Trends in Business Organization:** Internal constituents of the Business Organization; key managerial personnel (KMP); chairman- qualities of a chairman, powers, responsibilities and duties of a chairman; chief executive officer (CEO), role and responsibilities of the CEO; E-commerce, E-business, E-banking.

### **Suggested Books:**

1. Jain, Khushpat S : Business Organisation,Mumbai
2. C.P Bose: Business Organisation & Management
3. Sekhri, Arun : Organisation, MUMBAI, Himalaya Publishing House, 2014
4. P.C.Jain: Government and business policy,Galgotia Publishing Com.New Delhi
5. Gulhane, Chopade Choudhary- Business Organization, Sheth Publishers Pvt. Ltd. Mumbai.
6. 'kekZ] ,l-y- % O;kolkf;d laxBu] jes'k cwd fMiks] ubZ fnYyh
7. oekZ] ;ksxsUnzizlkn % O;kolkf;d laxBu izca/k ,oa iz'kklu] ,l-pkUn ,aM da-
8. Dr. A. Shende, Dr. M Dixit& Dr. D. Mohture, Business Organization, Anuradha Prakashan Nagpur.

**QUESTION PAPER PATTERN**  
**BCOM – I : SEMESTER I**  
**1T2-Business Organisation**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **1T3: Company Law**

**Level of Knowledge:** - Basic Conceptual Knowledge.

**Objective:** To make aware the students with basic concept of company law  
[The Company Act 2013 with Amendments up to June 2016]

### **UNIT - I**

- (i) Background of New Company Act 2013.
- (ii) Corporate Personality – Company, Meaning of Company, Characteristics of a Company, Lifting of Corporate Veil
- (iii) Kinds of Company- Private Company, Public Company, Company limited by Share, Company Limited by guarantee, Unlimited Company, Association not for profit, Government Company, Foreign Company, Holding and Subsidiary and associate company with features of all kinds of company.
- (iv) Promotion and incorporation of company- stages in formation and incorporation of company, registration and commencement of business, Certificate of Incorporation

### **UNIT - II**

- (i) Memorandum of Association- Meaning, Definition, Importance and Content of Memorandum of Association.
- (ii) Articles of Association – Meaning, Definition, Importance and content of Articles of association.
- (iii) Private Placement and Prospectus: Meaning and definition of private placement and prospectus, public offer, types of prospectus- Deemed prospectus, Shelf prospectus, Red Herring Prospectus, Abridge prospectus.
- (iv) Misrepresentation in prospectus, Consequences of misrepresentation and remedies for misrepresentation in prospectus.

### **UNIT- III**

- (i) Share and share capital- Meaning and nature of capital and share capital, kinds of share- equity, preference, sweat equity, bonus, employee stock option scheme, and Right issue.
- (ii) Debt Capital (Borrowing and Debenture)- Meaning and nature of debt and debt capital, Types of different types of borrowing
- (iii) Difference between- Share and debenture, owned capital and debt capital.
- (iv) Depositories and dematerialization of securities- meaning and nature of depositories, procedure of dematerialization of securities.

### **UNIT – IV**

- (i) Membership in a company – Meaning of shareholder and member, distinction between shareholder and member, kinds of member.
- (ii) Procedure to become member and shareholder of a company, Concept of Transfer and Transmission of Securities (Share and Debenture)
- (iii) Directors – Meaning, Appointment, Power and Duties, Managing Director and Whole Time Director – Appointment and Qualification.

(iv) Concept of Small Shareholders Director, Women Director, Resident Director and Independent Director,Auditor – Meaning, Appointment and Removal

**Reference Books:**

- Company Law By Ashok K. Bagrial; Vikas Publication House
- Company Law And Practice, Ratan Nolakha: Vikas Publication House
- Business Law Including Company Law, Gulshan, S S and Kapoor, G K , New Age International (P) Ltd., Publishers.
- Company Law - A comprehensive Textbook on New Companies Act 2013 , Kapoor G.K. and Dhamija Sanjay: Tazman Publication
- Company Law & Secretaria lPractice- Appannaian Reddy, Prabhudev, Himalaya Publishing House
- Faroq Haque Company Law., Sheth Publishers Pvt. Ltd. Mumbai
- Company Law Dr. A . Shende, Dr. R. Ingole, Anuradha Prakashan, Nagpur
- Company Law and Secretarial Practice- Dr. R.K. Nelakha, Ramesh Book Depot, Jaipur, New Delhi.
- Secretarial Practice & Company Law- Arunkumar, Rachana Sharma- Atlantic Publishers and Distributors
- A Text Book of Company Law & Corporate Law) P.P.S.Gogna, S. Chand Publishing.

**QUESTION PAPER PATTERN**  
**1T3-COMPANY LAW**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **1T4: Business Economics – I**

### **Unit I: Nature and Scope of Business Economics**

Business Economics-Meaning, scope and objectives of business economics. Nature and types of business decisions. Role and social responsibility of business & business economist. Micro and Macro Economics- Definition, scope, merits and demerits.

### **Unit II: Theory of Consumption**

Law of Demand, Demand determinants, Changes in demand, Indifference Curve Concept- Definition, properties, importance of indifference curves. Elasticity of Demand- Concept, definition, kinds, measurement of elasticity of demand, Factors influencing elasticity of demand, Importance of elasticity of demand. Demand Forecasting- Meaning, need, importance, methods of demand forecasting.

### **Unit III: Theory of Production**

Concept of Production Function- Concept, definition, Types of Products, Total Production, Average Production, Marginal Production. Law of Variable Proportions- Assumptions, significance & limitations. Isoquant Curves- Definition, general properties of Isoquant curves, Expansion Path. Law of Returns to Scale, Internal and External Economies and Diseconomies of Scale, Ridge Lines. Theories of Population - Malthusian Theory of Population, Optimum Theory of Population, Demographic Transition Theory of Population and Criticisms. Law of Supply.

### **Unit IV- Theory of Cost and Revenue**

Law of Supply & Criticisms, Factors influencing supply. Concept of Cost in the Short & Long Run- Accounting Cost, Economic Cost, Opportunity Cost, Fixed Cost, Variable Cost, Direct and Indirect Costs, Real Cost, Explicit & Implicit Costs, Money Cost, Total Cost, Average Cost, Marginal Cost, Selling Costs. Revenues - Total Revenue, Average Revenue, Marginal Revenue and their Relationship.

### **Books Recommended:**

1. Business Economics ,V.G. Mankar, Himalaya Publication House.
2. Business Economics, H.L.Ahuja, S.Chand Publishing
3. Business Economics, Dr. A. shende, Dr. D. Mohture, Dr. Dixit,  
Dr. R. Gan, Anuradha Prakashan Nagpur
4. Micro Economics, P.N.Chopra, Kalyani Publishers.
5. Micro Economics, D.D.Chaturvedi, Galgotia Publishing Company.
6. Principles of Economics, D.M.Mithani, Himalaya Publishing House.
7. Advance Micro Economic Theory, M.Maria John Kennedy, Himalaya Publishing House.
8. Business Economics, Rashi Arora, Sheth Publishers, Mumbai
9. Business Economics, Dr. Samudra, Sai Jyoti Prakashan

**QUESTION PAPER PATTERN**  
**BCOM – I : SEMESTER I**  
**1T4-Business Economics- I**

**TIME:- 3 Hours]**

**[Full Marks:-80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Financial Accounting**
- 2. Business Organization**
- 3. Company Law and**
- 4. Business Economics-I**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10marks</b>
<b>1</b>		<b>Internal assessment Total marks</b>
<b>2</b>	<b>Unit- I            20 marks</b>	<b>20 marks</b>
	<b>Unit-II          20 marks</b>	
	<b>Unit-III       20 marks</b>	
	<b>Unit-IV       20 marks</b>	
		<b>Semester wise End Examination marks</b>
		<b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

## **1T5-Compulsory English**

### **Unit –I Short Stories:**

1. The Gifts by O Henry
2. The Quality by J. Galsworthy
3. The Axe by R. K. Narayan

### **Unit –II Poems:**

1. You turned away yourself by Kabir
2. Mending wall by Robert Frost
3. Unknown Citizen by W.H. Auden

### **Unit –III Essays:**

1. Tolerance by E.M. Forster
2. The Philosophy of Pleasure by Fulton J. Sheen
3. On Painted Face by A. G. Gardiner

### **Unit –IV**

A) I ) Synonym/Antonym of Given words (Match the following format)

II ) One Word Substitute

B) Business Correspondence:

Job Application Letter, Interview Call Letter, Job Offer Letter

C) Comprehension of an Unseen Passage

D) Precis Writing

**Prescribed Textfor UNITS I, II & III:** Swan and Pearls (Raghav Publishers)

### **Reference Books :**

#### **For UNIT IV(A) (Grammar /Vocabulary items)**

1. Learner's English Grammar & Composition by Dr. N.D.V.Prasada Rao (S.Chand)  
For Unit IV (B)
2. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan  
(Tata McGraw-Hill)
3. Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

## **Question Paper Pattern 1T5:- Compulsory English SEMESTER – I**

**N.B. LAO - Long Answer Question to be answered in about 150 words.**

**SAQ - Short Answer Question to be answered in about 75 words.**

VSAQ – Very Short Answer Question to be answered in one or two sentences.

Total Marks- 80

Q 1.	A. One LAQ out of Two based on Short Stories (Unit I)	08 Marks
	B. Two SAQs with internal choice based on Short Stories (Unit I) 2 x 4 Marks - 08 Marks	
Q 2.	A. One LAQ out of Two based on prescribed poems (Unit II)	08 Marks
	B. One LAQ out of Two based on the prescribed Essays (Unit III)	08 Marks
Q 3.	A. Two SAQs with Internal Choice from Unit III (2 x 4 Marks) = 08 Marks	
	B. (i) Synonyms/Antonyms - Match the following – 4 items against 6 options (4 x 1 Marks)	04 Marks
	(ii) One word substitute – 4 out of 6 (4 x 1 Marks)	04 Marks
Q 4.	A. One out of Two items based on Business Correspondence (Unit IV)	08 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs – 4 x 2 Marks	08 Marks
Q 5.	A. Make a Precis of the given passage and give it a suitable Title	08 Marks
	B. Five VSAQs based on Unit I and Unit III (4x2 Marks) = 08 Marks	

## **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

## **2 Assignments – 6+6 = 12 Marks**

## **Performance & Conduct – 4 Marks**

## **Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Semester - I**  
**1T6.1- Supplementary English**

**Unit 1- Prose**

1. A New Star Rises- Jawaharlal Nehru
2. Mahatma Gandhi- Louis Fischer
3. Jagdish Chandra Bose- Aldous Huxley
4. My Greatest Olympic Prize- Jesse Owens
5. Eating for Health- Rajkumari Amrit Kaur

**Unit 2 - Poetry**

1. Virtue- George Herbert
2. Solitude- Alexander Pope
3. How Sleep the Brave- William Collins

**Non-Textual portion-**

**Unit 3 – Writing Skills**

**(A) Social Correspondence:**

Letter of Congratulations, Letter of Condolence, Informal Invitation

**(B) Writing Classified Advertisements**

**Unit 4 – Grammar**

Spotting errors in the use of - (1) Articles (2) Subject-Verb Agreement

**Prescribed Text- Zenith- An Anthology of Prose and Poetry (Raghav Publishers)**

**Reference books**

1. Macmillan Foundation English - R.K. Dwivedi, A. Kumar (**for Unit IV**)
2. Developing Communication Skills -- Krishna Mohan & Meera Banerji (Macmillan Publishers) (**for the topic of ‘Social Correspondence under Unit III’**)
3. Write Right – Sarita Manuja (Macmillan) (**For the topic ‘Writing Classified Advertisements’ given under Unit III**)

## **1T6.1- Supplementary English Question Paper Pattern**

### **Semester - I**

Q1.

(A) Unit 1 Prose - LAQ 150 words ( 2 out of 4) $2 \times 08 = 16$  marks

Q 2.

(B) Unit 1 Prose - SAQ 75 words( 4 out of 5) $4 \times 4 = 16$  marks

Q 3.

(A) Unit 2 Poetry- LAQ 150 words (1 out of 2)  $1 \times 08 = 08$  marks

(B) Unit 2 Poetry - SAQ 75 words ( 2 out of 3)  $2 \times 4 = 08$  marks

Q 4.

Non-textual portion

(A) Social Correspondence:  $1 \times 08 = 08$ Marks

(B) Writing Classified Ads  $1 \times 08 = 08$  Marks

Q 5. (A)i. Correct the error in the use of Articles (4)  $04 \times 1 = 04$  Marks

ii. Correct the error in the subject-verb agreement (4) $04 \times 1 = 04$ Marks

(B)VSAQs Units 1 & 2

Answer each of the following in one or two lines  $04 \times 2 = 08$  Marks

### **Total Marks of Theory Examination- 80**

### **INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

## 1T6.2 - विषय : मराठी

सत्र पहिले २०१६

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	समकालीन राष्ट्रीय, सामाजिक समस्यावर आधारित ( चार पर्यायांपैकी एका विषयावर, शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक	३५	
		१. लोकशाहीचे भवितव्य (डॉ. बाबासाहेब आंबेडकर) २. नौका ( प. भा. भावे ) ३. अस्पृश्यांचा आधारवड ( शिवाजी सावंत ) ४. बेगड ( योगीराज वाघमारे ) ५. उमा ( वि. स. जोग )		
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक	३५	
		१. ज्ञानेश्वरांच्या विराण्या ( संत ज्ञानेश्वर ) २. मन ( बहिणाबाई चौधरी ) ३. गणपतवाणी ( बा. सी. मर्ढकर ) ४. गिरणीची लावणी ( नारायण सुर्वे ) ५. माऊली भुकेले बेट ( सुधाकर गायधनी )		
४	४	व्यावहारिक मराठी	१०	
		१. पत्रलेखन २. इतिवृत्त लेखन		

## **1T6.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप  
सत्र : पहिले**

(वेळ: ३ तास)

(एकूण गुण-80)

प्रश्न: १ समकालीन राष्ट्रीय, सामाजिक समस्यावर आधारित निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा-४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागावर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

### **एकूण गुण विभागणी**

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण
३. व्यावहारिक मराठी 08 गुण
४. निबंध 16 गुण

एकूण गुण : 80

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्यांची वर्गातील उपस्थिती (०५ गुण ), परीक्षार्थ्यांचा वर्गातील सक्रीय सहभाग ( ०५ गुण) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

**1T6.3-fo"k;%& fgUnh  
izFke l=% SSSSemester I**

<b>le;%&amp; rhu ?kaVs</b> (Units)	bdkb;ksa Units)dk ikB~;Øe Øekuqlkj	<b>dqy vad%&amp;80</b> Vad
<b>bdkbZ 1</b> <b>(Unit-1)</b>	<b>Lkedkyhu jk"Vªh;] Ikekftd rFkk vkfFkZd leL;kvksa ij vk/kkfjr fuca/k A</b> 1/4fdUgh pkj esa ls,d fo"k; ij & 'kCn lhek 400 rd1/2	
<b>bdkbZ 2</b> <b>(Unit-2)</b>	<b>Xk  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b> 1 1/2 xi'ki& fuca/k&ukeoj flag 2 1/2 IPph ohjrk& fuca/k&ljnkj iw.kZflag 3 1/2 dQu & dgkuh &izsepan 4 1/2 phQ dh nkor& dgkuh & Hkh"e lkguh 5 1/2 'kj.kkxr& dgkuh& o`Unkouyky oekZ <b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>	
<b>bdkbZ 3</b> <b>(Unit-3)</b>	1 1/2 dchj ds nksgs & dchjnkl 2 1/2 cky yhyk & lwjnkI 3 1/2 HkfDr] uhfr ds nksgs &fcgkjh 4 1/2 oj ns] oh.kkokfnuh oj ns& lw;ZdkUr f=ikBh fujkyk 5 1/2 fgekfnz rqax Ja`x ls & t;`kadj izlkn <b>vU; ikB~; Ikexzh%&amp;</b>	
<b>bdkbZ4</b> <b>(Unit-4)</b>	1 1/2 ikfjHkkf"kd 'kCnkoyh&ikB~;iqLrd esa layXu okf.kT; ls lcaf/kr ikfjHkkf"kd 'kCnksa dk vaxzsth ls fgUnhrFkk fgUnh ls vaxzsth esa v/;u visf{kr gSA <b>2 1/2 dYiuk foLrkj&amp;ikkB~;iqLrd esa layXu mfDr;ksa dh lwph ls gh dYiuk foLrkj dk v/;u visf{kr gSA</b>	

**iz'u&i= dk izk:lk ,oa vad foHkktu**

izFke l=

le;%& rhu ?kaVs dqy vad%&80

iz'u&1Lkedkyhu jk"V<sup>a</sup>h;] lkekftd rFkk vkfFkZd leL;kvksa ij vk/kkfjr fuca/kA  
**vad&16**

¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½

iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
**vad&16**

¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½

iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
**vad&16**

¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½

iz'u&4 rhu x|&foHkkx lss o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa ls fdUgha  
pkj iz'uksa dsmRrj visf{kr gSA 4 x 4vad =vad&16

iz'u&5 blds vUrXZr lEiw.kZ ikB~;Øe ls pkj y?kqRjh iz'u gksaxsaA **izFke** iz'u x| ls] f}rh;  
iz'u i| ls] r'rh; iz'u **ikfjHkkf"kd** 'kCnkoyh ls vksj prqFkZ iz'u dYiuk foLrkj ls  
iwNs tk;saxsa A lKhkh iz'uksa ds mRrj visf{kr gSA

**4 x 4 vad = vad&16**

vkUrfjd ewY;kdau & 20 vad  
dqy vad foHkkku%&

fucU/k&16 vad

x| foHkkx&28 vad

i| foHkkx&28 vad

vU; ikB~; lkexzh&08vad

dqy vad&80 vad

## **Vocational Course**

## Semester I

**(Same syllabus for all vocational group subjects in B. Com. – I)**

## **1T7-Entrepreneurial Development-I**

**Time : 3 Hours**

Full Marks: 80

## **Internal Assessment: 20**

## **Level of knowledge: Basic knowledge**

**Objective:** To provide an introductory knowledge about entrepreneurship and its development process.

---

### **Unit-I**

Entrepreneurship – Evolution of the concept of entrepreneur, Definitions of Entrepreneurship & Entrepreneur, Types of Entrepreneurship, Function of Entrepreneur, Characteristics of Entrepreneur, Socio-economic origins of Entrepreneurship.

### **Unit-II**

Stages in the Entrepreneurial process, Barriers to Entrepreneurship, Environmental factors affecting Entrepreneurship, Entrepreneurial Structures.

### **Unit-III**

Qualities of a successful Entrepreneur. Distinction between an Entrepreneur and a Manager, role of Entrepreneurship in Economic development. Theories of Entrepreneurship- Theory of Achievement Motivation, Conceptual Model of Entrepreneurship.

### **Unit-IV**

Women Entrepreneurship- Concept of Women Entrepreneurs, Functions of Women Entrepreneurs, Growth of women Entrepreneurship and problems of women Entrepreneurs, Development of women Entrepreneurship, Recent Trends.

#### **Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

## **Group – I : Computer Applications**

### **1T8.1 : Fundamental of Information Technology (FIT)**

**Unit-I:** Definition of Computer, Block diagram of computer, generations of computer, classification of computers, characteristics, advantages & limitations of computer. Computer organization: Central processing Unit - speed of processor, computer memory: primary & secondary, Storage devices: floppy disk, Hard disk, magnetic tapes, optical disk (CD/ DVD), pen drive. Input devices: keyboard, mouse, joystick, light pen, scanners, OCR, MICR, Touch Screen, Bar code reader. Output devices: monitor, printers, classification of printers, impact & non-impact printers, dot matrix, ink jet, laser, thermal printers, plotters.

**Unit-II :** Hardware & software, Software and programming languages.

Computer networks – LAN, WAN, MAN

Internet, WWW, E-Mail, education, financial service, e-Commerce, banking, shopping, advertising, e-governance. Virus, Types of Viruses, Anti-Virus, Firewall and Anti-Spy ware Utilities

### **UNIT – III :**

#### **Introduction to Disk Operating System (DOS) :**

-File types, Directory Structure, Booting - Warm and Cold Booting, Types of DOS commands (Internal and External)

-Directory commands: DIR, MD, RD, TREE, PATH, SUBST ETC., Wild card Definitions, Commands related to file management: COPY, DEL, ERASE, REN, ATTRIB, XCOPY, BACKUP and RESTORE , General commands: TYPE DATE, TIME, PROMPT etc., batch commands, wild card characters & its use.

### **UNIT – IV :**

#### **Introduction to Windows Operating System :**

Advantages of windows operating system, operating with windows, GUI, use of help features, starting an application, essential accessories, windows explorer, control panel, my computer, my documents, recycle bin, finding folders and files, system tools, new features in windows-7/8/10 versions.

**Practical : Practical will be based on Unit-III & IV i.e. MS-DOS and Windows**

#### **BOOKS RECOMMENDED:**

1. I.T. Today (Encyclopedia) By S. Jaiswal (Test Book)
2. Computer Today By Donald Senders
3. Computer Applications In Management – Ushadahiya, Sapnanagpal(Taxmann's)
4. Information Technology - Dr. Sushilamadan (Taxmann's)
5. Understanding Computer By Dineshkumar
6. Computer Fundamentals By P. K. Sinha
7. Office Automation By K.K. Bajaj (Macmillan)
8. Business On The Net An Introduction To The Whats And Hows Of E-Commerce By K. N. Agarwala & Others (Macmillan)
9. Dos/Unix & Windows: I.T. Today (Encyclopedia) By S. Jaiswal
10. Msdos; Manual

**Vocational Course**  
**Semester – I**  
**Group - II : Principles & Practice of Insurance**  
**1T8.2-Life Insurance – Paper I**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Life Insurance.

**Unit - I**

Concept of Risk, Meaning ,Definition, Classification of Risk

Risk management : Meaning and Definition, Objectives, Importance, Classification of Risk,

Methods of Handling Risk, factors affecting Risk Management, Principles of Insurance Management, Process of Risk Insurance Management

**Unit - II**

Concept of Insurance: Meaning, Definition, Need, Importance and Scope of Insurance, Benefits of Insurance

History of Insurance, Meanings of Terms used - Premium, Compensation, Cover note, Claim, Peril, actor affecting premium calculation

Reinsurance : Important concepts, characteristics, types of reinsurance, double cover, external and internal insurance.

**Unit - III**

Life Insurance: Meaning and definition of Life Insurance, Organization , Management , regulation , role and functions of life insurance

Insurance Contract, Essentials of Insurance Contract

Principles of Life Insurance, Classification of Life Insurance Policies.

**Unit - IV**

Policy conditions of Life Insurance ,

Insurance document – Proposal form, policy form, cover note, certificate of Insurance, endorsement, co-insurance and renewal receipt, procedure of taking Life Insurance Policy.

Settlement of Claim on Maturity of Policy, Death of Policy holder,

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication
- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल– हिमालया पब्लिशिंग हाउस

**Group III.**  
**Advertising, Sales Promotion and Sales Management**  
**Semester-I**  
**1T8.3 -Advertising, Sale Promotion and Sales Management - I**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

**Objectives:** The aim of the paper is to acquaint the students with concepts, techniques and give experience in the application of concepts for developing an effective advertising programme.

**Unit-1**

- Advertising Role in the Marketing Process: Legal Ethical and social Aspects of Advertising. Functions and types of advertising.

**Unit- 2**

Integrated Marketing communication .Brand management , Brand Image, Brand Equity and Brand Building. Ethics of advertising

**Unit- 3**

The major players in advertising, Advertising agency, Brand manager, market research firms, Media, Type of agencies. Structure of an agency and its functions. The process of developing an ad.

**Unit-4**

Objective Setting and market Positioning; Dagmar Approach in Determination of Target Audience and understanding them. Assumptions about consumer behavior.

**Recommended books:**

- Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968) □
- Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981) □
- Stanton, William J & Buskirk, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- Russell, Frederic A. Beach, Frank H & Buskirk, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982) □
- David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi) □
- Kazmi & Batra, Advertising & Sales Promotion - Excel Books. □
- Belch & Belch, Advertising & Promotion - Tata McGrow Hill. □
- Jethwaney & Jain - Advertising Management, Oxford Univ. Press □□

**SEMESTER I**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

# Computer Application, Insurance & Entrepreneurial Development

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

**N.B. – 1) All questions are compulsory.**

2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
	OR	
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B.Com. – First Year**  
**Semester-II**  
**2T1: Statistics and Business Mathematics**

**Unit – I Statistics & Measures of Central Tendency**

Meaning, Scope, Importance, Functions and Limitations of Statistics. Collection of data, Tabulation and Classification, Frequency distribution.  
Mean, Median, Mode, Geometric Mean and Harmonic Mean (**Theory & Numericals**)

**Unit – II**

**Dispersion-** Meaning and significance of dispersion, Methods of measuring dispersion, Mean Deviation, Standard Deviation, Quartile Deviation, co-efficient of variation (**Theory & Numericals**)

**Unit – III**

Skewness-Absolute Measures of Skewness, Relative Measures of Skewness, Karl Pearson's Coefficient of Skewness, Bowley's Coefficient of Skewness. (**Numericals**)

**Unit – IV**

**Business Mathematics**:- Ratio Proportion, Percentages, Simple & Compound Interest, Profit/ Loss. (**Numericals**)

**Reference Books:**

- Fundamentals of statistics : D. V. Elhance&VeenaElhance
- Statistics : V. K. Kapoor – S. Chand & Sons
- Statistics : B. New Gupta – SahityaBhavan Agra
- Fundamentals of statistics and Computer, Dr. M. Datalkar & Mrs. Sindhu Ghate, Sai Jyoti Prakashan, Nagpur
- Business Statistics A Self Study Text Book, Dr. P. C. Tulsian & Bharat Jhunjhunwala, S. Chand Publishing
- Fundamental of Statistics : S. C. Gupta – Himalaya Publishing House
- Business Mathematics & Statistics : NEWK Nag & S.C. Chanda – Kalyani Publishers
- Gulhane, Chopade – Statistics and business mathematics, Sheth Publishers Pvt. Ltd. Mumbai
- Business Mathematics and Statistics- Dr. M. Datalkar & Mrs. S. Ghate, Sai Joyti Publication, Nagpur.
- Problem in statistics : Y. R. Mahajan - Pimplapure Publisher Nagpur

## **Question Paper Pattern Semester-II**

### **2T1-Statistics and Business Mathematics Paper - I**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 3 – Unit III**

- a) Problem                                    08 Marks  
 b) Problem                                    08 Marks

**OR**

c) Problem                                    16 Marks

O. No. 4 – Unit I

- a) Problem                            08 Marks  
b) Problem                            08 Marks

**OR**

c) Problem                            08 Marks  
d) Problem                            08 Marks

Q. No. 5

- a) Unit- I Problem 04 Marks
  - b) Unit -II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

## **2T2: Business Management**

### **Unit I**

**Introduction:** Meaning, Definition ,concept and types of management. Principles of business Management. Scope and significance of business management.

Process of business management. Function of business Management. Management as a science or art.

### **Unit II**

**Planning:** - Meaning, Nature and Characteristics, Importance, Types & Components of Planning. **Decision Making:** Meaning, characteristics & importance of decision making. Traditional and Modern techniques of Decision-Making.

### **Unit – III**

**Delegation of Authority:**-- Meaning, Elements, Advantages, & Obstacle of Delegation of Authority. Centralization and decentralization of authority and its merits and demerits.

**Co-ordination & Controlling:** Meaning, Concept and principles of Coordination, Internal & External Coordination. Meaning, concept and elements of control.

### **Unit IV**

#### **Recent trends in management:**

Management of Change Management of Crisis, Total Quality Management, Stress Management, International Management.

#### **Suggested Books:**

1. Bajaj: Management Processing and Organization, Excel Publications.
  2. Tripathy and Reddy – Principles of Management – Tata McGraw Hill.
  3. A. Pardhasaradhy & R. Satya Raju: Management Text and Cases, Prentice Hall of India.
- Gulhane, Chopade Choudhary- Business Management, Sheth Publishers Pvt. Ltd. Mumbai
- 4- lq/kk] th-,l- Jhekjh fot;% O;kofk;d izcaU/k ds fl/nkar] jes'k cwd fMisk]ubZ fnYyh  
5- 'kekZ] th-Mh-lwukuk] th-lh-% izcaU/k ds fl/nkar] jes'k cwd fMiks]ubZ fnYyh  
6- ns'keq[k] izHkkdj% O;olk; O;oLFkkiukph ewy rRos] fiaiGkiwjs vaM da- ukxiqjs

**Question Paper Pattern  
Semester-II  
2T2-Business Management**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal mark

Time :- 3 hours Marks-80

**Q.1.**

(a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

OR

(c) UNIT – I 16 Marks

**Q.2.**

(a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

(c) UNIT – II 16 Marks

**Q.3.**

(a) UNIT – III 08 Marks

(b) UNIT – III 08 Marks

OR

(c) UNIT – III 16 Marks

**Q.4.**

(a) UNIT – IV 08 Marks

(b) UNIT – IV 08 Marks

OR

(c) UNIT – IV 16 Marks

Q.5.

a)	UNIT – I	04 Marks
b)	UNIT – II	04 Marks
c)	UNIT – III	04Marks
d)	UNIT – IV	04 Marks

## **2T3 : Secretarial Practice**

**Level of Knowledge:** - Book Conceptual Knowledge.

**Objective:** To make aware the student with various function, duties and responsibilities of company secretary and Secretarial Practice

[The Company Act 2013 with Amendments up to June 2016]

### **UNIT – I**

- (i) Procedure for Incorporation of Companies, Conversion of Companies – Private Limited to Public Limited and Public Limited to Private Limited
- (ii) Procedure for Alteration of Memorandum of Association and Article of Association
- (i) Company Secretary – Meaning, Qualification and Functions/ Role
- (ii) Directors – Procedure for Appointment of Directors and Director's Identification Number (DIN)- allotment and surrender

### **UNIT- II**

- (i) Types and characteristics of company meeting, statutory, board, general and extra ordinary meeting, and meetings of committee of director.
- (ii) Agenda, Notice and provision regarding quorum of Board meeting, Annual General Meeting and Extra ordinary General Meeting
- (iii) Voting and resolution- Meaning of poll, postal ballot and E-Voting, Meaning of ordinary and Special Resolution.
- (iv) Circular Resolution, Explanatory statement, Ordinary and special Business to be transacted in meetings.

### **UNIT – III**

- (i) Report Writing - Essential and content of Board Report and Annual Report.
- (ii) Concept of secretarial audit, Secretarial standards, corporate social responsibility and corporate governance, National Financial Reporting Authority.
- (iii) E-Governance and E-Filing- Meaning, features and procedure of E-Governance and E-Filing, MCA-21

### **UNIT – IV**

- (i) Key managerial personnel- Appointment and function of managing director, whole time director and manager.
- (ii) Procedure for appointment of Additional Directors, Alternate Directors, Nominee Directors.
- (iii) Managerial Remuneration - Remuneration of managing director, whole time director or manager.
- (iv) Provisions regarding resignation, removal of directors, Casual vacancy.

Reference Books:

- Company Law, Ashok K. Bagrial: Vikas Publication House
- Ratan Nolakha: Company Law And Practice, Vikas Publication House
- Gulshan, S S and Kapoor, G K: Business Law Including Company Law , New Age International (P) Ltd., Publishers
- Dr. Arvind shende, Dr. Asha Tiwari, Company Law & Secretarial Practice, Anuradha prakashan, Nagpur.
- Faroq Haque Secretarial Practice., Sheth Publishers Pvt. Ltd. Mumbai
  
- Kapoor G.K. and Dhamija Sanjay: Company Law -A comprehensive Textbook on New Companies Act 2013 , Tazman Publication
- Secretarial Practice & Company Law- Arunkumar, Rachana Sharma- Atlantic Publishers and Distributors
- Secretarial Practice, M. C. Kuchhal, S. Chand Publishing.

**QUESTION PAPER PATTERNS**  
**SEMISTER II**  
**2T3-SECRETARIAL PRACTICE**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |          |
|-----|----------|----------|
| (c) | UNIT – I | 16 Marks |
|-----|----------|----------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |           |          |
|-----|-----------|----------|
| (c) | UNIT – II | 16 Marks |
|-----|-----------|----------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |            |          |
|-----|------------|----------|
| (c) | UNIT – III | 16 Marks |
|-----|------------|----------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |           |          |
|-----|-----------|----------|
| (c) | UNIT – IV | 16 Marks |
|-----|-----------|----------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04 Marks |
| d) | UNIT – IV  | 04 Marks |

## **2T4 : Business Economics – II**

### **Unit I: Market Structure**

Meaning, Definition, Classification of Market Structures. Firm & Industry- Meaning, Difference between Industry and Firm. Pricing of Products-Types, Cost-based pricing, Customer-based pricing, Competitor-based pricing.

### **Unit II: Perfect & Imperfect Competition Markets**

Definition, Features, Price-output determination under Perfect Competition Market. Monopoly - Definition, Features, Types, Price determination under Monopoly. Concept of Price Discrimination .Monopolistic Competition- Meaning, Features, Price determination under Monopolistic Competition.

### **Unit III: Theories of Distribution**

Theory of Distribution -Modern Theory of Distribution. Theories of Rent- Ricardian theory of Rent, Modern theory of Rent, Concept of Quasi Rent. Theory of Wages- Marginal Productivity theory of Wages with Criticisms, Nominal & Real wages. Theories of Interest-Loanable Funds Theory of Interest, Liquidity Preference Theory of Interest, Criticisms, Concept of Gross Interest & Net Interest. Theories of Profit- Dynamic Theory of Profit, Innovation Theory of Profit, Criticisms of the Theories, Gross Profit & Net Profit.

### **Unit IV- Business Cycles & National Income**

Business Cycles-Concept, Features, Types, Phases of Business Cycles. National Income - Meaning, Concepts, Methods of Measuring National Income, Difficulties in National Income Accounting.

### **Books Recommended:**

1. Business Economics , V.G. Mankar, Himalaya Publication House
2. Modern Economics, H.L.Ahuja, S.Chand & Co Ltd.
3. Micro Economics P.N.Chopra, Kalyani Publishers.
4. Micro Economics, D.D.Chaturvedi, Galgotia Publishing Company.
5. Modern Economic Theory, K.K.Dewett, S.Chand & Co Ltd.
6. Business economics, Dr. Arvind Shende, Dr. R. Ingole, Dr. P. Kothiwale, Anuradha Prakashan, Nagpur
7. Managerial Economics,D.N.Dwivedi, Vikas Publishing House Pvt Ltd.
8. Managerial Economics-Theory & Applications, D.M.Mithani, Himalaya Publishing House.
9. Business Economics by Ms. V. Karkare, Mrs. S Ghate, Anuradha Prakashan Nagpur.
10. Business Economics, Rashi Arora, Sheth Publishers, Mumbai

## **Question Paper Pattern**

### **Semester- II**

### **2T4-Business Economics - II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |
| OR  |          |          |
| (c) | UNIT – I | 16 Marks |

Q.2.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |
| OR  |           |          |
| (c) | UNIT – II | 16 Marks |

Q.3.

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |
| OR  |            |          |
| (c) | UNIT – III | 16 Marks |

Q.4.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |
| OR  |           |          |
| (c) | UNIT – IV | 16 Marks |

Q.5.

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04 Marks |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Statistics and Business Mathematics**
- 2. Business Management**
- 3. Secretarial Practice and**
- 4. Business Economics-II**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I           20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-II**  
**2T5-Compulsory English**

**Unit -I Short Stories**

1. Some Day by Issac Asimov
2. Marriage is a private affair by Chinua Achebe
3. The Taxi Driver by Kartar Singh Duggal

**Unit -II Poems**

1. Art of Life by Tukadoji from Gramgeeta ( Translation by Dr. Bhelkar)
2. Horses Graze by Gwendolyn Brooks
3. Swan and Shadow by John Hollander

**Unit -III Essays**

1. Knowledge and Wisdom by Bertrand Russell
2. On education by Albert Einstein
3. What is Indianess? by Shelia Dhar

**Unit -IV**

A)a. Degrees of Comparison    b. Words often Confused

B) Business Correspondence:

Sales Letter, Inviting Quotations, Placing Orders

C) Comprehension of an Unseen Passage

D) Essay in about 300 words on any one Topics out of the Four Given Topics [Social issues, Economic issues, Environmental issues, Personal (Reflective) essays]

**Prescribed Textfor UNITS I, II & III:** Swan and Pearls (Raghav Publishers)

**Reference Books :**

**For UNIT IV (A) (Grammar /Vocabulary items)**

1.Learner's English Grammar & Composition by Dr. N.D.V.Prasada Rao (S.Chand)

For Unit IV (B)

2. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan  
(Tata McGraw-Hill)

3 Developing Communication Skills – Krishna Mohan & Meera Banerji

**2T5-Compulsory English**  
**SEMESTER – II**  
**Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Short Stories (Unit I)	08 Marks
	B. Two SAQs with internal choice based on Short Stories (Unit I) 2 x 4 Marks -	08 Marks
Q 2.	A. One LAQ out of Two based on prescribed poems (Unit II)	08 Marks
	B. One LAQ out of Two based on the prescribed Essays (Unit III)	08 Marks
Q 3.	A. Two SAQs with Internal Choice from Unit III	(2 x 4 Marks) = 08 Marks
	B. (i) Degrees of Comparison – 4 out of 6 - 4 x 1 Marks	08 Marks
	(ii) Words often confused – 4 out of 6 - 4 x 1 Marks	04 Marks
Q 4.	A. One out of Two items based on Business Correspondence (Unit IV)	04 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs – 4 x 2 Marks	08 Marks
Q 5.	A. Essay in about 300 words (1 out of 4 topics)	08 Marks
	B. Four VSAQs based on Unit I and Unit III	(4x2 Marks) = 08 Marks

**Total = 80 Marks**

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Question to be answered in one or two sentences.

**INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline. Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

## **2T8.1-Supplementary English**

### **Semester - II**

#### **Unit 1- Prose**

1. Using the Dictionary- Albert Walker and Mary R. Parkman
2. On the Rule of the Road- A.G. Gardiner
3. How I became a Public Speaker- George Bernard Shaw
4. Seeing People Off- Sir Max Beerbohm
5. The Postmaster- Rabindranath Tagore

#### **Unit 2 - Poetry**

1. The Daffodils- William Wordsworth
2. Stopping by Woods on a Snowy Evening- Robert Frost

#### **Unit 3 Non-Textual Portion**

##### **(A) Social Correspondence:**

- Letter of Recommendation
- Letter of Introduction
- Making reservations in hotels for accommodation

##### **(B) Note making :**

- Serial or sequential format
- Tree diagram

#### **Unit 4 – Grammar**

Spotting errors in the use of- (1) Prepositions s (2) Tenses

**Prescribed Text- Zenith- An Anthology of Prose and Poetry (Raghav Publishers) For Unit I and II**

#### **Reference books**

1. Macmillan Foundation English - R.K. Dwivedi, A. Kumar (**For Unit IV**)
2. Developing Communication Skills -- Krishna Mohan & Meera Banerji (Macmillan Publishers) (**For the topic ‘Social Correspondence’ under Unit III** )
3. Write Right by Sarita Manuja ( Macmillian Publication) (**For the topic ‘Note Making’ under unit III)**

**2T8.1-Supplementary English  
Question Paper Pattern**

**Semester - II**

Q 1.

(C) Unit 1 Prose - LAQ 150 words ( 2 out of 4)                     $2 \times 08 = 16$  marks

Q 2.

(D) Unit 1 Prose - SAQ 75 words( 4 out of 5)                     $4 \times 4 = 16$  marks

Q 3.

(A) Unit 2 Poetry- LAQ 150 words (1 out of 2)                     $1 \times 08 = 08$  marks

(B) Unit 2 Poetry - SAQ 75 words ( 2 out of 3)                     $2 \times 4 = 08$  marks

Q 4.

Non-textual portion

(A) Social Correspondence:     $1 \times 08= 08$ Marks

(B) i. Correct the error in the use of prepositions (4 out 5)  $04 \times 1= 04$  Marks

ii. Correct the error in the use of the tense                            (4 out 5)     $04 \times 1= 04$  Marks

Q 5.

(A) Note Making     $1 \times 08 = 08$  Marks

(B) VSAQs Units 1 & 2

Answer each of the following in one or two lines     $4 \times 2$  Marks = 08 Marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

**The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The**

**concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.**

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

## 2T8.2-विषय : मराठी

### सत्र दुसरे

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	आत्मवृत्तपर, वर्णनपर, विषयांवर आधारित निबंध ( चार पर्यायांपैकी एका विषयावर शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक  १ जेट युगातील मराठी माणूस ( शंतनू किलोस्कर ) २ विड्ल तो आला आला ( पु. ल. देशपांडे ) ३ नवसमाजनिर्मितीचे प्रणेते: महात्मा ज्योतीबा फुले ( गंगाधर पानतावणे ) ४ भरती ( वसंत वळडपांडे ) ५ महालूट ( संदानंद देशमुख )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग एक  १ तुकारामांचे अभंग ( संत तुकाराम ) २ प्रेमाचा गुलकंद ( केशव कुमार ) ३ पृथ्वीचे प्रेमगीत ( कुसुमाग्रज ) ४ स्वप्न ( ग्रेस ) ५ दोन कामागारांच्या गोष्टी ( लोकनाथ यशवंत )	३५	
४	४	ट्यावहारिक मराठी ३. मुलाखत तंत्र ४. म्हणी व वाक्प्रचार	१०	

## **2T8.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप**

**सत्र : दुसरे**

वेळ:३ तास)

(एकूण गुण- 80

प्रश्न:१ आत्मवृत्तपर, वर्णनपर निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

### **एकूण गुण विभागणी**

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण
३. व्यावहारिक मराठी 08 गुण
४. निबंध 16 गुण

एकूण गुण : 80

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षाथर्थाची वर्गातील उपस्थिती (०५ गुण ), परीक्षाथर्थाचा वर्गातील सक्रीय सहभाग ( ०५ गुण) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण) या निकषांवर एकूण २० गुणांपैकी विद्याथर्थाचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

### 2T8.3-fo"k;%& fgUnh

### f}rh; I= % Semester II

le;%& rhu ?kaVs

dqy vad%&100

bdkbZ Øekad ( Units)	bdkb;ksa ( Units) dk ikB~;Øe Øekuqlkj	vad
<b>bdkbZ 1 (Unit-1)</b>	<b>Tkhouh ] o.kZukRed rFkk 'kS{kf.kd fo"k;ksa ij vk/kkfjr fuca/kA</b> 1/4 fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd1/2	<b>20</b>
<b>bdkbZ 2 (Unit-2)</b>	<b>Xk  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>  1½ âf"kds'k eq[kthZ ds lkFk <kbZ fnu & laLej.k& euks gj ';ke tks'kh 2½ lk;kZoj.k vkSj ge & fuca/k & jktho xxZ 3½ lkbcj dkSrqd & ,dkadh & e/kq /kou 4½ jkr dk jgL; & ,dkadh & MkW- jkedqekj oekZ 5½ baLisDVj ekrknhu pkjn ij & O;aX; & gfj'kadji lkbZ  <b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk**</b>	<b>35</b>
<b>bdkbZ 3 (Unit-3)</b>	  1½ Bqdkj nks ;k l;kj djks & lqHknzkdqekjh pkSgku 2½ dye vkSj ryokj & jke/kkjhflag ^fnudj* 3½ /kwi pedrh gS pkjnh dh lkMh igus & dsnkjukFk vxzoky 4½ chrs fnu dc vkus okys & gfjoa'kjk; cPpu 5½ i`Foh fdlfy, ?kwerh jgh & v#.k dey	<b>35</b>
<b>bdkbZ 4 (Unit-4)</b>	  <b>vU; ikB~; Ikexzh%&amp;</b>  1½ eqgkojs vkSj yksdksfDr;kj &ikB~;iqLrd esa lyaXu eqgkojs vkSj yksdksfDr;ksa dk vFkZ ,oa okD; iz;ksx dk v/;u visf{kr gSA  2½ i= ys[ku& izdkj]xq.k] fo'ks"krk,j] izk:i] dk;kZy;hu i=]	<b>10</b>

	dk;kZy; Kkiu] dk;kZy; vkns'k] ifji=d] v/kZljdkjh i=¼blesa vkosnu]fu;qfDr] chek] cSad] Kkiu] fufonk oLrqvksa dsa Ø;]&foØ;] izkfIr ,oa lwpuk i=] vkns'k i=½ bR;kfn lkexzh v/;;u vkSj v/;kiu ds ek;/e ls rS;kj dh tk;sA	
--	---	--

**f}rh; I= % Semester II**

**2T8.3-fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%- 80**

**iz'u&1 Tkhouh ] o.kZukRed rFkk 'kS{kf.kd fo"k;ksa ij vk/kkfjr fuca/kA  
vad&16**

**¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½**

**iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'u A  
vad&16**

**¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx ls o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gS A 4 x  
4vad =vad&16**

**iz'u&5blds vUrxZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA **izFke iz'u**  
**x| ls] f}rh; iz'u i| ls] r`rh; iz'u eqgkojs vkSj yksdksfDr;ksa ls vkSj**  
**prqFkZ iz'u i=&ys[ku ls iwNs tk;saxsAIHkh iz'uksa ds mRrj visf{kr**  
**gSA****

**4 x 4vad =vad&16**

**vkUrfjd ewY;kdau & 20 vad**

**dqy vad foHkktu%&**

**fucU/k&16 vad**

**x| foHkkx & 28 vad**

**i| foHkkx &28 vad**

**vU; ikB~; lkexzh& 08 vad**

**dqy vad & 80 vad**

**Vocational Course**  
**Semester II**  
**(Same syllabus for all vocational group subjects in B.Com – I)**  
**2T7:Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide an introductory knowledge about rural entrepreneurship and its development process.

---

**Unit I**

Rural entrepreneurship-meaning and need of Rural entrepreneurship, problems of Rural entrepreneurship and how to develop Rural entrepreneurship?, rural marketing potential marketing of agricultural inputs-warehousing, cold storage-importance and problems,

**Unit II**

NGO's and Rural entrepreneurship, entrepreneurship in agriculture, organization and management of agro-based industries, development strategy for Rural entrepreneurs, entrepreneurial development in backward areas.

**Unit III**

Entrepreneurial growth before and after independence, Factors determining the growth of entrepreneurs, Source of entrepreneurship in India, Causes of slow growth

**Unit IV**

The concept and need of Entrepreneurial development programmes in India, Phases and contents of Entrepreneurial development programmes in India, the target group, special agencies and schemes for Entrepreneurial Development Institutions conducting Entrepreneurship development programmes.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I : Computer Applications**  
**2T8.1 : Software Packages (SP)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I : Introduction to Word Processing**

Introduction, Starting word, Creating document, Structure of Ms-word window and its application, Mouse & keyboard operations, designing a document; formatting-selection, cut, copy, paste, Toolbars, operating on text;

**Unit –II : Word Processing Tools**

Printing, Saving, Opening, Closing of document; creating a template; Tables, borders, textbox operations; Spelling and Grammar check,

Mail Merge, Envelope and Label, Protection of document, Change the view of document.

**Unit-III : Introduction to Excel**

Introduction To Ms-Excel, Navigating, Excel Toolbars and Operations, Formatting Features-Copying Data Between Worksheets; Entering and Editing Cell Entries,

**Unit-IV : Advance Features of Excel**

Creation of Charts, Editing and Formatting Charts, Goal Seek, Auditing, Linking, Workbook, Database in Excel (Auto Filter, Advanced Filter, Sort, Form), Mathematical, Statistical and Financial Functions in MS-Excel.

**Practical : Practical will be based on MS-Word and MS-Excel**

**Books Recommended:**

1. Microsoft Office –2000 – Gini Courier , Annelte Marquis BPB
2. IT Today (Encyclopaedia) – S.Jaiswal
3. A First Course In Computers – Sanjay Saxena
4. First Text Book On Information Technology – Srikant Patnaik

**Group -: Principles & Practice of Insurance**  
**2T8.2-Life Insurance – Paper II (Semester – II)**

Time : 3 Hours]

Theory : 80 Marks

Internal Assessment: 20

Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Life Insurance.

**Unit - I**

**Insurance Agent** – Meaning and Definition of agent as per Insurance Act, Qualification and Disqualification for Appointment of Life Insurance Agent Training, duties, rights, code of conduct for agents, essential qualities for a successful agent.

**Unit -II**

**Life Insurance Corporation of India(LIC)** – History and Development and Establishment, Objectives, Organization structure , working of LIC Accounting procedure in life insurance business, analysis and interpretation of financial statement of life insurance organization

**Unit -III**

Role of IRDA – Insurance regulatory and development authority – Constitution, objectives, duties and powers, Role of IRDA in appointing agents. Progress of Life Insurance Business, Privatisation of Life Insurance Business, effect of globalization on insurance sector

**Unit - IV**

Silent features of Insurance Act 1938  
Silent features of Life Insurance Corporation Act 1956  
Marketing strategies of Life Insurance Products, insurance funds, investment of life, insurance funds

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
  - Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
  - Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication
  - Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल– हिमालया पब्लिशिंग हाउस
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Semester - II**  
**2T8.3-Advertising, Sale Promotion and Sales Management - II**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

**Unit-1**

Building of Advertising Programme-Message, Headlines, Copy, Logo, Illustration, Appeal, layout Campaign Planning. Creative Strategies. Production and execution of TVCs and print ads.

**Unit-2**

Sales Promotion – Introduction to Sales Promotion; Role and growth of Sales Promotion; its Features and Purpose; Tools and Techniques of Sales promotion, Sales promotion campaign, Developing a logic for sales promotion programmes.

**Unit-3**

- Role of selling in planed economy, selling as a career, Acquiring skills and developing new qualities for salesmen and to improve growth chances,

**Unit-4**

Tips and suggestions to improve personal ability, skills for salesmen, product knowledge, planned selling system.

**Recommended books:**

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
- ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
- ✓ Stanton, William J & Buskrit, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskrit, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)
  - ✓ Kazmi & Batra, Advertising & Sales Promotion - Excel Books.
  - ✓ Belch & Belch, Advertising & Promotion - Tata McGraw Hill.
  - ✓ Jethwaney & Jain – Advertising Management, Oxford Univ. Press

**SEMESTER II**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**      **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B. Com. Second Year**  
**Semester- III**  
**3T1 – : Financial Accounting – II**

**Unit – I**

**Consignment Accounts.**

Meaning, Needs, Advantages and Formalities in consignment, Difference between a consignment and a sale, Performa invoice, Account Sales, Accounting Procedure of Consignment, Valuation of Consignment Stock. (**Theory & Numerical**)

**Unit – II**

**Branch Accounts (Excluding Foreign Branch)**

Meaning of Branch, Objectives of Branch Accounting, Maintenance of Accounting Records , Transactions relating to Branch. Accounting Procedure of Branch(**Theory & Numerical** )

**Unit – III**

**Flotation of Joint Stock Companies and their Capital Structure.**

Types of Shares, Methods of issue of shares, Accounting for Issue, Forfeiture of shares & reissue of forfeited shares(**Theory & Numerical**)

**Unit – IV**

**Final Accounts of Joint Stock Companies**

Introduction, Statutory provisions regarding preparation of companies final accounts. Provision for interest on debentures, Proposed Dividends, Interim Dividend (**Theory & Numerical**)

**The financial year ends on 31<sup>st</sup> March.**

**Reference Books:**

- Corporate Accounting:-Maheshwari S N, Vikas Publishing house Pvt. Ltd.
- Advanced Financial Accounting, Gupta R. L. ,S. Chand Publishing
- Advanced Accounts Shukla and Grewal : (S. Chand & Ltd. New Delhi)
- Advanced Accounts , Jain and Narang : (Kalyani Publishers, Ludhiana)
- Accountancy, Volume –I and II ,Sr. K. Paul : (New Central Book Agency,Kolkata)
- Accounting Theory, R. K..Lele and Jawaharlal : (Himalaya Publishers)
- Accounting Theory, Dr. L. S. Porwal : (Tata McGraw Hill)
- Corporate Accounting Dr. S. N. Maheshwari : (Viakas Publishing House Pvt. Lit. New Heldi)
- Advanced Financial Accounting ,Dr. Ashok Sehgal& Dr. Deepak Sehgal : (Taxmann, New Delhi)
- Advanced Financial Accointing Dr. R. D. Mehta, Prof. P. Wath & Dr. D. C. Gotmare ,Payal Prakashan, Nagpur.

## **Question Paper Pattern**

### **Semester-III**

#### **3T1 -Financial Accounting – II**

N.B. – 1) All questions are compulsory.

2) All questions carry equal marks.

Time :- 3 hours

Marks-80

Q. No. 1 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

Q. No. 2 – Unit II

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 3 – Unit III

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 4 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

Q. No. 5

- |    |          |                  |
|----|----------|------------------|
| a) | Unit- I  | Problem 04 Marks |
| b) | Unit –II | Problem 04 Marks |
| c) | Unit-III | Problem 04Marks  |
| d) | Unit-IV  | Problem 04 Marks |

## **3T2 : Business Communication & Management**

### **Unit – I: Introduction**

Meaning, Definition and concept of Communication, Objectives of Communication, Functions of communication Written Communication, Oral Communication, Visual Communication, Audio Visual Communication, interpersonal communication, supervisory communication, grapevine communication, barrier in communication

### **Unit – II: Business communication**

Business communication: concept, objective, elements, purpose, importance, salient feature, principles of effective business communication.

#### **customer care communication In business**

Types of business communication-company manual, house journal, placement brochure, leaflets, E MAIL . Public Relations Management- Role of public relations officer in business, group discussion,

### **Unit-III: Technology and business communication**

Concept of Management Information System, Role of Computer in communication, Barriers of computerized Communication –Use of internet, website and electronic media in business communication. **Social media as a mean of communication.**

### **Unit-IV:**

**MS-office aided communication:** MS Word and its application in business communication , Role of MS-Excel and MS-Power point in communication skill, MS-excel and financial presentation, MS-power point and business communication, Use of MS-power point in business meeting as a tools of effective communication.

### **Suggested Books:**

1. A guide to business correspondence- Kapoor A- S Chand & Co
- 2.. Urmila Rai & S.M. Rai, Business Communication, Himalya Publishers,
3. Lesikar I Flatley, Basic Business Communication, Tata McGraw Hill.
4. Microsoft office-2000/2007- Gini courter, annelte Marquis BPB
5. Business Communication, Dr. Arvind Shende, Dr. Asha Tiwari,  
Anuradha Prakashan, Nagpur.
5. Business Communication , Pooja Khanna, S. Chand Publishing.
5. dwekj] fojsUnz % O;kolkf;d lapkj] dY;k.kh ifCy'klZ]ubZ fnYyh  
6-pwMkor] nfj;ko flag] O;olkf;d lapkj] jes'k cwd fMiks]ubZ fnYyh  
7-fkans] ih-,e-% ekfgrh ra=Kku vkf.k O;olk; mi;kstuk]dSyk'k ifCyds'kUl]vkSjkaxkckn

# **3T2-Business Communication & Management Paper - II Question Paper Pattern**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

- |      |                |          |
|------|----------------|----------|
| Q.1. | (a) UNIT – I   | 08 Marks |
|      | (b) UNIT – I   | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – I   | 16Marks  |
| Q.2. | (a) UNIT – II  | 08 Marks |
|      | (b) UNIT – II  | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – II  | 16Marks  |
| Q.3. | (a) UNIT – III | 08 Marks |
|      | (b) UNIT – III | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – III | 16Marks  |
| Q.4. | (a) UNIT – IV  | 08 Marks |
|      | (b) UNIT – IV  | 08 Marks |
|      | OR             |          |
|      | (c) UNIT – IV  | 16Marks  |
| Q.5. | a) UNIT – I    | 04 Marks |
|      | b) UNIT – II   | 04 Marks |
|      | c) UNIT – III  | 04Marks  |
|      | d) UNIT – IV   | 04 Marks |

### **3T3– III: Business Law**

**Level of Knowledge:** Basic Conceptual Knowledge

**Objective:** To make students aware about various Laws relating to Business [with amendments up to June 2016 in respective Acts]

#### **Unit-I**

(i)Business law : Meaning, evolution and significance

- (ii) Law relating to Contract – (Indian Contract Act-1872): important definitions, nature and kinds of contract, essentials of a valid contract, offer and acceptance, consideration, capacities of parties to contract, free consent.
- (iii) Void Agreement, Contingent Contract, Quasi Contract
- (iv) Contract of Indemnity and Guarantee, Law of Agency.

#### **Unit-II**

- (i) Law relating to Sale of Goods- (Sale of Goods Act- 1930): contract of sale of goods, Essentials of a contract of sale, concept of goods, sale distinguished from agreement to sell, difference between conditions and warranties; transfer of ownership and delivery of goods, unpaid seller - his rights against the goods and the buyer.
- (ii) Law relating to Partnership- (the Indian partnership act 1932): concept of partnership and partnership firm, types of partner, types of partnership.
- (iii) Registration of partnership firm, effect of non registration, partnership deed, duties and liabilities of partners including those of newly admitted partners, dissolution of partnership firms.

#### **Unit-III**

- (i) Law relating to Negotiable Instruments -(Negotiable Instrument Act-1881): Meaning and Definition of Negotiable instruments, Promissory Notes, Bills of Exchange and its Types, Cheques and Its types, Crossing of Cheques.
- (ii) Endorsements: Meaning and Types, Holder and Holder in due course and its rights, Discharge of Negotiable Instruments.
- (iii) Parties to a Negotiable Instrument - duties, rights, and liabilities
- (iv) Prevention of Money Laundering Act-2002: Objectives, Important Definitions and Salient Features.

#### **Unit-IV**

- (i) Law relating to Consumer protection in India - (Consumer Protection Act-1986): Definition of Consumer, Importance of Consumer, Problems faced by Consumers, Consumer Protection- Need & Importance, Rights & Responsibilities of Consumer

(ii) Definitions: Complaints, Services, Defects & Deficiency, Relief available to consumer, Procedure to file complaints, ways and means of consumer protection, consumer dispute redresser agencies and procedure followed by redresser agencies.

(iv) Law Relating to Information Technology- (Information Technology Act-2000): Objectives, scope and Important Terms, Digital Signature & Electronic Records, Certifying Authority, Digital Signature Certificates, offense and Penalties.

(iv) Cyber Law: Meaning, Important Definitions, Features, Need and Importance of cyber Law in India

### **Reference Books:**

- Gulshan, S S and Kapoor, G K: Business Law Including Company Law , New Age International (P) Ltd., Publishers
- M.C. Kuchhal and Vivek Kuchhal : Business Law, Vikas Publishing House, New Delhi
- V.S. Datey: Business and Corporate Laws, Taxman, New Delhi
- N.D. Kapoor: Mercantile Law, Sultan Chand & Sons, Educational Publishers, New Delhi.
- Dr. V. K. Jain: Mercantile Law, Seth Publications, Nagpur.
- Business Law R.S. N. Pillai& V. Bhagavathi, S. Chand Publishing.
- Sen & Mitra: Cinnercuak Kawn, The World Press Pvt. Ltd., Kolkata.
- C.K. Kapoor: Lectures on Business and Corporate Laws, Vidya Sadan, Delhi.
- K.R. Bulchandani, Business Law Himalaya P. House, Mumbai-2006.
- Business Law, Dr. Arvind shende, Dr. Vijay Upgade, Anuradha Prakashan, Nagpur.

# **Question Paper Pattern**

## **3T3-Business Law**

### **Paper - III**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

**Q.1.**

(a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

**Q.2.**

(c) UNIT – I 16Marks

OR

(a) UNIT – II 08 Marks

(b) UNIT – II 08 Marks

OR

(c) UNIT – II 16Marks

(c) UNIT - III OR 16Marks

**Q.4.**

(a)      UNIT – IV	08 Marks
(b)      UNIT – IV	08 Marks
OR	
(c)      UNIT – IV	16Marks

**Q.5.**

- a) UNIT – I 04 Marks
- b) UNIT – II 04 Marks
- c) UNIT – III 04Marks
- d) UNIT – IV 04 Marks

## **3T4 MONETARY ECONOMICS-I**

### **Unit I: Money**

Evolution, Meaning, Definition, Nature and Functions of Money. Quantity Theory of Money and Criticisms. Paper Currency & Methods of Note Issue- Fixed Fiduciary Method, Proportionate Reserve Method, Minimum Reserve Method.

### **Unit II: Inflation & Deflation**

Inflation- Meaning, Nature, Causes, Effects, Impact of Inflation. Deflation - Meaning, Nature, Causes, Effects, Impact of Deflation. Role of Monetary Policy and Fiscal Policy in controlling Inflation & Deflation.

### **Unit III: Money Market & Policies**

Money Market- Concept of Money Market, Objectives, Importance of Money Market, Instruments of Money Market. Monetary Policy and Fiscal Policy Concept-Meaning, Objectives, Need, Importance, Impact, Recent Changes/Trends.

### **Unit IV: Public Finance**

Concept, Meaning, Importance of Public Finance, Principles of Public Finance, Theory of Maximum Social Advantages & Criticisms. Taxation – Definition, Characteristics& Cannons. Types of Taxation- Proportional, Progressive and Regressive Taxation System .Direct and Indirect Taxes- Merits & Demerits.

### **Books Recommended:**

1. Monetary Economics, RR Paul, Kalyani Publishers.
2. Money,Banking,Trade & Public Finance, M.V.Vaish, New Age International Pvt.Ltd.
3. Money, Banking and International Trade, K.P.M. Sundaram , Sultan Chand,New Delhi.
4. Public Finance, Tyagi , Jai Prakash Nath Publishers.
5. Money and Financial System P.K. Deshmukh, Phadke Prakashan.
6. Monetary Economics, Rashi Arora, Sheth Publishers, Mumbai
7. Modern Macroeconomics(Theory & Policy ),B.N.Ghosh, Ane Books Pvt Ltd, 2<sup>nd</sup> Edition, 2012.
8. Macro Economics, D.D.Chaturvedi, Galgotia Publishing Company,1999.

**Question Paper Pattern**  
**Semester -III**  
**3T4-Monetary Economics – I**  
**Paper - IV**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.	(a) UNIT – I	08 Marks
	(b) UNIT – I	08 Marks
OR		
	(c) UNIT – I	16Marks
Q.2.		
	(a) UNIT – II	08 Marks
	(b) UNIT – II	08 Marks
OR		
	(c) UNIT – II	16Marks
Q.3.		
	(a) UNIT – III	08 Marks
	(b) UNIT – III	08 Marks
OR		
	(c) UNIT – III	16Marks
Q.4.		
	(a) UNIT – IV	08 Marks
	(b) UNIT – IV	08 Marks
OR		
	(c) UNIT – IV	16Marks
Q.5.		
	a) UNIT – I	04 Marks
	b) UNIT – II	04 Marks
	c) UNIT – III	04Marks
	d) UNIT – IV	04 Marks

**Allocation of marks for the subjects-**

- 1. Financial Accounting -II**
- 2. Business Communication and Management,**
- 3. Business Law and**
- 4. Monetary Economics-I**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10 marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10 marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-III**  
**3T5-Compulsory English**

**Unit -I PROSE ITEMS FROM “BLOSSOMS”**

- 1.The Portrait of a Lady - Khushwant Singh
- 2.Youth and the Tasks Ahead – Karan Singh
- 3.The Verger - W.S.Maugham
- 4.*The Eyes are not Here* - Ruskin Bond

**Unit -II POEMS FROM “BLOSSOMS”**

- 1.*Money Madness* – D.H.Lawrence
- 2.*The Felling of the Banyan Tree* – Dilip Chitre
3. *A River* - A.K.Ramanujan

**Unit -III**

(A)Comprehension of UnseenPassage

(B)Transformation of Sentences:

- a.Affirmative –Negative and vice-versa
- b.Interrogative – Assertive and vice-versa

**Unit -IV**

(A) Business Correspondence:

*Claim and Adjustment Letters* – Making Claims/Offering Adjustments

(B)Drafting Agenda/Minutes of a Meeting

**Prescribed Text :***Blossoms* (Raghav Publishers)

**Reference Books (For Sem III & IV) :**

For Unit III – Learner’s English Grammar and Composition – N.D.V.Prasada Rao  
(S.Chand)

For Unit IV – 1. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan (Tata  
2.Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan) (Tata McGraw-Hill)

### **3T5-Compulsory English**

#### **Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Prose items (Unit I: Lesson No. 1 & 2)	08 Marks
	B. One LAQ out of Two based on Prose items (Unit I: Lesson No 3 & 4)	08 Marks
Q 2.	Four SAQs with internal choice based on prescribed Prose items (Unit I) (4 x 4 Marks)	16 Marks
Q 3.	A. One LAQ out of Two from prescribed poems (Unit II)	08 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs –4 x 2 Marks	08 Marks
Q 4.	A. (i) Four items based on Unit III B (a) – 4 x 1 Mark - (ii) Four items based on Unit III B (b) – 4 x 1 Mark -	04 Marks
	B. One out of Two Questions based on Business Correspondence [Unit IV (A)]	08 Marks
Q 5.	A. One out of Two Questions based on UNIT IV (B)	08 Marks
	B. Four VSAQs based on Unit I and Unit III - (4×2 Marks)	08 Marks
		Total = 80 Marks

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Questions to be answered in one or two sentences.

#### **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance – 4 Marks**

**TOTAL – 20 MARKS**

## **3T6.1 - Supplementary English**

### **Semester - III**

#### **Unit 1 – Prose**

1. The Thief- Ruskin Bond
2. Three Hermits – Leo Tolstoy
3. The Power of Prayer- A.P.J. Abdul Kalam
4. A Tryst with Destiny- Jawaharlal Nehru

#### **Unit 2 - Poetry**

1. Still I Rise- Maya Angelou
2. Ulysses - Alfred, Lord Tennyson
3. Telephone Conversation- Wole Soyinka

#### **Non-Textual Portion-**

#### **Unit 3- Writing Skills**

##### **A) Report Writing**

- Inquiry Report
- Progress Report

##### **(B) Expansion of an Idea**

#### **Unit 4 - Vocabulary**

(A) Business Terminology - Ad Valorem, Authorized Capital, Blue Chip, Benchmark, Credit Rating, Corporation, Debenture, Dividend, Excise Duty, Face Value, Fringe Benefits, Goodwill, Gross Profit, Inventory, Inflation, Joint Venture, Kickback, Lease, Mortgage, Patent, Portfolio, Running Costs, Surety, Social Security, Voucher

(Students to give the appropriate business term for the definition/ explanation given)

Prescribed Text- *Reflections*- A Supplementary English Coursebook for Undergraduates (Raghav Publishers)( **for unit I & II** )

#### **Reference Books-**

1. Professional Communication - Roshan Lal Raina, Iftikhar Alam, Falzia Siddiqui. (Himalaya Publishing House)( **For the topic ‘Report Writing’ under unit III**)
2. Macmillan Foundation English - R.K. Dwivedi, A. Kumar( **for the topic ‘Expansion of an Idea’ under Unit III**)
3. Business Correspondence & Report Writing- A practical approach to Business & Technical Communication- R.C. Sharma & Krishna Mohan Fourth Edition (McGraw Hill) ( **for the topic ‘Business Terms’ under Unit IV** )

**3T6.1 - Supplementary English**  
**Question Paper Pattern**

Q1.

(E) Unit 1 Prose - LAQ 150 words (2 out of 4)                   $2 \times 08 = 16$  marks

Q 2.

(F) Unit 1 Prose - SAQ 75 words (4 out 5)

$4 \times 04 = 16$  marks

Q 3.

(C) Unit 2 Poetry- LAQ 150 words- 1 out of 2                   $1 \times 08 = 08$  marks

(D) Unit 2 Poetry - SAQ 75 words- 2 out of 3                   $2 \times 04 = 08$  marks

Q4.

(A) Unit 3- Report Writing                   $1 \times 08 = 08$  marks

(B) Unit 3- Expansion of an idea (1out of 2)                   $1 \times 08 = 08$  marks

Q 5.

(A) Business Terms (4 out of 6)                   $4 \times 02 = 08$  marks

(B) VSAQs from Unit 1 and Unit 2                   $4 \times 02 = 08$  marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

### 3T6.2-विषय : मराठी

#### सत्र तिसरे

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	पर्यावरण, आधुनिकज्ञानविज्ञान आणि प्रसार माध्यमे ह्या विषयांवर आधारित निबंध ( चार पैकी एक ; शब्द मर्यादा-४०० )	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन १ दुखःक्रांत लेंकी येणे (म्हाइंभट) २ माझे दत्तक वडील ( चि. वि. जोशी) ३ सांगावा ( शंकरराव खरात ) ४ शेवटची माती ( आनंद यादव ) ५ जनसामान्यांच्या प्रबोधनाचं गतिचक्र ( बा. ह. कल्याणकर )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन १ संतवाणी ( चोखामेळा, सेना न्हावी, नरहरी सोनार ) २ लटपट लटपट तुझे चालणे ( होनाजी बाळा ) ३ माझी कन्या ( बी. ) ४ आभाळाची आम्ही लेकरे ( वसंत बापट ) ५ इथेच ( यशवंत मनोहर ) ६ जहर खाऊ नका ( जानेश वाकुडकर )	३५	
४	४	व्यावहारिक मराठी १ प्रसारमाध्यमांसाठी वृत्तलेखन २ कल्पना विस्तार	१०	

### **3T6.2-विषय : मराठी**

**प्रश्न पत्रिकेचे स्वरूप  
सत्र : तिसरे**

वेळ: ३ तास)

(एकूण गुण-80)

प्रश्न: १ पर्यावरण आधुनिक ज्ञानविज्ञान आणि या विषयावर आधारित निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घात्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

#### **एकूण गुण विभागणी**

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण
३. व्यावहारिक मराठी 08 गुण
४. निबंध 16 गुण

एकूण गुण : 80

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्याची वर्गातील उपस्थिती (०५ गुण ), परीक्षार्थ्याचा वर्गातील सक्रीय सहभाग ( ०५ गुण) आणि लिखित स्वरूपातील गृह पाठ ( १० गुण ) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण  
एकूण गुण : १००

3T6.3-fo"k;%& fgUnh  
r`rh; I= % Semester III

le;%& rhu ?kaVs		dqy vad%&80
bdkbZ Øekad (Units)	bdkb;ksa (Units) dk ikB~;Øe Øekuqlkj	vad
<b>bdkbZ 1 (Unit-1)</b>	<b>Toyar leL;kvksa]</b> vk/kqfud Kku&foKku rFkk izlkj <b>ek;/e vkfn fo"k;ksa ij vk/kkfjr fuca/k A</b> ½ fdUgh pkj esa ls ,d fo"k; ij & 'kCn lhek 400 rd½	20
<b>bdkbZ 2 (Unit-2)</b>	<b>Xk  foHkkx %&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk &amp;Hkkx&amp;2**</b> 1½ fgEer vkSj ftanxh & fuca/k& jke/kkjh flag ^fnudj* 2½ thou dh fdrkc & fuca/k& vuar xksiky 'ksomS 3½ lk;kZoj.k& iznw"k.k % leL;k eukstxr dh & fuca/k& foosdh jk; 4½ xkSjk & laLej.k & egknsoh oekZ 5½ izfr'kks/k & ,dakdh & MkW- jkedqekj	35
<b>bdkbZ 3 (Unit-3)</b>	<b>i  foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk&amp;Hkkx&amp;2**</b> 1½ fou; if=dk & rqylhnkl 2½ ehjk ds in & ehjkckbZ 3½ jghe ds nksgs & jghe 4½ fiz; izokl & v;ks;/kflag mik;/k; ^gfjvkS/k* 5½ ckny dks f?kjrs ns[kk gS & ukxktqZu	35
<b>bdkbZ 4 (unit-4)</b>	<b>vU; ikB~; lkexzh %&amp;</b> 1½ thou o`Rr (Bio-Data)ifjHkk"kk] lkekU; ifjp;] izk:i]fo'ks"krk,j] izdkjA	10

2½ lk{kkRdkj (Interview)ifjHkk"kk]lhek, i] mls';] fl)kar]  
izdkj]egRRoA

fVli.kh%& bdkbZ& 4 dh lkexzh v/;u vkSj v;/kiu ds ek/;e  
ls rS;kj dh tk;sA

**3T6.3-fo"k;%& fgUnh  
r`rh; I= % Semester III  
fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%&80**

**iz'u&1 Toyar leL;kvksa] vk/kqfud Kku&foKku rFkk izlkj ek;/e vkfn  
fo"k;ksa ij vk/kkfjr fuca/kA  
¼ fdUgh pkj esa ls ,d fo"k; ij & 'kCn e;kZnk 400 'kCnksa rd½  
vad&16**

**iz'u&2x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½**

**iz'u&3i|& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
vad&16**

**¼nks iz'uksa esa ls ,diz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx lss o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gSSA 4  
x4vad =vad&16**

**iz'u&5 blds vUrXZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA izFke iz'u  
x| ls] f}rh; iz'u i| ls] r`rh; iz'u eqgkojs vkSj yksdksfDr;ksa ls vkSj  
prqFkZ iz'u i=&ys[ku ls iwNs tk;saxsa A lHkh iz'uksa ds mRrj  
visf{kr gSA 4 x4vad =vad&16**

**vkUrfjd ewY;kdau & 20 vad  
dqy vad foHkktu%&**

**fucU/k&16 vad  
x| foHkkx & 28 vad  
i| foHkkx &28 vad  
vU; ikB~; lkexzh& 08 vad  
dqy vad &80 vad**

**Vocational Course**  
**Semester III**  
**(Same syllabus for all vocational group subjects in B.Com – I)**  
**3T7-Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge regarding assisting institutions and preparation of project.

---

**Unit-I**

Institutions Assisting Entrepreneurs- District Industries Centres (DICs), State Small Industries Corporations (SSIC), Small Industries Services Institute (SISI), Small Industry Development Corporations (SIDCO), Khadi & village Industries Commission (KVIC)

**Unit-II**

Commercial Bank & Entrepreneurial Development: State Bank of India (SBI), Punjab National Bank (PNB), Indian Bank (IB), Bank of Baroda, Bank of India (BOI), Canara Bank, Syndicate Bank, Export Import Bank of India (Exim Bank).

**Unit-III**

Concept of project and classification of project, project identification, project selection, elements of project formulation - project report, contents of project report- project design - project appraisal

**Unit-IV**

Methods of project appraisal-- Ratio analysis - Break even analysis - Profitability analysis, average rate of return, overrun analysis,

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I : Computer Applications**  
**3T8.1 : Application Software**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit-I : Introduction to PowerPoint**

Working with PowerPoint Window, Standard Toolbar, Formatting Toolbar, Drawing Toolbar, Moving the Frame, Inserting Clip Art, Picture, Slide; Text Styling, Send to Back, Entering Data to Graph,

**Unit-II : Features of PowerPoint**

Organization Chart, Table, Design Template, Master Slide, Animation Setting, Saving and Presentation, Auto Content Wizard, Package for CD (Pack & Go Feature).

**Unit-III : Introduction to MS-Access**

Introduction to database management system, DBMS vs RDBMS, Database Administrator (DBA) and its role.

Introduction to Microsoft Access, creating a database in access, using database wizards and blank database, creating table, database view and design view,

**Unit-IV : Introduction to MS-Access**

Creating queries, forms, reports and macros in MS-Access, Relationship in MS-Access

**Practical : Practical will be based on MS-PowerPoint and MS-Access**

**Books Recommended:**

1. Microsoft Office –2000 – Gini Courter , Annelte Marquis BPB
2. IT Today (**Encyclopedia**) – S.Jaiswal
3. A First Course In Computers – Sanjay Saxena
4. First Text Book On Information Technology – Srikant Patnaik
5. Guide To Microsoft Access – Carl Townsand
6. An Introduction To Database Management System – Bipin C. Desai (Galgotia Pub.)

7. Database Management Design – CSV Murthy ( Himalaya)

(Semester - III)

**Group - II : Principles & Practice of Insurance**

**3T8.2:General Insurance – Paper I**

Time : 3 Hours]

Theory : 80 Marks

Internal Assessment: 20 Marks

---

### **Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about General Insurance.

#### **Unit - I**

- General Insurance : Meaning Definition ,Functions, Importance of General Insurance
- Principle of General Insurance ,History and Development of Insurance

#### **Unit - II**

- Types of Insurance, Life Insurance Vs.General Insurance
- Silent features of General Insurance Business ( Nationalisation ) Act,1972
- Concept of Reinsurance ,Double Insurance and Over insurance and its features

#### **Unit-III**

- Fire Insurance : Meaning, features and policy conditions for Fire Insurance, premium calculation, fire insurance contracts.
- Procedure of Taking of Fire Policy, Types of Fire insurance, Settlement of Claim of Fire Insurance, rate of fixation in fire insurance

**Unit IV-** Introduction to miscellaneous insurance, nature and utility of miscellaneous insurance, progress of miscellaneous insurance, general insurance business in India.

- Introduction to National Agricultural Insurance Scheme, property, motor vehicle, health, cattle and engineering insurance, public liability insurance

#### **Recommended books:**

Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.

Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House

Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिधांत एवं व्यवहार – भगवती प्रकाळ अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

### Group-III

#### 3T8.3- Advertising, Sales Promotion and Sales Management - III

Full Marks : 80

Time : 3 Hours

Internal Assessment : 20

- Level of knowledge: basic knowledge
- Objectives: to acquaint students with the theory and practice of advertising as well also management of a firm's sales operation.

## CONTENTS

### Unit-I

- **Introduction:** meaning of advertising, importance of advertising from the viewpoint of marketing and communication, role of advertising in the marketing mix – inter-relationship with product decisions, Pricing Decision, Channels Decision. Personal Selling, Sales Promotion and Publicity.

### Unit-II

- **Scope of advertising:** How advertising works (a few case studies), Stimulating, Expanding and sustain scale: secure sales lead, Increasing profits, Demarketing, Supporting other promotion tools etc.

### Unit - III

**Various forms of advertising:** National, Retail, Trade, Cooperative, Industrial, Corporate/Institutional, Financial, Public Service, Political, Primary and Selective demand Ad; Push and Pull Ad.

### Unit - IV

- **Advertising objectives:** Meaning and importance, Difference between objective, goals and strategy, possible Ad objectives, Sales as an objective, communication objectives, DAGMAR Approach of RH Colley.

### Recommended books:

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
  - ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
  - ✓ Stanton, William J & Buskirk, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskirk, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)

✓ Rajiv BAtra, Myers, David Aaker, Advertising Management (Prentice Hall India Pvt. Ltd., New Delhi)

**SEMESTER III**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours] [Full Marks:- 80**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks
Q.5. Answer in Brief		
(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

**B.Com. – Second Year  
Semester-IV  
4T1:- Financial Accounting – III**

**Unit – I**

**Final Accounts of Banking Companies**

Meaning of Banking Companies, Functions of Banking, Restrictions for a Banking Company, Provision of the Banking Companies Regulation Act 1949, Preparation of Annual accounts as per Banking Companies Regulation Act 1949 as per amendment by RBI.

( Theory & Numericals)

**Unit – II**

**Final Accounts of General Insurance Companies**

Introduction, Types of General Insurance, Important Terms- Reserve for unexpired Risk, Reinsurance Claims, Reinsurance Premium, Commission, Bonus in Reduction of Premium and preparation of final accounts

( Theory & Numericals)

**Unit – III**

**Valuation of Goodwill**

Meaning, Characteristics of Goodwill, Factors influencing the value of goodwill, Need for Valuation of goodwill , Valuation of goodwill as per -Average Profit Method, Weighted Average Profit Method, Super Profit Method, Capitalization Method. ( Theory & Numericals)

**Unit – IV**

**Liquidation of Company.**

Meaning, Types of Liquidation, Steps in Voluntary Liquidation, Functions of Liquidator, Liquidators remuneration/Commission. Preparation of Liquidator's Final Statement of Account only. (Theory & Numericals)

**The Financial year ends on 31<sup>st</sup> March.**

**Books Recommended**

- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya PublicationHouse
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency,Kolkata)
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- Dr. L. S. Porwal : Accounting Theory (Tata McGraw Hill)

- Robert Anthony, D. F. Hawkins & K. A. Merchant : Accounting Text & Cases(Tata McGraaw Hill)
- Dr. S. N. Maheshwari : Corporate Accounting (Viakas Publishing House Pvt.Lit. New Heldi)
- Dr. Ashok Sehgal& Dr. Deepak Sehgal : Advanced Accounting (Taxmann,New Delhi)

**Question Paper Pattern  
Semester IV  
4T1-Financial Accounting – III  
Paper - I**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours		Marks-80
Q. No. 1 – Unit I		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16Marks	
Q. No. 2 – Unit II		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 3 – Unit III		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 4 – Unit I		
a) Theory	08 Marks	
b) Problem	08 Marks	
<b>OR</b>		
c) Problem	16 Marks	
Q. No. 5	a) Unit- I	Problem 04 Marks

b)	Unit –II	Problem 04 Marks
c)	Unit-III	Problem 04Marks
d)	Unit-IV	Problem 04 Marks

## **4T2- : Skill Development**

### **Unit I: Introduction:**

Basic of personality, Human growth and behavior, Motivation and morality, Meaning of Skill, types; soft and hard skill, need for developing skill, human skill and behavior, Motivation and morality, skill development and employment

### **Unit II: Communication skills and Personality Development:**

Intra-personal communication and Body Language, Inter-personal Communication and Relationships, Leadership Skills, Team Building and public speaking, Communication in English, Presentation Skills, and Quality required for good public speaker,

### **Unit III: Techniques in Personality development**

Self confidence, Mnemonics, Goal setting, Time Management and effective planning, Stress Management, Meditation and concentration techniques, Self Motivation Self acceptance and Self growth

### **Unit IV : Entrepreneurial skill development**

Skill development of rural industrial sectors - small scale - handloom - agro based industries, rural artisans - handicrafts and sericulture. Meaning of entrepreneurship, types skill required for entrepreneurship

### **Suggested Books:**

1. Personality Development –Transform yourself by Rajiv K Mishra.
2. Personality Development and Communication Skills – II by Dr.C.B.Gupta
3. Business Communication and Personality Development: Lessons for Paradigm Change in Personality by Biswajit Das and Ipseeta Satpathy.
4. Entrepreneurship development.

# **Question Paper Pattern**

## **Semester-IV**

### **4T2-Skill Development**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks

Time :- 3 hours Marks-80

**Q.1.** (a) **UNIT – I** **08 Marks**

OR

**(c) UNIT – I** 16Marks

**Q.2.** (a) **UNIT – II** **08 Marks**

OR

**Q.3.** (a) **UNIT – III** **08 Marks**

25

## UNIT - III

(c) UNIT - III 16 Marks

OR

(c) UNIT – IV 16Marks

Q.5.

- a) UNIT – I 04 Marks
- b) UNIT – II 04 Marks
- c) UNIT – III 04Marks
- d) UNIT – IV 04 Marks

## **4T3-: Income Tax**

### **Unit I: Introduction of Income Tax**

- i) Basic Concepts of Income Tax, Meaning & Definition of Assesses, Assessment Year, Previous Year, Gross Total Income, Types of Assesses, Income Exempt from tax, Capital & Revenue Expenditure. Agricultural Income.

### **Residential Status**

- ii) Residential Status and its effects on Tax incidence: Residential status of Individual, HUF, Firm & Association of Person, Company, Basic Conditions & Additional Conditions.(**Theory**)

### **Unit II: Income from Salary**

- i) Definition of Salary, Allowances, Types of Allowances, Taxable Allowances, Tax Free Allowances, Partly Taxable Allowances,  
ii) Perquisites, Types of Perquisites, Taxable Perquisites, Tax Free Perquisites,  
iii) Types of Provident Fund, Tax treatment of P.F, E.P.F., Superannuation Fund and Computation of Salary Income/Taxable Salary and tax liability. (**Theory & Numericals**)

### **Unit II Income from House Property**

- i) Meaning of Annual Value, Fully exempted income of house property, deemed owner.  
ii) Deduction from income from house property, unreleased rent, computation of income from house property. (**Theory & Numericals**)

### **Unit IV : i)Income Tax Slab Rates, Rebates, Income which do not form part of total Income**

- ii)Deduction under section 80C, 80CCC, 80CCD, 80D, 80DDB, 80E, 80G, 80GG, 80U

### **iii) Income from Other Sources**

Income specifically included under the head of other sources, specified income, casual income, deduction allowed from the income of other sources, computation of income from other sources. (**Theory & Numericals**)

### **Books Recommended :**

Ahuja G. K. and Ravi Gupta :- Systematic Approach to Income and Central Sales tax, Bharat law house, New Delhi.

- Singhania V. K. :- Direct taxes :- Law and Practice, Taxman's publication, Delhi.

- Jain K. C., Gour V. P., Narang D. B. :- Direct taxes Kalyani Publishers, Delhi.
  - Datey V. S. :- Indirect taxes law and Practice, Taxman, New Delhi, customs and excise Law Time - various issues.
  - Dr. V. Upgade and Shende Dr. A. K. Income Tax, Anuradha publication, Nagpur.

## **Question Paper Pattern**

**Semester-IV**

## 4T3-Income Tax

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

## **Q. No. 1 – Unit I**

a) Theory 08 Marks  
b) Theory 08 Marks

**OR**

c) Theory 08 Marks  
d) Theory 08 Marks

Q. No. 2 – Unit II	a) Theory	08 Marks
	b) Problem	08 Marks
	<b>OR</b>	
	c) Problem	16 Marks

Q. No. 3 – Unit III	a) Theory b) Problem	08 Marks 08 Marks
		<b>OR</b>
	c) Problem	16 Marks

Q. No. 4 – Unit I	a) Theory b) Problem	08 Marks 08 Marks
		<b>OR</b>
	c) Problem	16 Marks

Q. No. 5	a)	Unit- I	Problem 04 Marks
	b)	Unit –II	Problem 04 Marks
	c)	Unit-III	Problem 04Marks
	d)	Unit-IV	Problem 04 Marks

## **4T4-: MONETARY ECONOMICS-II**

### **Unit I: Commercial Banking**

Evolution, Meaning, Functions of Commercial Banks. Role commercial banks in a developing economy. Process of Credit Creation by Commercial Banks & its Limitations, Investment Policy of Commercial Banks. Non-Performing Assets- Meaning, Criteria and Causes.

### **Unit II: E-Banking & Core Banking**

Meaning, Features, Advantages & Disadvantages of ATM (Automated Teller Machines.) Meaning, Features, Merits and Demerits of Credit cards, Plastic cards, Smart cards, e-purse, Laser cards. EFT (Electron Fund Transfer), ECS (Electronics clearing system).

### **Unit III: Banks and Customers Relationship and Services**

Introduction, Meaning of Customer. Bank & Customer Relationship- Debtor & creditor, Trustee and Beneficiary, Agent and Principal, Bailer and Bailee. Opening, operating and closing of various bank accounts. Demat Account -Advantages, Opening and Operation of Demat Account. Methods of Calculating Interest Rates on deposits and on loans.

### **Unit : IV Central Bank**

Meaning, Objectives, Functions, Role of Central Bank. Credit Control- Meaning, Objectives, Methods : Quantitative- Bank Rate, Open Market Operations, Cash Reserve Ratio(CRR), Statutory Liquidity Ratio(SLR), Repo Rate. Qualitative – Varying margin requirement, Regulation of consumer's credit, Issuing directives, Publicity measure, Moral suasion, Credit rationing and limitations.

### **Books Recommended:**

1. Monetary Economics, RR Paul, Kalyani Publishers.
2. Money, Banking and International Trade, K.P.M. Sundaram , Sultan Chand,New Delhi.
3. Macroeconomics, Mankiw, N. Gregory, Macmillan Worth Publishers New York, Hampshire U.K.

4. Financial Institutions and Markets , Agrawal & Gupta, Kalyani Publishers.
5. Modern Banking ,Vaish, M.C, Oxford & IBH Publishing Co.,New Delhi
6. Money and Financial System P.K. Deshmukh, Phadke Prakashan.
7. Monetary Economics, Rashi Arora, Sheth Publishers, Mumbai

### **Question Paper Pattern**

#### **Semester-IV**

#### **4T4-Monetary Economics- II**

- N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

Q.2.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |           |         |
|-----|-----------|---------|
| (c) | UNIT – II | 16Marks |
|-----|-----------|---------|

Q.3.

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |            |         |
|-----|------------|---------|
| (c) | UNIT – III | 16Marks |
|-----|------------|---------|

Q.4.

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |           |         |
|-----|-----------|---------|
| (c) | UNIT – IV | 16Marks |
|-----|-----------|---------|

Q.5.

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for the subjects-**

- 1. Financial Accounting -III**
- 2. Skill Development**
- 3. Income Tax and**
- 4. Monetary Economics-II**

<b>1a</b>	<b>Two periodical class tests</b>	<b>10 marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>10 marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Semester-IV**  
**4T5-Compulsory English**

**Unit –I PROSE ITEMS FROM “BLOSSOMS”**

PROSE ITEMS FROM “BLOSSOMS” :

1. *Go! Kiss the World* - Subroto Bagchi
2. *The Gold Frame* - R.K.Laxman
3. *The Cabuliwallah* - Rabindranath Tagore
4. *The Struggle for an Education* - Booker T. Washington

**Unit –II POEMS FROM “BLOSSOMS”**

POEMS FROM “BLOSSOMS” :

1. *If* – Rudyard Kipling
2. *Stay Calm* - Grenville Kleiser
3. *Ballad of the Landlord* - Langston Hughes

**Unit –III**

(A)Comprehension of Unseen Passage

(B) Transformation of Sentences:

- a. Exclamatory-Assertive and vice-versa
- b. Change the Voice

**Unit –IV**

(A) Business Correspondence:

*Credit and Collection Letters* – Granting Credit/Refusing Credit, Reminders for payment

(B)Interoffice Memorandum/Office Order

**Prescribed Text :Blossoms** (Raghav Publishers)  
**Reference Books (For Sem III & IV) :**

For Unit III – Learner’s English Grammar and Composition – N.D.V.Prasada Rao  
(S.Chand)

For Unit IV – 1. Business Correspondence and Report Writing – R.C.Sharma & Krishna Mohan (Tata  
2.Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan) (Tata McGraw-  
Hill)

## **4T5-Compulsory English**

### **Question Paper Pattern**

Q 1.	A. One LAQ out of Two based on Prose items (Unit I: Lesson No. 1 & 2)	08 Marks
	B. One LAQ out of Two based on Prose items (Unit I: Lesson No 3 & 4)	08 Marks
Q 2.	Four SAQs with internal choice based on prescribed Prose items (Unit I) (4 x 4 Marks)	16 Marks
Q 3.	A. One LAQ out of Two from prescribed poems (Unit II)	08 Marks
	B. Comprehension of Unseen Passage – 4 VSAQs –4 x 2 Marks	08 Marks
Q 4.	A. (i) Four items based on Unit III B (a) – 4 x 1 Mark - (ii) Four items based on Unit III B (b) – 4 x 1 Mark -	04 Marks
	B. One out of Two Questions based on Business Correspondence [Unit IV (A)]	08 Marks
Q 5.	A. One out of Two Questions based on UNIT IV (B)	08 Marks
	B. Four VSAQs based on Unit I and Unit III - (4×2 Marks)	08 Marks
		Total = 80 Marks

N.B. LAQ - Long Answer Question to be answered in about 150 words.

SAQ - Short Answer Question to be answered in about 75 words.

VSAQ – Very Short Answer Questions to be answered in one or two sentences.

### **INTERNAL ASSESSMENT : 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

**Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.**

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

## **4T6.1-Supplementary English**

### **Semester - IV**

#### **Unit 1 - Prose**

1. The Last Salvation- R.P. Sisodia
2. The Romance of a Busy Broker- O' Henry
3. Playing the English Gentleman- M.K. Gandhi
4. My Financial Career- Stephen Leacock

#### **Unit 2 - Poetry**

1. Dulce et Decorum est- Wilfred Owen
2. At the Lahore Karhai- Imtiaz Dharker
3. Leisure- W.H. Davies

#### **Non-Textual Portion-**

#### **Unit 3 - Writing Skills**

##### **A) Report Writing**

- Recommendation Report
  - Situational Report about an event or function
- B) Writing a dialogue with minimum 5 exchanges**

#### **Unit 4 - Vocabulary**

##### **(A) Business Terminology**

(Advice Note, Arbitration, Boom, Brand, Buffer, Curriculum Vitae, Capital, Devaluation, Duty, Entrepreneur, Gilt-Edged Stock, Infrastructure, Internal Audit, Ledger, Petty Cash, Raw Data, Scrip, Social Audit, Stock Exchange, Tender, Trademark, Underwrite, Warranty, Wildcat Strike, Write-Off) (Students to give the appropriate business term for the definition/ explanation given)

#### **Prescribed Text:**

*Reflections* - A Supplementary English Coursebook for Undergraduates  
(Raghav Publishers) **(For Unit I & II)**

#### **Reference Books-**

1. Professional Communication - Roshan Lal Raina, Iftikhar Alam, Faizia Siddiqui (Himalaya Publishing House) (**For the topic ‘Report Writing’ under Unit III**)
2. English for Practical Purposes - Z.N. Patil, B.S. Valke, Ashok Thorat, Zeenat Merchant. (Macmillan) (**for the topic ‘Dialogue Writing’ under Unit III**)
3. Business Correspondence & Report Writing - A Practical Approach to Business & Technical Communication- R.C. Sharma & Krishna Mohan. (McGraw Hill Higher Education) (**for the topic ‘Business Terms’ under Unit IV**)

**4T6.1-Supplementary English  
Question Paper Pattern**

**Semester - IV**

Q1.

(G) Unit 1 Prose - LAQ 150 words (2 out of 4)  $2 \times 08 = 16$  marks

Q 2.

(H) Unit 1 Prose - SAQ 75 words (4 out of 5)

$4 \times 04 = 16$  marks

Q 3.

(E) Unit 2 Poetry- LAQ 175 words- 1 out of 2  $1 \times 08 = 08$  marks

(F) Unit 2 Poetry - SAQ 75 words- 2 out of 3  $2 \times 04 = 08$  marks

Q 4.

(A) Unit 3- Report Writing (1 out of 2)  $1 \times 08 = 08$  Marks

(B) Unit 3- Writing a dialogue  
(with minimum 4 exchanges)  $1 \times 08 = 08$  Marks

Q 5. (A) Business Terms (4 out of 6)  $4 \times 02$  Marks= 08 Marks

(B) VSAQ from Unit 1 and Unit 2  $4 \times 02$  Marks = 08 Marks

**Total Marks of Theory Examination- 80**

**INTERNAL ASSESSMENT: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

**2 Assignments – 6+6 = 12 Marks**

**Performance & Conduct – 4 Marks**

**Attendance - 4 Marks**

**TOTAL – 20 MARKS**

**Theory Examination – 80 Marks**

**Internal Assessment – 20 Marks**

**Total: 100 Marks**

#### **4T6.2-विषय : मराठी**

**सत्र चौथे**

प्रश्न क्र.	घटक क्र.	अभ्यासक्रम	गुण	शेरा
१	१	साहित्यविषयक निबंध ( चार पैकी एक; शब्द मर्यादा- ४००)	२०	
२	२	गद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन  १ इंद्रायणीच्या वाळवंटात ( श्री. म . माटे ) २ मित्र ( ना. सी. फडके ) ३ माणसांत विरलेला माणूस ( दुर्गा भागवत ) ४ रामा मैलकुली (व्यंकटेश माडगुळकर ) ५ प्रेम ( मारोती चित्तमपल्ली) ६ विजान युगात भारत ( जयंत नारळीकर )	३५	
३	३	पद्य विभाग : पाठ्य पुस्तक : भाषा दर्शन भाग दोन  १ दोन भारुडे ( संत एकनाथ) २ विद्यार्थ्याप्रत ( केशवसुत) ३ आई ( यशवंत )	३५	

		४ विचार झाला पाहिजे ( वसंत आबाजी डहाके) ५ आता आम्ही (वैभव सोनारकर)		
४	४	व्यावहारिक मराठी १ स्मरणिका संपादन २. वाक्प्रचार	१०	

#### 4T6.2-विषय : मराठी

प्रश्न पत्रिकेचे स्वरूप  
सत्र : चौथे

वेळ: ३ तास)

(एकूण गुण-80

प्रश्न: १ साहित्य विषयक निबंध (चार पर्यायांपैकी एका विषयावर)

शब्दमर्यादा- ४०० शब्द (16 गुण )

प्रश्न: २ गद्य विभागावर आधारित दीर्घोत्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ३ पद्य विभागावर आधारित दीर्घोत्तरी दोन प्रश्नांपैकी एक सोडवा ( 16 गुण )

प्रश्न: ४ दोन गद्य विभागावर व दोन पद्य विभागावर आधारित चार लघु प्रश्नांच्या दोन गटांपैकी एक

गट सोडवा ( 16 गुण )

प्रश्न: ५ एक लघु प्रश्न गद्य विभागवर, एक लघु प्रश्न पद्य विभागावर आणि दोन लघु प्रश्न व्यावहारिक मराठीवर आधारित अशा चार लघु प्रश्नांची उत्तरे लिहा ( 16 गुण )

#### एकूण गुण विभागणी

१. गद्य विभाग 28 गुण
२. पद्य विभाग 28 गुण

३. व्यव्हारिक मराठी ०८ गुण

४. निबंध १६ गुण

एकूण गुण : ८०

अंतर्गत मूल्यांकन गुण २० : संबंधित महाविद्यालयातील प्राध्यापकांनी परीक्षार्थ्याची वर्गातील उपस्थिती (०५ गुण), परीक्षार्थ्याचा वर्गातील सक्रीय सहभाग (०५ गुण) आणि लिखित स्वरूपातील गृह पाठ (१० गुण) या निकषांवर एकूण २० गुणांपैकी विद्यार्थ्यांचे अंतर्गत मूल्यांकन करणे.

सत्र लेखी परीक्षा : ८० गुण

अंतर्गत मूल्यांकन : २० गुण

एकूण गुण : १००

### 4T6.3-fo"k;%& fgUnh prqFkZ I= %Semester IV

**le;%& rhu ?kaVs**

**dqy vad%&80**

bdkbZ Øekad(Units)	bdkb;ksa (Units) dk ikB~;Øe Øekuqlkj	Vad
<b>bdkbZ 1 (Unit-1)</b>	<b>IkfjfR;d fo"k;ksa] Hkkjr; R;kSgkjsarFkk LokLF; laca/kh fo"k;ksa ij vk/kkfjr fuca/kA ½ fdUgh pkj esa ls,d fo"k; ij &amp; 'kCn lhek 400 rd½</b>	20
<b>bdkbZ 2 (Unit-2)</b>	<b>XkJ foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk &amp;Hkkx&amp;2**</b>	35
<b>bdkbZ 3 (Unit-3)</b>	<b>1½ y{eh dk Lokxr&amp;,dakdh &amp;misUnzukFk ^v'd* 2½ vHkko&amp;dgkuh&amp;fo".kq izHkkdj 3½ vdsyh&amp;dgkuh&amp;eUuw HkaMkjh 4½ ?kj dh ryk'k&amp;dgkuh&amp;jktsUnz ;kno 5½ ydh &amp;dgkuh&amp;eerk dkfy;k</b>	35
<b>bdkbZ 4</b>	<b>ij foHkkx%&amp; ikB~;iqLrd%&amp; ^^IkfgR; ohfFkdk Hkkx&amp;2**</b>	
	<b>1½ xhr &amp;Qjks'k&amp;Hkokuhizlkn feJ 2½ Lof.kZe ijkx&amp;lqfe=kuUnu iar 3½ /kjrh LoxZ leku&amp;xksikynkl ^uhjt*</b>	
	<b>4½ [kksus dks ikus vk;s gks\&amp;ek[kuyky prqosZnh</b>	

<p><b>(unit-4)</b></p> <p>5½ &gt;k;jlh dh jkuh dh lekf/k ij&amp;lqHknzkdqekjh pkSgku</p> <p><b>vU; ikB~; lkexzh%&amp;</b>  <b>1½ izfrosnu ys[ku ¼Report Writing½&amp; vFkZ ,oa</b>  ifjHkk"kk] mn~Hko vkSj fodkl] fo'ks"krk,j] izdkj ,oa  rRo] izfrosnu rS;kj djrs le; /;ku nsus ;ksX; ckrsaA  <b>2½ lekpkj ys[ku ¼News Writing½&amp; lekpkj&amp;i= ds</b>  fy, lekpkj ys[ku] izeq[k vk;ke ,oa izk:lk rS;kjdjuk]  foKku&amp;fopkj] laln lekpkj] lekpkj vkSj laln] vijk/k  lekpkj] [ksy lekpkj] jkstxkkj lekpkj] lkekfd;d ,oa O;fDrxr  lekpkj] 'kqHk voljksads lekpkj] e`R;q lekpkj] foKkiu  lekpkj vkfnA  Lkekpkj ys[ku esa vko';d ckrsa ij /;ku nsuk  &amp;'kh"kZiafDr(Head line)] lekpkj ys[ku izfØ;k] vPNs  lekpkj dhfo'ks"krk,j] Hkk"kk&amp;'kSyh] vPNs laoknnkrk  dh ;ksX;rk,jA</p> <p><b>fVli.kh%&amp;</b> bdkbZ&amp; 4 dh lkexzh v/;u vkSj v/;kiu ds  ek/;e ls rS;kj dh tk;sA</p>	<p><b>10</b></p>
--	------------------

**iz'u&i= dk izk:lk ,oa vad foHkktu**

**prqFkZl=**

**4T6.3-fo"k;%& fgUnh**

**le;%& rhu ?kaVs**

**dqy vad%&80**

iz'u&1 lkfgfR;d fo"k;ksa] Hkkjrh; R;kSgkjksa rFkk LokLF; laca/kh  
**fo"k;ksa ij vk/kkfjr fuca/kAvad&16**

¼ fdUgha pkj esa ls ,d fo"k; ij & 'kCn e;kZnk 400 rd½

iz'u&2 x|& foHkkx ij vk/kkfjr ikBksa esa ls fodYi ds lkFk nh?kksZRrjh iz'uA  
**vad&16**

¼nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½

iz'u&3 ij& foHkkx ij vk/kkfjr dforkvksa esa ls fodYi ds lkFk nh?kksZRrjh  
**iz'uAvad&16**

**½nks iz'uksa esa ls ,d iz'u dk mRrj visf{kr gSA½**

**iz'u&4rhu x|&foHkkx ls o rhu i|& foHkkx ij vk/kkfjr dqy Ng y?kq iz'uksa esa  
ls fdUgha pkj iz'uksa ds mRrj visf{kr gSSA**

**4 x4vad=vad&16**

**iz'u&5 blds vUrXZr lEiw.kZ ikB~;Øe ls pkj y?kqRrjh iz'u gksaxsaA **izFke iz'u  
x| ls] f}rh; iz'u i| ls] r`rh; iz'u lkzfrosnu ys[kuls vkSj prqFkZ iz'u  
Iekpkj&ys[ku ls iwNs tk;saxsa A lHkh iz'uksa ds mRrj visf{kr gSA****

**4 x 4vad=vad&16**

**vkUrfjd ewY;kdau & 20 vad  
dqy vad foHkktu%&**

**fucU/k&16 vad  
x| foHkkx & 28 vad  
i| foHkkx &28 vad  
vU; ikB~; lkexzh& 08 vad  
dqy vad &80 vad**

**Vocational Course  
Semester IV**

**(Same syllabus for all vocational group subjects in B.Com – I)**

**4T7-- Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge about small business and environment consideration.

---

**Unit-I**

**Small Enterprises**

Definition, Characteristics, Relationship between Small and Large Units, Objectives, Scope, Role of Small Enterprises in Economic Development.

**Unit-II**

### **Selection of Types of Organisation**

Sole proprietorship, Partnership, Joint stock company, Factors influencing the choice of organization

### **Unit-III**

Legal Aspects of Small Business – Major provisions of Income Tax, Sales Tax, Patent Rules, Excise Rules – Factory Act and Payment of Wages Act.

### **Unit-IV**

Environmental considerations – Concept of ecology and environment – Factors contributing to Air, Water, Noise pollution – Air, Water and Noise pollution standards and control – regulatory bodies. Personal Protection Equipment (PPEs) for safety at work places.

### **Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

### **Group – I : Computer Applications**

#### **4T8.1 : Computerized Accounting (C/A)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

### **Unit-I :**

Introduction to Accounting, Advantages of accounting, Books of accounts, Classification of Accounts, Financial Statements, Inventory management, Computerized Accounting, Need of Computerized Accounting, Accounts Organization, Accounts group, Loans Liabilities, Assets and Budget.

### **Unit-II :**

Accounting Software's Introduction to tally Software, Features of Tally Screen, Company information, Creating new Company, Gateway, Selection of Company, selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features,

Configuration- General, Numeric Symbols, Voucher Entry, Creation of Voucher Screen, invoice Order Entry, Printing.

### **Unit-III :**

Accounts info menu, Account Groups- create new group, creation of primary group. Normal and advance information, Ledger Accounts, cost categories, Cost Centers. Creation of Budget, Types of budget. Voucher- Voucher Entry, creation of Vouchers Screen, types of Voucher, Selection of Voucher types, Post Dated Voucher, printing of Vouchers, Cheque Printing.

### **Unit-IV :**

Inventory info, Features of Inventory info. Configure- Inventory Info, balance Sheet, Audit Trail, Ratio Analysis. Display-Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export, Export of Data.

### **Practical : Practical will be based on Tally S/W**

Tally Software – All Accounting Problems Viz. Balance sheet, Profit & Loss, Cash Book, Loans, Cost Accounting, Vouchers, Budget, Sales and Purchase, Assets & Liabilities, Inventory Management, Financial Statements, Books of accounts, Ledger, etc.

### **Books Recommended:**

1. Accounting with Tally : K.K. Nadhani, BPB Publication
2. Tally Tutorial : K.K. Nadhani and A.K. Nadhani, BPB Publication.
3. Advances Accounts Vol-I: M.C. Shukla, T.S.Grewal and S.G.Gupta, S.Chand & Company, Delhi.
4. Accounting Principles: Anthony R.N. and J.S. Richard, Irwin Inc.
5. Advanced Accountancy By P.C. Tulsian, Tata McGraw HILL Publication.
6. Tally By S.B. Kishor (Dasganu)
7. Fundamentals of Computers – ITL Education Solutions Ltd. (Pearson)

**Group - II: Principles & Practice of Insurance**  
**4T8.2- General Insurance – Paper II (Semester – IV)**

Time : 3 Hours]

Theory : 80 Marks

---

Internal Assessment: 20 Marks

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about General Insurance.

**Unit - I**

- Nature of Marine Insurance, Marine insurance contract, Marine insurance policies, premium calculation, kinds of Marine insurance policies.

- Types of Marine losses, payment of claims, proximity clause, voyage warranties, progress of Marine insurance business in India.

### **Unit - II**

- Policy conditions for Marine Insurance, Procedure of taking out Marine Policy
- Settlement of claim of Marine loss, Growth of Marine Insurance Business

### **Unit -III**

- Nature of insurance benefits, insurers liability, resources to life and general table, value of benefits, basic plan of assurance.
- Temporary assurance and pure endowment.

### **Unit- IV**

- Fidelity Guarantee Insurance, Public liability, Health Insurance, Personal Accident and Sickness Insurance
- Growth of Miscellaneous Insurance business in India
- Growth of General Insurance Business after Privatisation.

#### **Recommended books:**

Fundamental<sup>□□</sup> Of Insurance, R.K. Gupta, Himalaya Publishing House.

Principles<sup>□□</sup> & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House

Insurance Principle and Practice, M.M. Mishra and Dr. S.B. Mishra, S. Chand Publication

Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House

बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल – हिमालया पब्लिशिंग हाउस

### **Group-III**

#### **4T8.3-Advertising, Sales Promotion and Sales Management - IV**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

### **Unit-I**

- **Advertising Budget:** Consideration to be kept in mind while deciding the budget, different methods. The budget-making process.

### **Unit-II**

- **Media planning:** Importance of the exercise, Evaluation of important media-print, audio-visual, outdoor, direct mail, advertising on internet misc. media, the media planning process, important considerations- cost, coverage, flexibility, impact etc. computerized media selection, current Ad. Media scene in India.

### **Unit-III**

- Role of selling in planned economy, selling as a career

- Acquiring skills and developing new qualities for salesmen and to improve growth chances.
- Tips and suggestions to improve personal ability, skills for salesmen, product knowledge, planned selling system.
- Practical suggestions to improve day to day field working, customer psychology, buying motives, trade relations, effective distribution network.
- Sales organizations- types, principles, aims and objectives.

#### **Unit-IV**

- Selection and training of sales force, latest techniques in training.
- Motivation and compensation plans
- Sales planning (forecasting) methods, budgets, implementation, review techniques.
- Communication, how to develop skills for effective communication, principles, objectives and methods.
- Sales managers/supervisors - their role, authority and responsibility

#### **Recommended books:**

- ✓ Luick, John F and Siegler, William Lee, Sales promotion and Modern Merchandising (McGraw Hill Book Co., New York, 1968)
- ✓ Still, Richard, Edward W & Govoni Norman AP, Sales management Decisions, Strategies and cases (Prentice Hall India Pvt. Ltd., New Delhi, 1981)
- ✓ Stanton, William J & Buskrit, management of Sales Force ( Richard D, Irwin, Inc. Homewood, 1987)
- ✓ Russell, Frederic A. Beach, Frank H & Buskrit, Richard H, Selling principles and Practices (Mcgraw Hill, International Book Co.1982)
- ✓ David Aaker, Advertising management (Prentice Hall India Pvt. Ltd., New Delhi)
- ✓ Rajiv Batra, Myers, David Aaker, Advertising Management (Prentice Hall India Pvt. Ltd., New Delhi)

### **SEMESTER IV QUESTION PAPER PATTERN FOR All Vocational Subjects**

#### **Computer Application, Insurance & Entrepreneurial Development & ASM**

**TIME:- 3 Hours]** **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Q.1.(a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks
OR		
(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.2. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.3. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

Q.4. (a)	UNIT – I	8 Marks
(b)	UNIT – I	8 Marks

OR

(c)	UNIT – I	8 Marks
(d)	UNIT – I	8 Marks

#### Q.5. Answer in Brief

(a)	UNIT – I	4 Marks
(b)	UNIT – II	4 Marks
(c)	UNIT – III	4 Marks
(d)	UNIT – IV	4 Marks

### B.Com. – Third Year Semester-V **5T1- : Financial Accounting – IV**

#### **Unit – I**

##### **Amalgamation and Absorption of Companies**

Introduction, Meaning, Characteristics, Objectives, Methods of purchase Consideration, Accounting Procedure of Amalgamation and Absorption.

**(Theory & Numericals)**

#### **Unit – II**

##### **Reconstruction of Companies.**

(Internal and External Reconstruction of Companies)

Meaning, Characteristics, Objectives, Difference between Reconstruction and Reorganization, Accounting Procedure of Reorganization and Reconstruction.

**(Theory & Numericals)**

### **Unit – III**

**Accounts of Public Utility Companies (Electricity, Gas and Water Supply Companies)** According to Double Accounting System-  
 Meaning, Main features of Double Accounting system, Objective of Double Accounting System, Difference between Double Accounting System and Single Accounting System, Merits, Demerits of Double Accounting System, Preparation of Final Accounts.  
**(Theory & Numericals)**

### **Unit – IV**

#### **Valuation of Shares**

Meaning, Need of Valuation of Shares, Factors affecting the value of shares, Methods of valuation of shares, Net Assets Method/Intrinsic Value Method, Yield Method.  
**(Theory & Numericals)**

**The Financial year ends on 31<sup>st</sup> March.**

#### **Books Recommended**

- Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
- Kumar, Anil S. – Advanced Financial Accounting – Himalaya PublicationHouse
- Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency,Kolkata)
- R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- Dr. L. S. Porwal : Accounting Theory (Tata McGraw Hill)
- Robert Anthony, D. F. Hawkins & K. A. Merchant : Accounting Text & Cases (Tata McGraawHill)
- Dr. S. N. Maheshwari : Corporate Accounting (Viakas Publishing House Pvt.Lit. New Heldi)
- Dr. Ashok Sehgal& Dr. Deepak Sehgal : Advanced Accounting (Taxmann,New Delhi)

**Question Paper Pattern  
Semester -V  
5T1-Financial Accounting – IV**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours

Marks-80

Q. No. 1 – Unit I

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

Q. No. 2 – Unit II	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 3 – Unit III	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 4 – Unit I	a) Theory b) Problem	08 Marks 08 Marks
<b>OR</b>		
	c) Problem	16 Marks
Q. No. 5	a)      Unit- I b)      Unit –II c)      Unit-III d)      Unit-IV	Problem 04 Marks Problem 04 Marks Problem 04Marks Problem 04 Marks

## **5T2– :Cost Accounting**

### **Unit – I**

#### **Cost Accounting :-**

Meaning, Importance, Element of Cost, Cost-Absorption, Allocation of Overheads and Methods of costing, Difference between Cost Accounting and Financial Accounting. Simple Problems on Cost Sheet, Tender and Quotations. (**Theory & Numericals**)

### **Unit – II**

#### **Reconciliation of Profit /Loss shown by Cost and Financial Accounts:**

Need for reconciliation of profit, reason for the difference between cost accounts and financial accounts, objectives of reconciliation statement, methods of preparation of reconciliation statement. (**Theory & Numericals**)

### **Unit – III**

## **Process Cost Accounting :**

Methods of costing, advantages and limitations of process costing, difference between job costing and process costing, Normal loss, Abnormal loss and Abnormal effects, **(Theory & Numericals)**

Unit -IV

## **Contract Costing:**

Features of contract costing, Types of contracts, Elements of contract cost, Nature of contract-completed contract, incomplete contract(**Theory & Numericals**)

### - Books Recommended -

- S. N Maheshwari : Cost Accounting Theory and problems –Shri Mahavir Book Depot, New Delhi
  - V.K. Saxena : Cost Accounting Text Book- Sultan Chand and Sons New Delhi
  - M.C. Shukls – T.S. – Grewal, M.P. Gupta – Cost Accounting – S. Chand , NewDelhi
  - R. S. N. Pallai, V Bhagavathi – Cost Accounting – S. Chand, New Delhi
  - S. M. Shukla :- Cost Accounts (Hindi)
  - Nigam R. S. – Advanced Cost Accounting , S. Chand & Company
  - Jain S. P. – Advanced Cost Accounting – Kalyani Publication
  - Gawada, J Made – Advanced Cost Accounting – Himalaya Publication House

**Question Paper Pattern  
Semester –V  
5T2-Cost Accounting  
Compulsory Paper- II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q. No. 1 – Unit I

a) Theory 08 Marks

b) Problem	08 Marks
<b>OR</b>	
c) Problem	16Marks

Q. No. 2 – Unit II

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 3 – Unit III

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 4 – Unit I

a) Theory	08 Marks
b) Problem	08 Marks
<b>OR</b>	
c) Problem	16 Marks

Q. No. 5 -	Unit- I	a)	Problem 04 Marks
	Unit –II	b)	Problem 04 Marks
	Unit-III	c)	Problem 04Marks
	Unit-IV	d)	Problem 04 Marks

## 5T3-MANAGEMENT PROCESS

**Objective:** To equip the students with the knowledge of Management Process and inspire them to acquire required quality to face the managerial challenges.

### **Unit I:-**

**Management and Administration:** - Management concept, levels of management, importance & functions of various levels of management. Administration- meaning, concept and functions of administration. Differences between Management and Administration.

### **Unit II:-**

**Managerial Development & Group Dynamics:** - Need for developing managerial skills, skills required of a manager, classification of managerial skill, methods of developing skills of managers, group dynamics ,meaning & significance, types of groups, group formation development, group composition.

### **Unit III:-**

**Managerial Style:** - Meaning and types of managerial styles X and Y Theory of Macgregor, factors' influencing managerial style, organization conflict- traditional and modern approaches to conflict, Management as a profession, significance of professional manager in current scenario,

### **Unit IV:-**

**Motivation:** Definition, Meaning and concept of motivation, kinds of motivation and its importance, Theories of motivation- Maslow's theory of need hierarchy, Herzberg's theory of motivation, relationship between motivation & productivity.

### **Refefence:**

1. Sherlekar "Management Value Oriented Holistic Approach" Himalaya Publishing.
2. Stephen Robbins : Organizational Behaviour, Prentice Hall of India.
3. Terry George: Principles of Management.
4. R.S.Dewedi "Human Relation and organizational behaviour.
5. Shejwalkar and Ghanekar : Principal and Practices of Management
6. Sharma, : Organisational behaviour
7. Saxena, Principal and Practices of Management

**QUESTION PAPER PATTERN**  
**BCOM – III: SEMESTER V**  
**5T3-Management Process**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **5T4: Indian Economy – I**

### **Unit I:**

#### **Indian Economy & Planning**

Economic Planning- Characteristics, Rationale, Features, Objectives of Economic Planning. Strategy of India's Development Plans. Objectives and Evaluation of 11<sup>th</sup> Plan. Objectives of 12<sup>th</sup> Plan. Resources allocation and financing of five years plans. Regional Planning in India- Aspects of regional planning , Conceptualization, Magnitude & Challenges. Achievements and shortcomings of India's Economics Planning. NITI Aayog-Aims, Objectives & Structure. From Economic Planning to NITI Aayog- Differences in the two Approaches.

### **Unit II:**

#### **Indian Economy & Policy**

Concept of Economic Growth & Economic Development. Characteristics of underdeveloped/ developing countries. Broad features of Indian economy. Natural resources- Land, soil, water, forest, mineral. Infrastructure - Sources of Energy in India. Power, Coal, Oil and Gas, Atomic, Non-conventional Sources, India's Energy Strategy. Transport System in India- Railways, Road, Water & Air Transport.

### **Unit III-**

#### **Population & Unemployment**

India's Population: Size and Growth Trends, Causes of Population Explosion, Consequences on Economic Development, Remedies, Population Policy. Employment and Unemployment- Trends, Structure of Employment in India. Nature & Estimates of Unemployment. Urban & Rural Unemployment- Causes, Effect, Government Policy for Removing Unemployment.

### **Unit IV:**

#### **India's Public Finance**

Public Expenditure-Classification, Role of Public Expenditure in India, Causes of increase in Public Expenditure. Public Revenue-Sources of Public Revenue in India. Public Debt- Meaning, Concept, Classification, Role, Problem and Remedies. India's Fiscal Deficit-Causes, Recent Policy Measures towards Controlling Fiscal Deficit.

### **Books Recommended:**

1. Indian Economy, Datt & Sundharam, S Chand
2. The Indian Economy: Problems and Prospects, D .R.Gadgil.
3. Globalization And Indian Economy, R.Chaddha, Sumit Enterprises.
4. Indian Economy : Problems of Development and Planning, A.N.Agrawal, New Age International.
5. Indian Economy, Misra & Puri, Himalaya Publishing House Pvt. Ltd.
6. Government of India- Five Year Plans.
7. Government of India- Economy Survey.
8. Reserve Bank of India- Annual Reports on Currency and Finance.
9. Indian Economics, Rashi Arora, Mumbai

**Question Paper Pattern**

**Semester –V**

**Elective–I**

**5T4- Indian Economics – I**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

OR

- (c) UNIT – I 16Marks

Q.2.

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT – I 16Marks

Q.3.

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT – I 16Marks

Q.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT – I 16Marks

Q.5.

- a) UNIT – I 04 Marks  
b) UNIT – II 04 Marks  
c) UNIT – III 04Marks  
d) UNIT – IV 04 Marks

## **5T5.1 : Marketing Management**

### **Unit – I**

**Introduction:** Meaning and Concept of Marketing and Marketing Management. Traditional and Modern concept of Marketing, Functions and importance of Marketing Management, Market segmentation: - evaluation, criteria's, advantages and disadvantages of market segmentation, types

### **Unit-II**

**Market and pricing policies:** Meaning, concept and characteristics of Consumer Market, Industrial Market and Service Market, their difference, government and reseller market, online market: - issues and challenges **Pricing policies:** - meaning, types and factors governing them.

### **Unit – III**

**Product Planning and Distribution:** Product Planning – New Product Development – Product Life Cycle – Branding and Packaging , Distribution Channels for Consumer Product, Industrial Product and Service Product, Function of Distribution of Channels, Factors Affecting Distribution of Channels.

### **Unit – IV**

#### **Consumer behavior and Promotion:**

Consumer behavior: - Meaning, concept and factors affecting consumer behavior, Customer Satisfaction, measurement of Customer Satisfaction, After Sales Services and its role in modern business, **Promotion:** techniques of promotion, Personal Selling; Advertising, Direct Marketing. E-marketing

#### **Suggested Books:**

1. Marketing Management, Philip Kotler and Kevin Lane Keller: Prentice Hall of India / Pearson Education, New Delhi.
2. Marketing Management, V. J. Ramaswami and S. Namakumari:, Macmillan Business Books, Delhi.
3. Principles of Marketing Management, Dr. Arvind Shende, Dr. Dilip Vairagade, Anuradha Prakashan, Nagpur.
4. Services Marketing; S M Jha; Himalaya Publishing House.
5. Industrial Marketing Practices in India- S.L. Gupta, Sanjeev Bahadur and Hitesh Gupta Excel Books, New Delhi.
6. [foi.ku O;oLFkkiu&MkW-es?kk ukusVdj&lkbZukFk izdk](http://www.foi.ku.O;oLFkkiu&MkW-es?kk ukusVdj&lkbZukFk izdk)

**Question Paper Pattern**  
**Semester –V**  
**Elective Group–I**  
**5T5.1- Marketing Management**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **Elective Group-I**

### **5T5.2 : Computerized Accounting**

#### **Unit-I**

**Introduction** - Computerized Accounting, Advantages of Computerized Accounting, Manual Vs Computerized Accounting, Need of Computerized Accounting, Accounts Organization, Accounts group, Loans, Liabilities, Assets and Budget.

#### **Unit-II**

**Accounting Software's**, - Introduction to Tally Software, Features of Tally, Tally Screen, Company Information, Creating new Company, Gateway, Selection of Company, Selection of Options, Buttons at Gateway, Working with multiple Companies, Company Features, Configuration – General, Numeric Symbols, Voucher Entry, Invoice Order Entry, Printing.

#### **Unit-III**

**Accounts Info Menu, Account Groups** – Create new group, creation of Primary group. Normal and Advance Information, Ledger Accounts, Cost Categories, Cost Centers. Creation of Budget, Types of Budget. Voucher – Voucher Entry, Creation of Voucher Screen, Types of Voucher, Selection of Voucher Types, Post Dated Voucher, Printing of Vouchers, Cheque Printing, advance Features of account Voucher.

#### **Unit-IV**

**Inventory Info, Features of Inventory Info. Configure** – Inventory Info, Balance Sheet, Audit trail, Ratio Analysis. Display – Accounting Report Display, Inventory report Display, and MIS Report Display. Printing Reports, Export of Data. Maintenance – Bank Reconciliation, House Keeping, Data Maintenance. Security – Users and Password, Security Controls, Types of Security, Creation New Security Levels and Tally Audit.

#### **Books Recommended:**

- Accounting with Tally : K.K. Nadhani, BPB Publication.
- Tally. ERP 9 : Prof. C. M. Tembhurnekar& Dr. D. N. Khadse , Saiyyoti publication , Nagpur.
- Tally Tutorail : K.K. Nadhani and A.K. Nadhani, BPB Publication.
- Advances Accounts Vol-I: M.c.Shukla, T.S.Grewal and S.G, Gupta, S. Chand& Company, Delhi.
- Accounting Principles: Anthony R.N. and J.S. Richard, Irwin Inc.
- Advanced Accountancy By P.C. Tulsian, Tata McGraw HILL Publication.
- Microsoft Office -2000/2007- Gini Courter, Annelte Marquis BPB.
- It Today (Encyclopaedia) - S.Jaiswal.
- Gulhane, Dr., Tiwari, Naidu Computerized Accounting, Sheth Publishers Pvt. Ltd. Mumbai
- A First Course In Computers - Sanjay Saxena.
- First Text Book On Information Technology – SrikantPatnaik.

**Question Paper Pattern**  
**Semester –V**  
**Elective Group-I**  
**5T5.2-Computerized Accounting**

N.B. – 1) All questions are compulsory.  
 2) All questions carry equal marks.

Time :- 3 hours Marks-80

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

## **Foundattion Group—I**

### **5T6.1 : Business Finance -I**

**Unit –I Business Finance**-Meaning, Nature, Significance, Objects and Scope of Business Finance, Functions of Financial Executive in an Organization.

**Sources of Business Finance**-Long- Medium and Short Term Sources of Finance, Equity, Preference shares, Sweat equity shares, Shares with differential rights, debentures & Bonds .**(Theory)**

**Unit – II Project Financing**: Meaning, Steps involved in Project Financing, Appraisal of project, Means of Project finance, Aspect of Project Appraisal. **(Theory)**

**Inventory Management** : Need and Cost of Inventory , Economic Order Quantity under constant price and with varying price , Various inventory levels. **(Theory & Numericals)**

**Leverages** -Concept of Leverages, Operating and Financial Leverages. **(Theory & Numericals)**

### **Unit – III Management of Working Capital.**

Meaning & Concept ,Need or Objects of Working Capital, types, and Advantages of Working Capital , disadvantages of Excessive Working Capital, Determinant's , assessment of Working Capital requirements**(Theory & Numericals)**

**Unit – IV Debtors Management**.: Introduction to Debtors Management, Cost of extending credits, Credit / discount policy, Effective cost of bill discounting . **(Theory & Numericals)**

**Creditors Management**: Introduction, Cost of Credit, Accruals / expenses payable as source of finance. **(Theory & Numericals)**

**Venture Capital Financing**: Meaning, Methods of Venture Financing, Problem areas facing the Venture Capital Industry. **(Theory)**

### **Books Recommended:**

1. Financial Management Problems &Solutions :- Kishore Ravi M (Taxman Allied Service (p) Ltd.)
2. Fundamentals of Financial Management :- Chandra Prasanna (Tata McGraw Hill Publishing Co. Ltd.)
3. Management Accounting & Financial Management :-Arora M N (Himalaya Publishing House Pvt. Ltd.)
4. Business Finance : Dr.Jain V. K. ,And Sharma D.G. (Shethe publishers PVT. LTD.

**Question Paper Pattern  
Semester –V  
Foundattion Group-I  
5T6.1-Business Finance -I**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
b) Theory 08 Marks  
**OR**  
c) Theory 08Marks  
c) Theory 08Marks

## **Q. No. 2 – Unit II**

- a) Theory 08 Marks  
b) Theory 08 Marks

**OR**

c) Problem 08 Marks  
d) Problem 08 Marks

O. No. 3 – Unit III

- a) Theory                                    08 Marks  
 b) Theory                                    08 Marks

**OR**

c) Problem                                08 Marks  
 d) Problem                                08 Marks

## O. No. 4 – Unit I

- a) Theory 08 Marks  
b) Problem 08 Marks

**OR**

c) Problem 08 Marks  
d) Problem 08 Marks

**Q. No. 5 -** Unit- I  
Unit -II  
Unit-III  
Unit-IV

- a) Theory 04 Marks
  - b) Problem 04 Marks
  - c) Problem 04Marks
  - d) Problem 04 Marks

## **5T6.2 : Auditing**

### **UNIT- I: Basic of Auditing**

(i) **Audit, Auditing and Auditor:** Meaning, definition, object and scope of Audit and auditing, basic principles governing an audit, Advantage and Disadvantages of Audit, Difference between Internal Audit and External Audit, **Types of Audit:** Meaning, Objective and Importance of Continuous Audit, Annual Audit, Periodical Audit, Internal Audit.

(ii) **Internal Control and Internal Audit System:** Meaning, definition, advantages and disadvantages of Internal Control, Internal Check, Internal Audit, EDP Audit: Meaning of EDP audit, Control in EDP (Electronic Data Processing) Environment- General EDP Control, Application Control

### **UNIT- II: Audit Working and Procedure.**

i)**Audit Planning, Evidence** Audit programme: Meaning and Definition, Objective, Advantages and Disadvantages of Audit Programme, Formulation of audit programme, precaution to be taken for preparation of audit programme.

ii)**Audit Documentation and Evidence:** Meaning, definition, content, advantages of audit note book, audit working paper, essential of good audit working paper, Ownership and custody of audit working paper, Audit evidence, Method of obtaining audit evidence

### **UNIT-III**

(i) **Standard on Auditing:** Standard Auditing Policies- Introduction of auditing standard issued by ICAI (From AAS-1 to AAS -30 and AAS-34)

#### **ii) Vouching & Verification**

**Vouching:** Meaning and definition of vouching, objective, importance and limitation of vouching, Vouching procedure and precaution to be taken for vouching of - Cash book, purchase book, sales book.

iii) **Verification of Assets and Liabilities:** Meaning, object, importance and limitation of Verification. Audit of Fixed Assets, Current Assets, General principle regarding verification of assets, Audit of Liabilities, General principle of regarding verification of liabilities.

### **UNIT- IV: Company Audit & Audit Report**

(i) **Company Auditor:** Legal provision related with appointment of auditor under Companies Act 2013, Qualification and disqualification of auditor, Right, Power, and liabilities of company auditor, civil and criminal liabilities of company auditor, Legal provision related with remuneration, removal of company auditor.

(ii) **Company Audit :**Meaning, definition, feature, objective, advantages and criticism of Financial audit, Management audit, Special audit, Cost Audit, Difference between Financial audit and cost audit, Management audit and financial audit.

iii) **Audit report and Certificate:** Meaning, definition, content, scope and significance of audit report

### **Reference Books:**

- Aruna Jha: Students Guide to Auditing and Assurance, Taxman Publication, New Delhi
- S.D. Sharma: Auditing Principle and Practice, Taxman Publication , New Delhi
- Dr. Arvind shende, Dr. Dilip Vairagade; Auditing-Anuradha Prakashan, Nagpur.
- L. N. Chopde, D.H. Choudhari, Dr. Baban Taywade: Auditing – Sheth Publishers
- Dr. K. R. Dixit: Auditing – Vishwa Publishers & Distributors, Nagpur
- B. N. Tandon, S. Sudharsanam, S. Sundharabahu: Practical Auditing – S. Chand & Company Ltd.
- S. K. Mehta: Auditing , Diamond Publication Pune

**Question Paper Pattern**  
**Semester –V**  
**Foundattion –I**  
**5T6.2Auditing**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for all subjects-**

<b>1a</b>	<b>Two periodical class tests</b>	<b>08marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>08marks</b>
<b>1c</b>	<b>Overall conduct as a responsible learner</b>	<b>04marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I      20 marks</b> <b>Unit-II      20 marks</b> <b>Unit-III      20 marks</b> <b>Unit-IV      20 marks</b>  <b>Semester wise End Examination marks</b>	    <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Vocational Course: Semester V**  
**(Same syllabus for all vocational group subjects in B.Com - I)**  
**5T7:Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

---

**Level of knowledge: Basic knowledge**

**Objective:** To provide knowledge regarding documentation franchising and business plan.

---

**Unit-I**

Documents:- Types of documents - Commercial, Regulatory and Assistance Document, procedure of processing of an export order.

**Unit-II**

Franchising and Financing:- Definition, Advantages, Disadvantages of franchising in India, Financing of new ventures – Types of finance – Short, Medium and Long Term.

**Unit-III**

Business Plan – Meaning of Business Plan, Importance and Preparation of Business Plan, Financial and Social aspects of Business Plan.

**Unit-IV**

Meaning and Concepts – Management, Marketing, Accounting, Inventory Management, Working Capital Management, Human Resource Management and Total Quality Management.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.

Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House

**Group – I : Computer Applications**  
**5T8.1 : Web Designing using HTML (WD)**  
**Paper - I**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I :**

**HTML** : Introduction, Designing web site, Advantages and Disadvantages of HTML, Flow of Web Information, Role of Web Browser and Web Server, Process of Web Publishing,

**Creating a Simple Static Web Page** : About HTML, Basic elements : <html>, <head>, <title>, <p>, <br>, <h1> to <h6>, <ol>, <ul>, <li>, <dl>, <pre>, <marquee>, <hr>, Physical and Logical tags **Path** : Relative and Absolute path, Comments, Special Characters, Text Formatting tags, <center>

**Unit –II :**

Hyperlinks <a href ...>, Creating links to web pages and URLs, Creating links within the same page, various types of URLs that can be used in links, Image tag and their related attributes, Inline images, Links to (external) images, Using Inline images, Using images as hyperlinks, Popular images formats for internet and HTML.

**Tables** : Basic table tags and their related attributes.

**Unit –III :**

**Frames, Image Map and Web Font Creator** : Frames and their creation, the <Frame> and <Frameset> tags, Frame linking, Floating or Inline Frames, Image Maps <map> and <area> tags, Client – Side and Server – Side image maps.

**Unit –IV :**

Form designs, Form Controls, Text controls, password fields, radio buttons, checkboxes, reset and submit buttons, form control selection, option processing and textarea.

**Practical** : The Practical will be based on HTML

**BOOKS RECOMMENDED :**

1. Web Publishing : Monic D'souza and J D'souza
2. Complete HTML : BPB
3. E-Commerce : Bhushan Dean – S. Chand
4. HTML – 4 Unleashed : SAMS
5. Dynamic HTML : O'RELLY (SPD)

(Semester – V)

**Group - II: Principles & Practice of Insurance  
5T8.2-Insurance and Actuarial Science – Paper I**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20 Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Insurance and Actuarial Science

**Unit - I**

- Investment of Insurance Funds
- Nature and Method of According procedure in Life Insurance and General Insurance
- Meaning of policy values, retrospective policy value, prospective policy value, symbols of policy value, calculation of policy value, progress of policy value

**Unit - II**

- Risk selection, Identification of Risk, Principles of Risk Management, Sources of Risk Information
- Rate Making, Types of Rate Making ,Principles of Rate Making

**Unit -III**

- Actuarial Science : Meaning ,Nature of actuarial science, scope of actuarial science in Finance, economics, statistics, Mathematics and computer science
- Concept of terms: Accumulated value and present value ,Nominal and effective rates of Interest, Discount and Discounted value, Redemption of Loan, Sinking fund.

**Unit- IV**

- Annuities : Meaning and classification of Annuities, perpetuities, immediate annuities
- Mortality ,Meaning, Nature of Mortality, Factors included in construction of Mortality Table I and II, Survival rate , Death rate

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

- Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House
- ✓ बीमा के सिद्धांत एवं व्यवहार – भगवती प्रकाळ अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

## **V - Semester**

### **5T8.3- Advertising, Sales Promotion and Sales Management – III**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

#### **OBJECTIVES:**

To expose students to the principles and practices of advertising and sales promotion and develop the conceptual abilities in this functional area of marketing.

To develop the skills of the students, which will help them to prepare effectively for a career in the advertising and sales promotion function of any company or in the advertising agency.

#### **CONTENT:**

##### **Unit-I**

- Communication Process - Communication models for rural communication and urban communication

##### **Unit-II**

- Advertising - Organizational structure of advertising agency and its functions. Evaluation of agency functioning, Creativity in Advertising including Message development, copy writing, layout; Media selection

##### **Unit-III**

- Advertising Research. Effectiveness of advertising- methods of measurement. Rationale of testing Opinion and Attitude Tests, Recognition, Recall

##### **Unit-IV**

- Message Strategy: Attention and comprehension, Associating Feelings with the Brand, Brand Equity, Image and Personality and Group Influence and word of month advertising

##### **Recommended books:**

- Advertising Management – Concepts and Cases, Manendra Mohan (Tata McGraw Hill)
- Sales Promotion and Advertising Management (6thEd.)Himalaya Publishing House
- Advertising Excellence by Bovee, Thill, Dovel and Wood (McGraw Hill)
- Advertising Management – Shelekar, Victor & Nirmala Prasad (Himalaya Publishing House)
- Foundations of Advertising – Theory & Practice – S.A. Chunawala
- Brand Positioning – Subroto Sengupta, Tata McGraw Hill

**SEMESTER V**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**      **[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.2.(a)**

- |     |          |         |
|-----|----------|---------|
|     | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.3.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.4(a)** UNIT – I

8Marks

- |     |          |         |
|-----|----------|---------|
| (b) | UNIT – I | 8 Marks |
|-----|----------|---------|

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.5.** Answer in Brief

- |     |            |         |
|-----|------------|---------|
| (a) | UNIT – I   | 4 Marks |
| (b) | UNIT – II  | 4 Marks |
| (c) | UNIT – III | 4 Marks |
| (d) | UNIT – IV  | 4 Marks |

**B.Com. Third Year**

**Semester-VI**

**6T1-Financial Accounting- V**

**Unit-I-** Accounts of Holding Company-

Introduction, Meaning of Wholly-owned subsidiary, partly-owned subsidiary, preparation of Consolidated Balance Sheet and Profit and Loss Account, simple problem on involving two companies only.

**Unit-II-** Insurance Claims

Introduction,oss of stock Average clause practical problem on loss of stock.

**Unit-III-** Investment Accounts

Meaning , Need,Utility and objectives, Sales and Purchase of different types of Securities, Simple problem on Investment and Securities.

**Unit-IV-** Profit prior to incorporation-

Meaning Methods of ascertain the pre-incorporation profit, Issue and Redemption of preference shares Redemption out of new issue of shares Redemption at premium out of new issue of shares, Redemption out of profit.

**Books**

S. N. Maheshwar :- Financial Accounting – Vikas Publishing House, New Delhi

□□Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons

□□Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House

□□Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)

□□Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)

□□Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata)

□□R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)

□□M. A. Arulnandam :- Advance Accounting – Himalay Publication

24

□□Prof. PradeepWath, Dr. R. D. Mehta, Dr. DilipGotmare :- Financial Accounting– Payal Prakashan

**Question Paper Pattern  
Semester -VI  
6T1-Financial Accounting – V**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## Q. No. 1 – Unit I

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16Marks

## Q. No. 2 – Unit II

- a) Theory 08 Marks  
b) Problem 08 Marks  
**OR**  
c) Problem 16 Marks

### **Q. No. 3 – Unit III**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

## **Q. No. 4 – Unit I**

- a) Theory 08 Marks  
 b) Problem 08 Marks  
**OR**  
 c) Problem 16 Marks

### **Q. No. 5**

- a) Unit- I Problem 04 Marks
  - b) Unit –II Problem 04 Marks
  - c) Unit-III Problem 04Marks
  - d) Unit-IV Problem 04 Marks

**Semester-VI**  
**6T2-Management Accounting**

**Unit\_I**

**Management Accounting :-**

Meaning, Scope, Importance, and Limitations of Management Accounting. Difference between Cost Accounting and Management Accounting, Role of Management Accounting. Break -Even Point Analysis (**Theory & Numericals**)

,

**Unit – II**

**Business Budget & Budgetory Control:**

Meaning, Characteristics, Objectives ,Advantages, Limitations. Classification &Types of Budgets. Problems on Cash Budget and Flexible Budget Only (**Theory & Numericals**)

**Unit – III**

**Ratio Analysis:**

Meaning, Importance and Limitations of Ratio Analysis, Classification of Ratio, Computation of Profitability Ratio, Financial Ratio with special reference to Current Ratio, Acid Test/ Liquid Ratio, Inventory Turnover Ratio Debtors and Creditors Turnover Ratio, Fixed Assets Turnover Ratio, Debt-Equity Ratio, Working Capital Ratio, , Earnings per Share Ratio. (**Theory & Numericals**)

**Unit – IV**

**Fund Flow Analysis:**

Meaning, Sources of fund, Uses of fund, Distinguish between fund flow statement and Balance Sheet. Preparation of Statement showing Changes in Working Capital, Profit from operation, Fund flow Statement (**Theory & Numericals**)

**Books Recommended –**

- S. N Maheshwari : Cost Accounting Theory and problems –Shri Mahavir Book Depot, New Delhi
- V.K. Saxena : Cost Accounting Text Book- Sultan Chand and Sons New Delhi
- M.C. Shukls – T.S. – Grewal, M.P. Gupta – Cost Accounting – S. Chand , New Delhi
- R. S. N. Pallai, V Bhagavathi – Cost Accounting – S. Chand, New Delhi
- S. M. Shukla :- Cost Accounts (Hindi)
- Nigam R. S. – Advanced Cost Accounting , S. Chand & Company
- Jain S. P. – Advanced Cost Accounting – Kalyani Publication
- Gawada, J Made – Advanced Cost Accounting – Himalaya Publication House
- Pillai R. S. N. – Management Accounting – S. Chand & Co. Pvt. Ltd.
- Agrawal N. K. – Managements Accounting – Galgotia Publication
- Singh, Jagwant - Managements Accountings – KitabMahal
- Rathnam P. V. - Managements Accountings – KitabMahal
- Sharma R. K. - Managements Accountings – Kalyani Publication

**Question Paper Pattern**  
**Semester –VI**

## **6T2-Management Accounting**

**Time :- 3 hours**

**Marks-80**

- N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q. No. 1 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
- OR**
- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
- OR**
- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
- OR**
- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 4 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |
- OR**
- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

- Q. No. 5 -**
- |          |    |                  |
|----------|----|------------------|
| Unit- I  | a) | Problem 04 Marks |
| Unit –II | b) | Problem 04 Marks |
| Unit-III | c) | Problem 04Marks  |
| Unit-IV  | d) | Problem 04 Marks |

**Semester VI**  
**6T3-Advanced Statistics**

**Unit I**

Correlation- Types of correlation, Karl Pearson's coefficient of correlation in Bivariate frequency table, probable error, interpretation of 'r', Rank Correlation Method.

**Unit II**

Regression Analysis- Lines of Regression/Regressions Equation, Coefficient of regression for a Bivariate frequency table.

**Unit III**

Index Number- Uses of I N, Types of I No. Methods of Index Number.Test of consistency of Index No.- unit test Time Reversed Test, Factor cost of living Index No.

**Unit IV**

. Time series Analysis-Introduction components of a Time series- a) Trend b)Short Term Variation c)Irregular variation d)Measurement of Trend- (Simple Problems)  
Graphic Methods ,Methods of Seminar,Methods of Curve by the square  
Methods of Movig Average

## **6T4- Indian Economy – II**

### **Unit I: Indian Agriculture**

Nature, Role of Agriculture in Indian Economy. Cropping Pattern in India and its Determining Factors. Land Reforms. Cooperative Farming & Marketing. Green Revolution: Impact and Constraints. Cause & Remedies to Low Agricultural Production and Productivity. Agriculture Marketing-Problems & Remedies. Agricultural Labour - Problems & Remedies. Sources of Agriculture Finance. NABARD ( National Bank for Agriculture and Rural Development). Financial Inclusion. Agricultural Price Policy- Objectives and Constituents. Agricultural Subsidies in India. Crop & Live Stock Insurance -Problems and Remedies.

### **Unit II: Indian Industry**

Industrial Policy 1991. Small Scale and Cottage Industries- Role, Performance, Problems and Remedies. Public Sector Industries - Role, Performance, Problems and Remedies. Privatization of Public Sector Industries: Meaning, Methods of Privatization Policy in India. Arguments in favor and against privatization. Policy of Disinvestment. Industrial Sickness in India- Definition, Causes, Effects, Remedial Measures. Indian Trade Union Movement: Role, Functions, Strength and Weaknesses.

### **Unit III: Indian Service Sector**

Growth of Services Sector in India. Nature, Scope, Trends & Importance of Service Sector in Current Scenario. Share of Service Sector in India's Employment Generation. Contribution of Service Sector to India's GDP. Government's reforms in various Services. IT & ITES Sector-Trend, Role & Importance. Challenges and Opportunity in IT & ITES Sector. Banking & Insurance Sector- Importance of Banking and Insurance Industry in India's Service Sector, Challenges and Opportunities.

### **Unit IV: India's International Trade**

Foreign Trade -Concept and Meaning, Advantages, Disadvantages, Composition and Direction of India's Exports & Imports. Special Economic Zones- Concept, History, Benefits, Arguments against SEZS. Foreign Capital and Aid- Need, Role, Problems. India's External Debt. Multinational Corporations(MNCs)- Role, Importance, Advantages and Disadvantages. Impact of MNCs on Indian Economy. Liberalization, Privatization, Globalization(LPG)- Meaning, Role, Impact of LPG on Indian economy. World Trade Organization (WTO)- Objectives, Working and Functions, WTO & India.

### **Books Recommended:**

1. Indian Economy, Datt & Sundharam, S Chand.
2. The Indian Economy: Problems and Prospects, D .R.Gadgil.
3. Globalization And Indian Economy, R.Chaddha, Sumit Enterprises.
4. Indian Economy : Problems of Development and Planning, A.N.Agrawal, New Age International.
5. Indian Economy, Misra & Puri, Himalaya Publishing House Pvt. Ltd.
6. Government of India- Five Year Plans.
7. Government of India- Economy Survey.
8. Reserve Bank of India- Annual Reports on Currency and Finance.

**Question Paper Pattern  
6T4- Indian Economy – II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

OR

- (c) UNIT – I 16Marks

Q.2.

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT – I 16Marks

**Q.3.**

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT – I 16Marks

Q.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT - I 16Marks

Q.5.

- a) UNIT – I 04 Marks  
b) UNIT – II 04 Marks  
c) UNIT – III 04Marks  
d) UNIT – IV 04 Marks

**Elective Group- II**  
**6T5.1- Human Resource Management**

**UNIT-I**

**Introduction**

Human Resource Management, Definition, Objectives, Functions, Scope, Importance.  
Quality of a ideal Human Resource Managers

**UNIT-II**

**Recruitment selection and training**

**Recruitment:** - meaning, source; selection process and importance, placement and induction, career planning v/s manpower planning

**Training:** - meaning, method, training and development,

**UNIT-V**

**Labour welfare and Collective bargaining**

**Labour welfare:** - Safety and Health Measures Workers Participation in Management - Objectives for Wage Incentive - Fringe Benefits

**Collective Bargaining** - Features - Pre-requisite of Collective Bargaining - Agreement at different levels, Successful Participation of workers in Management.

**UNIT-IV**

**Human resource planning and accounting**

Human Resource Planning - Human Capital Investment - Expenditure vs. Productivity  
Meaning and Definition of Human Resource Accounting, Importance; Human Resource Accounting - Measurement of Human Value addition into Money Value

**Suggested Books:**

1. Human Resource Management - Dr. C.B. Gupta - Sultan and Sons.
2. Personnel & Human Resource Management - P. Subba Rao - Himalaya Publishing House.
3. Human Resource and Personnel Management - K. Aswathappa - Tata Mc Graw Hill Publishing Co. Ltd.

Human Resource Management, Dr. Arvind shende, Dr. Dilip Vairagade, Dr. Devendra. Mohture, Anuradha Prakashan, Nagpur.

4. Personnel Management & Human Resources - C.S. Venkata Rathnam & B.K. Srivastava. TMPL.

5. ekuoh; lallk/ku O;oLFkkiu & MkW-es?kk ukusVdj&lkbZukFk izdk"ku]ukxijqj

## **Question Paper Pattern 6T5.1- Human Resource Management**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours Marks-80

Q.1.

- (a) UNIT – I 08 Marks  
(b) UNIT – I 08 Marks

QR

- (c) UNIT – I 16Marks

Q.2.

- (a) UNIT – II 08 Marks  
(b) UNIT – II 08 Marks

OR

- (c) UNIT = I 16Marks

Q.3.

- (a) UNIT – III 08 Marks  
(b) UNIT – III 08 Marks

OR

- (c) UNIT - I 16Marks

0.4.

- (a) UNIT – IV 08 Marks  
(b) UNIT – IV 08 Marks

OR

- (c) UNIT = J 16Marks

0.5.

- a) UNIT – I 04 Marks  
b) UNIT – II 04 Marks  
c) UNIT – III 04Marks  
d) UNIT – IV 04 Marks

**Semester-VI**  
**6T5.2-Indirect Taxes**

**UNIT-I: Central Excise Laws**

Basis of chargeability of duties of central excise-goods, manufacture, classification and valuation of excisable goods; Registration and routine procedures in central excise, payment of duties of excise and removal of goods, Cenvat on inputs and on capital goods, excise and small scale industries.

**UNIT-II: Customs Laws**

Nature of customs duty, types of customs duty, classification for customs and rate of duty, valuation for customs duty, procedures for import and export.

**UNIT-III: Service Tax**

Charging of service tax, Services on which tax is payable, registration, records to be maintained by the assessee, returns and payment of tax, Provisions of law and procedures.

**UNIT-IV: State Sales Tax Law**

Basic Concepts, value added tax on sale or purchase of goods, levy or incidence of tax, goods liable to tax, rate of tax and exemptions, dealer and registration method of computing tax liability, credit, set-off and refunds, documents, records and maintenance of accounts, returns and assessments (the state sales tax law applicable will be the Bombay Sales Tax Act or the new sales tax enactment in its place).

**Central Sales Tax Act, 1956**

Definitions, Concepts of inter-state sales, Sale outside the state, sale in the course of export and import, Liability to tax and rate of tax, Registration of dealers.

**Reference Books**

Dr. H. C. Mehrotra and S. P. Goyal : Direct and Indirect Taxes ( Sahitya Bhawan, Agra)

V. S. Datey : Indirect Taxes Law and Practice ( Taxman, New Dehli)

V. Balchandran : Indirect Taxes ( Sultan Chand & Sons, Dehli)

C. A. Farooq Haque : Indirect Tax (Sheth Publishers Ltd., Mumbai)

# **Question Paper Pattern Semester -VI 6T5.2-Indirect Tax**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Time :- 3 hours** **Marks-80**

## **Q. No. 1 – Unit I**

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

Q. No. 2 – Unit II

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

### O. No. 3 – Unit III

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

O. No. 4 – Unit I

a) Theory 08 Marks  
 b) Problem 08 Marks

**OR**

a) Theory 08 Marks  
 b) Problem 08 Marks

Q. No. 5

- a) Unit- I Problem 04 Marks
- b) Unit -II Problem 04 Marks
- c) Unit-III Problem 04Marks
- d) Unit-IV Problem 04 Marks

## **Foundation Group II**

### **6T6.1- Business Finance – II**

#### **Unit – I**

**Financial Market in India** : significance of Financial Markets, Objectives and functions of the financial System, Types of Financial Markets,

**Money Market**- Meaning , features, functions, Composition

**Capital Market**- Meaning ,Composition & Structure of Capital Market Market segment. Products and Participant's in Primary market. Regulatory authorities governing financial and capital market.

**SEBI** - ( Security Exchange Board of India)Organisational structure of SEBI, Role and Functions of Stock Exchange and SEBI, Regulation issued by SEBI, Achievements of SEBI.(**Theory**)

**Unit – II Primary Market:** Meaning, Functions, Scope & Significance of PrimaryMarket,Developments in the Primary Market, Primary Market Intermediaries.

**Secondary Market:** Meaning , Difference between Primary Market & Secondary Market, Products dealt in the Secondary Market, Stock Exchange, Secondary Market Intermediaries. Listing Procedure. NSE and BSE. (**Theory** )

**Capital Budgeting** - Meaning, Nature and Importance of Capital Budgeting, Investment Appraisal Techniques, Pay Back Period Method, Rate of return method, Net Present Value Method, Discounted Cash Flow Method, (**Theory & Numericals**)

**Unit – III NBFC's-** Meaning, Formation of NBFC's , Types and Regulation of NBFC's,

**Credit Rating:** Meaning /Concept, Scope & Significance of credit rating, Benefits to Investors. Credit Rating Agency in India CRISIL, ICRA, CARE. (**Theory**)

**Dividend Policies**- Essentials of Sound Dividend Policy, Determination of Dividend Policy and its types ,Surplus and Reserve Policy, (**Theory & Numericals**)

**Unit -I V** - Cash Flow for Investment Analysis- Meaning, Benefits and Uses of Cash Flow Statement. Significance ,Limitations of Cash Flow Statement.

Format of Cash Flow Statement as per AS-3. (**Theory & Numericals**)

#### **Books Recommended:**

Financial Management Problems &Solutions :- Kishore Ravi M (Taxman Allied Service (p) Ltd.)

Fundamentals of Financial Management :- Chandra Prasanna (Tata McGraw Hill Publishing Co. Ltd.)

Management Accounting & Financial Management :-Arora M N (Himalaya Publishing House Pvt. Ltd.)

Business Finance : Dr.Jain V. K. ,And Sharma D.G. (Shethe publishers PVT. LTD.

**Question Paper Pattern  
Foundation Group II**

**6T6.1- Business Finance – II**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

Time :- 3 hours

Marks-80

**Q. No. 1 – Unit I**

- |           |          |
|-----------|----------|
| a) Theory | 08 Marks |
| b) Theory | 08 Marks |

**OR**

- |           |         |
|-----------|---------|
| c) Theory | 08Marks |
| c) Theory | 08Marks |

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 4 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

- |                   |                 |    |                  |
|-------------------|-----------------|----|------------------|
| <b>Q. No. 5 -</b> | <b>Unit- I</b>  | a) | Theory 04 Marks  |
|                   | <b>Unit –II</b> | b) | Problem 04 Marks |
|                   | <b>Unit-III</b> | c) | Problem 04Marks  |
|                   | <b>Unit-IV</b>  | d) | Problem 04 Marks |

## **Foundation Group II**

### **6T6.2- Industrial Law**

**Level of Knowledge:** Basic Conceptual Knowledge

**Objective:** To make students aware about Various Laws relating to Industries [with amendments up to June 2016 in respective Acts]

#### **Unit -I**

- (i) Indian Factories Act-1948: Important Definitions, Object & Scope, Provision regarding workers Health, Provision regarding Safety of Workers,
- (ii) Rules regarding Labour Welfare, Provision regarding Adults, women workers and Young Workers.
- (iii) Industrial Dispute Act-1947: Concept, Objectives and Significance, Authorities for settlement of Industrial Dispute-their work procedure & Powers,
- (iv) Concept and Distinction between Strike, Lockouts, Layoff & Retrenchments

#### **Unit-II**

- (i) Law relating to Wages: Object, Scope and Application of Minimum Wages Act-1948 and Payment of Wages Act 1936
- (ii) Law Relating to Bonus and Gratuity: Object, Scope and Application of Payment of Bonus Act 1965 and Payment of Gratuity Act 1972
- (iii) Law Relating to Employee State Insurance and Provident Fund: Object, Scope and Application of The Employee's State Insurance Act 1948 and Employee's Provident Fund & Miscellaneous Provision Act 1952
- (iv) Law Relating to Workmen Compensation and Maternity Benefits: Object, Scope and Application of Workmen Compensation Act-1923 and Maternity Benefits Act 1961

#### **Unit-III**

- (i) Child Labour (Prohibition and Regulation) Act 1986: Object Scope and Application
- (ii) Trade Union Act 1926: Object Scope and Application. Registration of Trade Union.
- (iii) International Labour Organization (ILO): Background and Importance of ILO and its impact on Indian Labor Laws
- (iv) Contract Labour Act: Object Scope and Application

#### **Unit-IV**

- (i) Meaning and Nature of Industrial Estate, Software Technology Park, SEZ, Co-operative Industrial Estate
- (ii) Intellectual Property Rights Law In India: Object and Scope of Patent, Copyrights, Trademark and Industrial Design
- (III) Procedure for registration of Trademarks and Copyrights.
- (IV) Environment Protection Act 1986: Objective and Scope, Location of Industries, Processes & Operation, offense and Penalties

#### **Reference Books:**

- Business Law Including Company Law, Gulshan, S S and Kapoor, G K: , New Age International (P) Ltd., Publishers
- Business Law, M.C. Kuchhal and Vivek Kuchhal , Vikas Publishing House, New Delhi
- Business and Corporate Laws, V.S. Datey, Taxman, New Delhi
- Mercantile Law, N.D. Kapoor, Sultan Chand & Sons, Educational Publishers, New Delhi.
- Business & Industrial Law , Dr. Arvind shende, Dr. Mohture, Dr. Dixit, Anuradha Prakashan Nagpur.

**Question Paper Pattern  
Foundation Group II  
6T6.2- Industrial Law**

**TIME:- 3 Hours]**      **[Full Marks:- 80**

**Q.1.**

- |     |          |          |
|-----|----------|----------|
| (a) | UNIT – I | 08 Marks |
| (b) | UNIT – I | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.2.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – II | 08 Marks |
| (b) | UNIT – II | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.3.**

- |     |            |          |
|-----|------------|----------|
| (a) | UNIT – III | 08 Marks |
| (b) | UNIT – III | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.4.**

- |     |           |          |
|-----|-----------|----------|
| (a) | UNIT – IV | 08 Marks |
| (b) | UNIT – IV | 08 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 16Marks |
|-----|----------|---------|

**Q.5.**

- |    |            |          |
|----|------------|----------|
| a) | UNIT – I   | 04 Marks |
| b) | UNIT – II  | 04 Marks |
| c) | UNIT – III | 04Marks  |
| d) | UNIT – IV  | 04 Marks |

**Allocation of marks for all the subjects**

<b>1a</b>	<b>Two periodical class tests</b>	<b>08marks</b>
<b>1b</b>	<b>An assignment/Viva/Group Discussion/Seminar based on curriculum to be assessed by the teacher concerned</b>	<b>08marks</b>
<b>1c</b>	<b>Overall conduct as a responsible learner</b>	<b>04marks</b>
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20 marks</b>
<b>2</b>	<b>Unit- I            20 marks</b> <b>Unit-II          20 marks</b> <b>Unit-III       20 marks</b> <b>Unit-IV       20 marks</b>  <b>Semester wise End Examination</b>  <b>marks</b>	     <b>80 marks</b>
	<b>Total marks per subject</b>	<b>100 marks</b>

**Vocational Course : Semester VI**  
**6T7- Entrepreneurial Development-I**

**Full Marks: 80**

**Time: 3 Hours**

**Internal Assessment: 20**

**Unit-I**

Government policy and schemes for setting up agricultural & rural industries, financing schemes for khadi and village industries, small scale industries. WTO and small & village industries.

**Unit-II**

Incentives and Subsidies – Meaning of Incentives and Subsidies, Need and problems of Incentives and Subsidies, Incentives for development of backward areas.

**Unit-III**

Entrepreneurial systems – Search for a business ideas, sources of ideas, idea processing and selection, role of industrial fairs.

**Unit-IV**

Concept of cyber space and internet – importance of cyber marketing, internet usage applications, Technology as driver for entrepreneurship.

**Books Recommended:**

- ✓ Dynamics of entrepreneurial development and management, Vasant Desai
- ✓ Entrepreneurial development, Vasant Desai.
- ✓ Entrepreneurial Development, S. S. Khanka, S. Chand Publishers.
- ✓ M.V. Deshpande : Entrepreneurship of small scale industries.
- ✓ Entrepreneurship Development and Business Communication, Vasant Desai and Urmila Rai, Himalaya Publishing House.
- ✓ Entrepreneurship Development in India, Dr. C. B. Gupta and Dr. N.P. Srinivasan, Sultan Chand & Sons.
- ✓ Entrepreneurial Development, Vasant Desai, Appannaiah, Reddy and Gopal Krishna, Himalaya Publishing House.

**Group – I: Computer Applications**  
**6T8.1 : Introduction to Visual Basic (IVB)**

Time : 3 Hours

Theory : 80

Marks

Practical : 20 Marks

---

**Unit –I**

Introduction to Visual Basic, Event driven programming, Programming constructs - Variables, Types of Variables, Data Types, Scope of Variables, Constants, system defined functions, Operators (Precedence and Associatively), Creating User Interface, VB Controls (Label, Text box, Command button, Frame, Check box, Option button,

**Unit –II**

List box, Combo box, Timer, Drive list box, Directory list box, File list box, Horizontal and vertical scroll bars, Image, Picture box, Shape, Line, Data, OLE container), Microsoft windows common controls (Tab Strip, Tool bar, Status Bar, Progress Bar, Tree View, List View, Image List, Slider, Date Picker, Month View)

**Unit –III**

Working with Procedure, Function and Modules (Form, Class, Standard Modules)  
Scope of Procedures, Calling Procedures, Calling Functions, Passing Arguments,  
Control Structures : If-Then, If-Then-Else, Select Case, Loops Structures : Do-While, While - Wend, For-Next, For-Each, With-End With.

**Unit – IV**

Arrays : Declaring an Array, Types of Array (Fixed arrays, Single-dimensional arrays, Multidimensional arrays, Dynamic arrays), Control Array.

Menus : Creating Menus, Adding Menu Items, Adding Code for the Menus, Modifying menus at run time, Creating Pop-Up Menus.

Database connectivity through data access object. Types of recordset , setting properties and record editing & updating , searching records.

**Practical : Practical will be based on Visual Basic**

**BOOKS RECOMMENDED :**

1. PAUL SHERIFF TEACHES VB-6 BY SHERIFF (PHI)
2. VISUAL BASIC: PETER WRITES
3. LEARN VB 6 BY HALVARSON ( MICROSOFT/PHI)
4. VB PROGRAMMING FOR A ABSOLUTE BEGINNER – MICHAEL VINE (PHI)
5. VISUAL BASIC: SUPPER BIBLE TECH MEDIA
6. VISUAL BASIC: STEPHEN SOLOSKY (PHI)
7. COMPLETE REFERENCE VISUAL BASIC – TATA MCGROW HILL

8. FRONT END DEVELOPMENT USING VISUAL BASIC BY DR.  
S.B.KISHOR(DASGANU)

9.

**Group –: Principles & Practice of Insurance**  
**6T8.2 -Insurance and Acturial Science – Paper II (Semester – VI)**

Time : 3 Hours]

Theory : 80 Marks  
Internal Assessment: 20

Marks

---

**Level of knowledge - Basic knowledge.**

**Objective** - To create awareness regarding basic knowledge about Insurance and Acturial Science

**Unit – I--** Privatisation of Insurance Business in India, Contribution of Private sector, Liberalisation required for privatization, Effect of globalization on Insurance sector.

- Methods of payment of amount insured, premium as consideration for insurance benefits, , nature of installment premiums.

**Unit – II**

- General Insurance Corporation(GIC) of India : Background ,main provisions of General Insurance Act 1972,Establishment and objectives, Functions of subsidiary companies
- Banc assurance - Meaning, nature and scope
- Insurance Innovation – Innovation ,use of Technology by Insurance Industry\

**Unit – III**

- Policy Value – Meaning ,Types of Policy value, equation, Alteranation of policy contracts
- Special reserves : Meaning, types of services maintained in Insurance
- Valuation of liability – Meaning and Importance

**Unit – IV**

- Probability – Meaning and nature, its use in insurance business
- Surrender of policy , surrender value , Lapse of policy ,Reserve for Revival of Lapse Policy

**Recommended books:**

- Fundamental Of Insurance, R.K. Gupta, Himalaya Publishing House.
- Principles & Practice of Insurance, Dr. P. Periasamy, Himalaya Publishing House
- Insurance Principle and Practice,M.M. Mishra and Dr. S.B. Mishra,S. Chand Publication

Principles of Insurance, Dr. Shakti Pratchbal and Dr. N.P. Dwivedi, Himalaya Publishing House

बीमा के सिधांत एवं व्यवहार – भगवती प्रकाळा अर्मा, राजीव जैन, पुरुशोत्तम दयाल— हिमालया पब्लिशिंग हाउस

## VI - Semester

### **6T8.3-Advertising, Sales Promotion and Sales Management – III**

**Full Marks : 80**

**Time : 3 Hours**

**Internal Assessment : 20**

#### **Unit-I**

- Sales Territories - Concept of Sales territory - Procedures for setting up Sales territories - Deciding assignment of sales personnel to territories.

#### **Unit-II**

Sales Budget and Sales Quota - Sales budget - Purpose, form and content of sales budgets, Sales Quota - Concept, Types of quota, Quota setting procedures, Administering the quota system.

#### **Unit-III**

- Consumer Promotions and Trade Promotions – Their purpose and types How to plan and evaluate a successful promotion, The relationship between advertising and promotions. Introduction to Global Marketing, Advertising and sales promotion.

#### **Unit-IV**

Laws for protection against Malpractices: Introduction, civil and penal codes Applicable to Advertising; laws relating to Intellectual Property Rights. Consumer Protection Act 1986. Monopolies and restrictive trade practices Act 1969. Regulation Governing Broadcast Media Advertising.

#### **Recommended books:**

Advertising Management – Concepts and Cases, Manendra Mohan (Tata McGraw Hill)

Sales Promotion and Advertising Management (6thEd.)Himalaya Publishing House

Advertising Excellence by Bovee, Thill, Dovel and Wood (McGraw Hill)

Advertising Management – Shelekar, Victor & Nirmala Prasad (Himalaya Publishing House)

Foundations of Advertising – Theory & Practice – S.A. Chunawala

Brand Positioning – Subroto Sengupta, Tata McGraw Hill

Cases in Marketing Management – M.L. Bhasin, Excell Books

Sales & Distribution Management (Units 12-16 for Sales Promotion) F.L. Lobo, Global Business Press

**SEMESTER VI**  
***QUESTION PAPER PATTERN FOR All Vocational Subjects***

**Computer Application, Insurance & Entrepreneurial Development &ASM**

**TIME:- 3 Hours]**

**[Full Marks:- 80]**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q.1.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.2.(a)**      UNIT – I

8Marks

- |     |          |         |
|-----|----------|---------|
| (b) | UNIT – I | 8 Marks |
|-----|----------|---------|

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.3.**

- |     |          |         |
|-----|----------|---------|
| (a) | UNIT – I | 8Marks  |
| (b) | UNIT – I | 8 Marks |

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.4(a)** UNIT – I

8Marks

- |     |          |         |
|-----|----------|---------|
| (b) | UNIT – I | 8 Marks |
|-----|----------|---------|

OR

- |     |          |         |
|-----|----------|---------|
| (c) | UNIT – I | 8 Marks |
| (d) | UNIT – I | 8 Marks |

**Q.5.** Answer in Brief

- |     |            |         |
|-----|------------|---------|
| (a) | UNIT – I   | 4 Marks |
| (b) | UNIT – II  | 4 Marks |
| (c) | UNIT – III | 4 Marks |
| (d) | UNIT – IV  | 4 Marks |



## **jk"V<sup>a</sup>lar rqdMksth egkjkt ukxiwj fo|kihB] ukxiwj**

^^ ¼lsav<sup>a</sup>y izksfOgUlsI 'kklu f'k{k.k foHkkxkph vf/klwpuk Øekad 513 fnukad 1 vkWxLV] 1923 }jkj LFkkfir o egkjk"V<sup>a</sup> fo|kihB vf/kfu;e] 1994 }jkj lapkfyr jkT; fo|kihB½\*\*  
¼fo|k foHkkx½

**N=irh f'kokth egkjkt iz'kkldh; ifjljl jfoUnzukFk V<sub>k</sub>xksj ekxZ] ukxiwj & 440 001-  
nwj/ouh Øekad% dk;kZy;% 0712&2532063 QWDI % 0712&2555701**

**Ø- jkrqeukfo@fo|k@16@1170  
03 IIVsacj] 2016**

**fnukad**

### **vf/klwpuk**

IoZ laca/khrkaP;k ekfgrhdjhrk lqfpr dj.;kr ;srs dh] okf.kT; fo|k'kk[ksvarxZr ;s.kkjs ch-dkWe- inoh vH;kldze I= **2016&2017** iklqu I= ijfrus ykxw dj.;kr ;srs vkgs- Inj vH;kldzekaP;k ifj{kk ;kstuk o vH;kldzehdsyk ek- dqyxq: egksn;kauh egkjk"V<sup>a</sup> fo|kihB vf/kfu;e 1994 P;k dye **14½** varxZr fo}r ifjÔn vkf.k O;oLFkkiu ifjÔnsP;k orhus fnukad **02@09@2016** jksth ekU;rk iznku dsysyh vkgs- rlsp ek-dqyx:aauh Inj vH;kldzekyk I= ijrhuis dk;kZUohr dj.;kdfjrk egkjk"V<sup>a</sup> fo|kihB vf/kfu;e **1994** P;k dye **14½** varxZr ch-dkWe- vH;kldzekps funsZ'k dzekad **59** fnukad **02@09@2016** jksth fuxZfer dsyk vkgs-

ch-dkWe- inoh vH;kldzekaps funsZ'k] ifj{kk o vH;kldzehdk jk"V~lar rqdMksth egkjkt ukxiwj fo|kihB] ukxiwj-[www.naguniversity.org](http://www.naguniversity.org) ww;k ladsrLFkGkoj miyC/k dj.;kr vkysys vkgs-

d`lk;k laca/khrkuh ukasn ?;koh

**ek-dqyxq:aP;k**

**vkns'kkUo;s**

**Lok{kjhl@&  
¼Jh- iqj.kpnz esJke½  
dqylfpo  
jk"V<sup>a</sup>lar rqdMksth  
egkjkt  
ukxiwj fo|kihB**

**izfrfyih ekfgrh o iq<hy dk;ZokghIkBh vxzsfÔr:**

- 1-layfXur egkfo|ky;kaps IoZ izkp;Z@lapkyd@foHkkx izeq[k
  - 2- IoZ lHkkln] fo'ksÔ dk;Z lferh]
  - 3--ek- leUo;d] okf.kT; fo|kk'kk[kk]
  - 4- ek-ijh{kk fu;a=d]
  - 5 midqylfpo ¼iqoZ ifj{kk] iqokZRrj
  - 6-Lkgk;d dqylfpo ¼lk- lkjh{kk @ lk-
  - 7-Lkgk;d dqylfpo ¼xksiuh;½
  - 8- Lkgk;d dqylfpo ¼O;ko;k;hd
  - 9-vf/k{kd ¼v/;kns'k foHkkx½
  - 10-vf/k{kd ¼fudky foHkkx½
  - 11- izHkkjh vf/kdkjh ¼izdk'ku
- 
- ifj{kk] e-fo-½  
ifj{kk o pkSd'kh½  
jk"Clar rqdMksth egkjkt ukxiwj  
ijh{kk½  
foHkkx½

12-ek-dqyxq:aps Loh; lgk;d]  
13-ek- dqylfpokaps Loh; lgk;d]  
14-Jherh fouk izdk'ks] ekfgrk'kkL=

**Lok{kjhl@&  
¼MkW- vfuy  
fgjs[ku½  
midqylfpo ¼fo|k½  
jk"Valar rqdMksth  
egkjkt  
ukxiwj fo|kihB-**

***Proposed New syllabus For B. Com  
From the Academic session 2020-21  
B.Com. – First Year Semester-I  
1T1: Financial Accounting-I***

**Unit – I Financial Accounting**

Meaning, objectives and principles of Accounting, Accounting concepts & Conventions, Accounting Standards- AS 1 to AS 10. Final accounts of Sole Traders.  
(Theory & Numerical)

**Unit – II Branch Accounting ( Excluding Foreign Branch)**

Meaning of Branch, Objective of Branch Accounting, Maintenance of Accounting Records, Transactions relating to Branch, Accounting procedure of Branch.  
(Theory & Numerical)

**Unit – III Final Accounts of Co - Operative Societies: ( As per Maharashtra Co-Operative Societies Act 1960)-**

Introduction, Types of Co-operative societies Preparation of Trading & Profit and Loss A/c and Balance Sheet. (Theory & Numerical)

**Unit – IV-Joint Venture Accounts**

Meaning, Distinction between Joint venture and Partnership, Methods of joint venture accounting. (Theory & Numerical on Centralized & Decentralized Method)

**The Financial year ends on 31<sup>st</sup> March.**

**Reference Books :**

1. S. N. Maheshwar :- Financial Accounting – Vikas Publishing House, New Delhi
2. Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
3. Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House
4. Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
5. Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
6. Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata)
7. R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
8. M. A. Arulnandam :- Advance Accounting – Himalay Publication
9. Dr. Vijay Bagde, Dr. Pramod Fating, Dr. Prashant Gulhane: Financial Accounting-I;  
Sir Sahitya Kendra, Nagpur.
10. Prof. PradeepWath, Dr. R. D. Mehta, Dr. DilipGotmare :- Financial Accounting–Payal  
Prakashan

**Question Paper Pattern**  
**B.Com. – First Year Semester-I**  
**1T1: Financial Accounting-I**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q. No. 1 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 4 – Unit IV**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

- Q. No. 5 a) Unit- I Problem                    04 Marks  
                  b) Unit –II Problem                04 Marks  
                  c) Unit-III Problem                04Marks  
                  d) Unit-IV Problem                04 Marks

***From the Academic session 2019--20***

**Third Year Semester-VI**

**6T3-Advanced Statistics**

### **Unit I**

**Correlation-** Types of correlation, Karl Pearson's coefficient of correlation in Bivariate frequency table, probable error, interpretation of 'r', Rank Correlation Method.

### **Unit II**

**Regression Analysis-** Lines of Regression/Regressions Equation, Coefficient of regression for a Bivariate frequency table.

### **Unit III**

**Index Number-** Uses of Index Number & its, Types and Important.

**Unweighted Index Number** (Simple Aggregative, Simple Average of Price Relative)

**Weighted Index Number** (Weighted Aggregative I. N, Laspeyre's, Paasche, Dorbish & Bowley's, Fisher's Ideal, and Marshall & Edgeworth Method.) Weighted Average of Price relatives

**Test on consistency of Index No.-** Time Reversal Test, Factor Reversal Test, Cost of living Index No.

### **Unit IV**

**Time series Analysis-Introduction components of a Time series-**

a) Trend b) Short Term Variation c) Irregular variation d) Measurement of Trend-  
(Simple Problems) Graphic Methods ,Methods of Seminar, Methods of Curve by the square Methods of Moving Average

### **Books Recommended:**

1. Ajay Goel, Alka Goal: Mathematics & Statistics (Taxmann)
2. Elhance D.N : Fundamentals of Statistics
3. Asthana B.N. Applied Statistics in India
4. Gupta S.P: Statistical Method
5. Gupta S.G. & Kapoor V.K.: Fundamentals of Applied Statistics
6. Dr. P. Fating, Dr. V. Bagde, M. Gulhane: "Advanced Statistics" – Sir Sahitya Kendra.

**Question Paper Pattern  
Third Year Semester-VI  
6T3-Advanced Statistics**

N.B. – 1) All questions are compulsory.  
2) All questions carry equal marks.

**Q. No. 1 – Unit I**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |         |
|------------|---------|
| c) Problem | 16Marks |
|------------|---------|

**Q. No. 2 – Unit II**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 3 – Unit III**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

**Q. No. 4 – Unit IV**

- |            |          |
|------------|----------|
| a) Theory  | 08 Marks |
| b) Problem | 08 Marks |

**OR**

- |            |          |
|------------|----------|
| c) Problem | 16 Marks |
|------------|----------|

- Q. No. 5 a) Unit- I Problem                    04 Marks  
b) Unit –II Problem                    04 Marks  
c) Unit-III Problem                    04Marks  
d) Unit-IV Problem                    04 Marks



## **RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**

**Directon No. 23 of 2017**

### **DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF Bachelor of Business Administration (BBA) (CREDIT BASED SEMESTER PATTERN) (FACULTY OFCOMMERCE AND MANAGEMENT)**

(Issued by the Vice-Chancellor under section 12(8) of the Maharashtra Public Universities. Act, 2016)(Mah. Act No. VI of 2017)

**WHEREAS**, the Maharashtra Public Universities Act, 2016 ( No. VI of 2017) ( hereinafter Act) has come into force with effect from 1<sup>st</sup> March, 2017;

**AND**

**WHEREAS**,the Faculty of Commerceand Managementin its meeting held on 14.3.2016 have decided to restructure the syllabus for the award of the degree of Bachelor of Business Administratoin (BBA) Examination commensurate with the curricula existing in the various Universities in India and with a view to include the latest trends in the commerce stream as well as to design it to suit to the needs of the industries and corporate houses as provided under Section 38(a) of the Act;

**AND**

**WHEREAS**,all the Board of Studies in Faculty of Commerce and Management in its meeting held on 5.4.2016 restructured the existing syllabi and recommended the new scheme of examination;

**AND**

**WHEREAS**,the recommendations made by the all four Board of studies under Faculty of CommerceandManagementwere approved by the Academic Council, in its meeting held on 8.6.2016;

**AND**

**WHEREAS**,no ordinance is in existance prescribing THE EXAMINATION LEADING TO THE DEGREE OF Bachelor of Business Administration (BBA) (CREDIT BASED SEMESTER PATTERN);

**AND**

**WHEREAS**,the Special Task Committeein its meeting on 23-11-2016 decidedto prepare a draft of new direction & syllabus of BBA (CBS );

**AND**

**WHEREAS**, the Special Task Committee in its meeting on 04-01-2016 considered and approved the draft of new direction and syllabus of BBA (CBS) submitted by the sub-committee & recommended it to the Hon'ble Vice-Chancellor for his approval;

AND

WHEREAS, Direction No. 1 of 2017 entitled 'Examination leading to the Degree of Bachelor of Business Administration (BBA) (CREDIT BASED SEMESTER PATTERN) in the Faculty of Commerce & Management, was issued by the Vice-Chancellor;

AND

WHEREAS, certain difficulties regarding implementation of the absorption scheme under the Direction No. 1 of 2017, were encountered by the colleges and the University administration, necessitating clarification and suitable modifications in the said scheme;

AND

WHEREAS, in the meeting of the task force in the Faculty of Commerce and Management, held on 3.8.2017 certain decisions were taken which are required to be incorporated in the Direction No. 1 of 2017;

AND

**WHEREAS**, the matter involved is required to be implemented urgently for the purpose of prescribing examinations leading to the degree of Bachelor of Business Administration (BBA) (CBS) in the Faculty of Commerce and Management;

AND

**WHEREAS**, the preparation of Ordinance to regulate the matter relating to the examinations leading to the degree of Bachelor of Business Administration (BBA) (CBS) is time consuming process;

Now, therefore, I, Dr. Siddharthvinayak P. Kane, Vice-Chancellor, Rastrasant Tukdoji Maharaj Nagpur University, Nagpur in exercise of the powers vested in me under Section 12(8) of the Maharashtra Public Universities Act, 2016 ( VI of 2017) do hereby issue the following direction:-

1. This Direction may be called '**Examination leading to the Degree of Bachelor of Business Administration (BBA) (CREDIT BASED SEMESTER PATTERN) in the Faculty of Commerce & Management, Direction, 2017**',--Number-----  
-----
2. This Direction shall come into force with effect from the date of its issuance.
3. There shall be Six Examinations leading to the degree of Bachelor of Business Administration (BBA) namely :
  - (1) The **Bachelor of Business Adminstration (BBA)** - 1<sup>st</sup> Semester Examination,
  - (2) The **Bachelor of Business Adminstration (BBA)** - 2<sup>nd</sup> Semester Examination,
  - (3) The **Bachelor of Business Adminstration (BBA)** - 3<sup>rd</sup> Semester Examination,

- (4) The **Bachelor of Business Administration (BBA)** – 4<sup>th</sup> Semester Examination,  
(5) The **Bachelor of Business Administration (BBA)** – 5<sup>th</sup> Semester Examination and  
(6) The **Bachelor of Business Administration (BBA)** – 6<sup>th</sup> Semester Examination.
4. The duration of the Degree Course under this shall be of three academic years divided into six semesters with the BBA 1<sup>st</sup> and 2<sup>nd</sup> Semester Examinations during the first academic year, the BBA 3<sup>rd</sup> and 4<sup>th</sup> Semester Examinations during the second year and the BBA 5<sup>th</sup> and 6<sup>th</sup> Semester Examinations during the third year.
5. The examinations specified in paragraph 3 above shall be held twice a year at such places and on such dates as may be fixed by the University.
6. The details of eligibility for **BBA Sem I** examination:
- (A) For the **BBA 1<sup>st</sup> Semester**, Examinee shall have Passed the 12<sup>th</sup> Standard Examination of the Maharashtra State Board of Secondary and Higher Secondary Education, with English at Higher or Lower level and any Modern Indian Language at higher or lower level with any combination of optional subjects;
- OR**
- XII Standard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only; OR any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed Minimum Competition vocation course (MCVC).
- OR**
- Any other Equivalent Examination of any State in (10+2) pattern with any combination of subjects.**
7. A collegiate candidate shall have pursued a regular course of study for not less than 90 days of the academic session before being examined for any semester examination of **BBA** in any recognized institution and or college affiliated to Rashtrasant Tukdoji Maharaj Nagpur University where the course is conducted.
8. An applicant for the Bachelor of Business Administration 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> or 6<sup>th</sup> Semester Examination shall have passed an examination specified in Clauses ( A ), ( B ), ( C ), (D), (E) and (F) of paragraph 6 respectively, not less than one academic year prior to his admission to the respective examination.
9. Without prejudice to the other provisions of Ordinance No. 6 relating to the Examinations in General, the provisions of Paragraphs 5, 7, 8, 10, 26 and 31 of the said Ordinance shall apply to every collegiate candidate.
10. The fees for the examination shall be as prescribed by the University from time to time and whenever any change is made in the fees prescribed for any particular examination that shall be notified through a notification for information of the examinees concerned.
11. With the issuance of this Direction, The Direction No 15 of 2014 , 47 of 2016 and 1 of 2017 shall stand repealed.

12. Teaching and Examination Scheme for examinees of Bachelor of Business Administration 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> Semester Examinations shall be as mentioned below:

**Teaching and Examination Scheme  
Bachelor of Business Administration (BBA)  
Three Year Degree Course (Semester Pattern)  
With effect from 2016-17**

(A)

**BBA 1<sup>st</sup> Semester Examination**

Sr. No.	Subjects	Course Code	Teaching Scheme	Examination Scheme				Total Marks	Credits
				Total Periods per Week	Max. Marks(TH)	Max. Marks (IM)	Total Marks		
1	English	1T1	5	80	20	100	40	100	4
2	Fundamentals of Business Management	1T2	5	80	20	100	40	100	4
3	Computer Applications for Business	1T3	5	80	20	100	40	100	4
4	Cost Accounting	1T4	5	80	20	100	40	100	4
<b>Total</b>			<b>20</b>	<b>320</b>	<b>80</b>	<b>400</b>	<b>160</b>	<b>400</b>	<b>16</b>

- Note : 1. Duration of each theory class should be minimum 48 minutes.  
 2. TH = Theory, IM = Internal Marks.  
 3. Minimum marks for passing the subject will be 40.  
 4. There would be combined passing for theory and internal assessment taken together.  
 5. One credit is equivalent to one hour of Teaching, that is to say,  
     For each subject, 48 Minutes \* 5 = 240 Minutes = 4 Hours i.e. 4 Credits.  
 6. Each semester will consist of 15 to 18 weeks of Academic Work equivalent to 90 actual teaching days.

(B)

**BBA 2<sup>nd</sup> Semester Examination**

Sr. No.	Subjects	Course Code	Teaching Scheme	Examination Scheme				Total Marks	Credits	
				Total Periods per Week	Max. Marks(TH)	Max. Marks (IM)	Total Marks	Min. Passing Marks		
1	Principles of Marketing Management	2T1		5	80	20	100	40	100	4
2	Financial & Management Accounting	2T2		5	80	20	100	40	100	4
3	Micro-Economic Fundamentals	2T3		5	80	20	100	40	100	4
4	English	2T4		5	80	20	100	40	100	4
<b>Total</b>				<b>20</b>	<b>320</b>	<b>80</b>	<b>400</b>	<b>160</b>	<b>400</b>	<b>16</b>

- Note :
1. Duration of each theory class should be minimum 48 minutes.
  2. TH = Theory, IM = Internal Marks.
  3. Minimum marks for passing the subject will be 40.
  4. There would be combined passing for theory and internal assessment taken together.
  5. One credit is equivalent to one hour of Teaching, that is to say,  
For each subject, 48 Minutes \* 5 = 240 Minutes = 4 Hours i.e. 4 Credits.
  6. Each semester will consist of 15 to 18 weeks of Academic Work equivalent to 90 actual teaching days.

(C)

**BBA 3<sup>rd</sup> Semester Examination**

Sr. No.	Subjects	Course Code	Teaching Scheme	Examination Scheme				Total Marks	Credits	
				Total Periods per Week	Max. Marks(TH)	Max. Marks (IM)	Total Marks	Min. Passing Marks		
1	Principles of Financial Management	3T1		5	80	20	100	40	100	4
2	Basic Statistical Techniques	3T2		5	80	20	100	40	100	4
3	Evolution of Business & Commercial Geography	3T3		5	80	20	100	40	100	4
4	Environment Management	3T4		5	80	20	100	40	100	4
<b>Total</b>				<b>20</b>	<b>320</b>	<b>80</b>	<b>400</b>	<b>160</b>	<b>400</b>	<b>16</b>

- Note :
1. Duration of each theory class should be minimum 48 minutes.
  2. TH = Theory, IM = Internal Marks.
  3. Minimum marks for passing the subject will be 40.
  4. There would be combined passing for theory and internal assessment taken together.
  5. One credit is equivalent to one hour of Teaching, that is to say,  
For each subject, 48 Minutes \* 5 = 240 Minutes = 4 Hours i.e. 4 Credits.

6. Each semester will consist of 15 to 18 weeks of Academic Work equivalent to 90 actual teaching days.

(D)

**BBA 4<sup>th</sup> Semester Examination**

Sr. No.	Subjects	Course Code	Teaching Scheme	Examination Scheme			Total Marks	Credits
				Total Periods per Week	Max. Marks(TH)	Max. Marks (IM)	Total Marks	Min. Passing Marks
1	Principles of Human Resource Management	4T1		5	80	20	100	40
2	Money, Banking & Finance	4T2		5	80	20	100	40
3	Introduction to Sociology & Psychology	4T3		5	80	20	100	40
4	Business Legislations	4T4		5	80	20	100	40
<b>Total</b>				<b>20</b>	<b>320</b>	<b>80</b>	<b>400</b>	<b>160</b>
							<b>400</b>	<b>16</b>

Note : 1. Duration of each theory class should be minimum 48 minutes.  
 2. TH = Theory, IM = Internal Marks.  
 3. Minimum marks for passing the subject will be 40.  
 4. There would be combined passing for theory and internal assessment taken together.  
 5. One credit is equivalent to one hour of Teaching, that is to say,  
 For each subject, 48 Minutes \* 5 = 240 Minutes = 4 Hours i.e. 4 Credits.  
 6. Each semester will consist of 15 to 18 weeks of Academic Work equivalent to 90 actual teaching days.

(E)

**BBA 5<sup>th</sup> Semester Examination**

Sr. No.	Subjects	Course Code	Teaching Scheme	Examination Scheme			Total Marks	Credits
				Total Periods per Week	Max. Marks(TH)	Max. Marks (IM)	Total Marks	Min. Passing Marks
1	Entrepreneurship Development	5T1		5	80	20	100	40
2	Principles of Operations Management	5T2		5	80	20	100	40
3	International Business Environment	5T3		5	80	20	100	40
4	Research Methodology	5T4		5	80	20	100	40
<b>Total</b>				<b>20</b>	<b>320</b>	<b>80</b>	<b>400</b>	<b>160</b>
							<b>400</b>	<b>16</b>

Note : 1. Duration of each theory class should be minimum 48 minutes.  
 2. TH = Theory, IM = Internal Marks.  
 3. Minimum marks for passing the subject will be 40.  
 4. There would be combined passing for theory and internal assessment taken together.  
 5. One credit is equivalent to one hour of Teaching, that is to say,

For each subject, 48 Minutes \* 5 = 240 Minutes = 4 Hours i.e. 4 Credits.

6. Each semester will consist of 15 to 18 weeks of Academic Work equivalent to 90 actual teaching days.

(F)

### BBA 6<sup>th</sup> Semester Examination

Sr. No.	Subjects	Course Code	Teaching Scheme Total Periods per Week	Examination Scheme				Total Marks	Credits
				Max. Marks(TH)	Max. Marks (IM)	Total Marks	Min. Passing Marks		
1	Elective Paper – 1	6T1	5	80	20	100	40	100	4
2	Elective Paper – 2	6T2	5	80	20	100	40	100	4
3	Project Work	6P1	10	150	50	200	80	200	8
<b>Total</b>			<b>20</b>	<b>310</b>	<b>90</b>	<b>400</b>	<b>160</b>	<b>400</b>	<b>16</b>

Note : 1. Duration of each theory class should be minimum 48 minutes.

2. TH = Theory, IM = Internal Marks.

3. Minimum marks for passing the subject will be 40 and for Project Work it will be 80.

4. There would be combined passing for theory and internal assessment taken together.

5. One credit is equivalent to one hour of Teaching, that is to say,

For each subject, 48 Minutes \* 5 = 240 Minutes = 4 Hours i.e. 4 Credits.

6. Each semester will consist of 15 to 18 weeks of Academic Work equivalent to 90 actual teaching days.

### **Elective Subjects (Any one of the following to be selected by the student):**

Every student appearing for BBA – 6<sup>th</sup> Semester Examination has to select any one of the specialization as elective subject before commencement of the academic session:

**a) Elective A - Financial Management**

- a. Paper 1 – Fundamentals of Business Finance
- b. Paper 2 – Advanced Financial Management

**b) Elective B - Human Resource Management**

- a. Paper 1 – Fundamentals of Human Resource Management
- b. Paper 2 – Advanced Human Resource Management

**c) Elective C - Marketing Management**

- a. Paper 1 – Fundamentals of Marketing Management
- b. Paper 2 – Advanced Marketing Management

**12. Assessment**

- The final total assessment of the candidates is made in terms of an internal assessment (Sessional) and an external assessment for each course/subject taken together.
- For each paper, 20 marks will be based on internal assessment and 80 marks for semester end examination (external assessment) to be conducted by the R T M Nagpur University,

- unless otherwise stated.

1a	Attendance of the student during a particular semester	05 marks
1b	An assignment based on curriculum to be assessed by the teacher concerned	05 marks
1c	Subject wise class test conducted by the teacher concerned	05 marks
1d	Subject presentation/viva-voce seminar conducted during the semester	05 marks
<b>1</b>	<b>Internal assessment Total marks</b>	<b>20</b>
<b>2</b>	<b>Semester wise End Examination marks</b>	<b>80</b>
<b>Total Marks Per Course</b>		<b>100</b>

- There shall be no separate / extra allotment of workload to the concerned teacher. He/ She shall conduct the internal assessment activity during the regular teaching days / periods as a part of regular teaching activity.
- The internal marks will be communicated to the University at the end of each semester, but before the semester end examinations / as instructed by University. These marks will be considered for the declaration of the results.
- The record of internal marks, evaluation & result should be maintained for a period of one year by respective institute/college for verification by competent authority.
- The maximum and minimum marks which each subject carries in BBA Semester - I, Semester - II, Semester - III, Semester - IV, Semester - V & Semester - VI Examination are as indicated in Paragraph 11. A, B, C, D, E & F respectively.

**13. (A)** The scope of the subjects and pattern of examination shall be as indicated in the Syllabus.

**(B)** The Medium of instructions and examinations shall be in ENGLISH only.

**(C)** The Maximum/minimum marks which each subject carries & workload in BBA 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> Semester Examination shall be as indicated in Examination & Teaching Scheme (item no 11) "A", "B", "C", "D", "E" and "F" respectively.

#### **14. Evaluation of Project**

- Project Work shall carry 200 marks
- Evaluation Pattern

	<b>Max. Marks</b>
Project Report Evaluation by External Examiner appointed by the University	100
Presentation and Open Defense Seminar (External Examiner)	50
Presentation and Open Defense Seminar (Internal Examiner)	50
Total	200

- (i) For Project work a batch of Maximum TWENTY students per guide / supervisor has to be allotted by the Institute. The Guide/Supervisor shall act as an internal examiner for project Examination.
- (ii) The guide or the supervisor shall be appointed by the institute and should be full time approved faculty to BBA / MBA Programme or PhD supervisor in Business Management.
- (iii) **The External examiner shall be appointed from the list of full time approved teaching faculty of the BBA/MBA program by the University.**
- (iv) **Each such External examiner shall examine a maximum of TWENTY students.**
- (v) One copy of Project work (Printed or Type Written) shall be submitted to the University through the supervisor of the candidate and the Principal/ Director / Head of the Institute, at least **One Month** prior to the date of commencement of Semester-VI Examination or following the

instructions issued by University at that time and one copy will be retained by the college/Department for internal evaluation purpose.

- (vi) A Candidate shall submit with his/her project work, a certificate from the Supervisor to the effect-
- a. That the candidate has satisfactorily completed the Project work for not less than one session and
  - b. That the Project work is the result of the candidates own work and is of sufficiently high standard to warrant its presentation for examination.
- (vii) Candidate shall submit his declaration that the Project is the result of his own research work and the same has not been previously submitted to any examination of this University or any other University. The Project shall be liable to be rejected and / or cancelled if found otherwise.
- (viii) The Project work shall be evaluated through seminar and open defense and Viva-voce at the College/ Department by internal and external examiners appointed by university **before Semester-VI Examination**.

A student appearing for BBA Semester VI Examination will have to pay additional fees as prescribed by the University from time to time.

## 15. Standard of Passing

The scope of the subject, percentage of passing in Theory and Project and Internal Assessment will be governed as per following rules:

- (i) In order to pass at the Bachelor of Business Administration (B.B.A.) 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> Semester Examinations, **an examinee shall obtain not less than 40 % marks in each paper, that is to say combined in the written Examination conducted by the University and in internal assessment put together.**
- (ii) An examinee who is unsuccessful at the examination shall be eligible for admission to the subsequent examinations on payment of a fresh fee prescribed for the examination together with the conditions of the ordinance in force from time to time.

## 16. Credit and Grade Point System:

**Conversion of Marks to Grades and Calculations of SGPA (Grade Point Average) and CGPA (Cumulative Grade Point Average)**: In the Credit and Grade Point System, the assessment of individual Courses in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grades by some mechanism wherein the overall performance of the Learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of Grade. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviations and formulae used are as follows:-

**Abbreviations and Formulae Used**

**G:** Grade

**GP:** Grade Points

**C:** Credits

**CP:** Credit Points

**CG:** Credits X Grades (Product of credits & Grades)

**SGPA = ΣCG:** Sum of Product of Credits & Grades points / **ΣC:** Sum of Credits points

**SGPA:** Semester Grade Point Average shall be calculated for individual semesters. (It is also designated as GPA)

**CGPA:** Cumulative Grade Point Average shall be calculated for the entire Programme by considering all the semesters taken together.

After calculating the SGPA for an individual semester and the CGPA for entire programme, the value can be matched with the grade in the Grade Point table as per the ten (10) Points Grading System and expressed as a single designated GRADE such as O, A+, A, B+, B, etc.

Marks	Grade	Grade Points
80 and above	O (Outstanding)	10
70-79	A+ (Excellent)	9
60 -69	A (Very Good)	8
55 -59	B+ (Good)	7
50-54	B(Above Average)	6
45-49	C (Average)	5
40 -44	P (Pass)	4
00 -39	F (Fail)	0
	AB (Absent)	0

A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

(A) There shall be no classification of examinees successful at the Bachelor of Business Administration (BBA) Semester - I, Semester - II, Semester - III, Semester - IV, Semester - V and Semester - VI Examinations whereas SGPA will be notified.

(B) Division at the Bachelor of Business Administration (BBA) Semester - VI Examination shall be declared on the basis of the aggregate marks at the BBA Semester - I, Semester - II, Semester - III, Semester - IV, Semester - V and Semester - VI Examination taken together and the CGPA will be calculated and notified.

(C) Successful examinees at the Bachelor of Business Administration (BBA) Semester - VI Examination shall be awarded division based on CGPA as follows :

CGPA	Grade	Division
8.5 - 10	O	Distinction(Outstanding)
7.5 - 8.4	A	Distinction
6.0 - 7.4	B	First
4.5 - 5.9	C	Second
4.0 - 4.4	D	Pass
00 - 3.9	F (Fail)	Fail

17. The percentage of passing marks in each subjects shall be as indicated in Examination Scheme (item no 11) "A", "B", "C", "D", "E" and "F" respectively.

18. Unsuccessful examinees at the above examinations can be readmitted to the same examination on payment of a fresh fee and such other fees as may be prescribed.
19. Provisions of Ordinance No. 3 of 2007 relating to the award of Grace Marks for passing an examination, securing higher division / class and for securing distinction in subject(s) shall be applicable.
20. Notwithstanding anything to the contrary in this Direction, no person shall be admitted to an examination under this Ordinance, if he/ she has already passed the same examination or an equivalent examination of any other University.
21. Examinees passing all the **Bachelor of Business Administration (BBA)** Examination shall on payment of the prescribed fees shall receive a Degree in the prescribed form signed by the Vice-Chancellor.
22. The aforesaid Amendment shall come into force from the date of its issuance and shall remain in force till the relevant Ordinance come into being in accordance with the provisions of the Maharashtra University Act, 1994.
23. The marks for internal assessment should be communicated to University within time limit as per University norms. The record of conduct of such examination, evaluation and marks for internal assessment should be maintained for a period of at least **one** year by the respective college / Department for the verification by the competent authority.
24. **Promotion to Higher Semester (A.T.K.T.):** The unsuccessful candidate of any semester examination shall be ALLOWED TO KEEP THE TERM (ATKT) in accordance with the following table: (Theory and Internal assessment of that theory subject shall be jointly considered as single passing head).

Admission to academic year	Candidate should have passed All Subjects of the following examination	Candidate should have filled the examination form and appeared for the following examinations	Candidate should have passed in Minimum 50% <b>Subjects</b> of the following examination
1 <sup>st</sup> Semester	H.S.S.C/equivalent	-----	-----
2 <sup>nd</sup> Semester	-----	1 <sup>st</sup> Semester	-----
3 <sup>rd</sup> Semester	-----	2 <sup>nd</sup> Semester	<b>4 subjects of 1<sup>st</sup> and 2<sup>nd</sup> Semesters taken together</b>
4 <sup>th</sup> Semester	-----	3 <sup>rd</sup> Semester	<b>As Above</b>
5 <sup>th</sup> Semester	<b>1<sup>st</sup> and 2<sup>nd</sup> Semesters</b>	4 <sup>th</sup> Semester	<b>4 subjects/ passing heads of 3<sup>rd</sup> and 4<sup>th</sup> Semesters taken together</b>
6 <sup>th</sup> Semester*	<b>As Above</b>	5 <sup>th</sup> Semester	<b>As Above</b>

**Note:** (\*) A candidate admitted to Final Semester can appear for Final Semester examination however the result of the Final Semester examination will be withheld unless the candidate clears all the lower examinations of the **BBA Course**.

**25. Pattern of Question Papers of BBA year end Examination:**

- a. The question paper should be set in such a manner so as to cover the complete syllabus as prescribed by the University.
- b. The Semester End examination shall be held as per the schedule notified by the University.
- c. The question paper shall be of 80 marks & the time duration of the Semester End examination would be 3 hours.
- d. The question paper shall have 4 long answers questions corresponding to Four Units of each course. Each long answer question shall carry 8 marks. There will be internal choice for each question for these long answer questions which means that the student has to mandatorily attempt one question from each unit of the syllabus. Hence, there would be 8 long answer questions in the question paper but the student has to attempt 4 questions with an internal choice for each question from each unit of the syllabus. The students shall get due credit for precise answers as per Marking Scheme given by the paper setters/ moderators.
- e. Question no. Five shall include Four compulsory questions from any of the six units carrying 4 marks each.
- f. The paper setters /moderators shall submit the proposed marking scheme (Memorandum of Instructions) along with question paper so that the students can be given due credit for precise answers.

**Illustrative Question Paper for BBA Program\***

Question No.	Unit	Nature	Max. Marks
1	I	a. Long Answer Question b. Long Answer Question OR c. Long Answer Question d. Long Answer Question	8 Marks each
2	II	a. Long Answer Question b. Long Answer Question OR c. Long Answer Question d. Long Answer Question	8 Marks each
3	III	a. Long Answer Question b. Long Answer Question OR c. Long Answer Question d. Long Answer Question	8 Marks each
4	IV	a. Long Answer Question b. Long Answer Question OR c. Long Answer Question d. Long Answer Question	8 Marks each
5	I II III IV	a. Short Answer Question b. Short Answer Question c. Short Answer Question d. Short Answer Question	4 Marks each
TOTAL MARKS			80

(\*) This pattern of question paper is not applicable for the following papers for which the question paper patterns are prescribed separately along with the detailed syllabus of respective subjects.

- BBA 1<sup>st</sup> Semester Examination – Cost Accounting

- BBA 1<sup>st</sup> Semester Examination – English
- BBA 2<sup>nd</sup> Semester Examination - English
- BBA 2<sup>nd</sup> Semester Examination – Financial & Management Accounting
- BBA 3<sup>rd</sup> Semester Examination – Basic Statistical Techniques
- 

**26. Absorption Scheme for Examinees of BBA Old Course (Introduced in 2014):**

1. The students of the BBA Course (Introduced in 2014) immediately preceding the new course under this direction shall be given chance to appear for three more consecutive examinations according to old syllabus (Introduced in 2014). The University shall conduct the examination of old course for three more consecutive examinations after the new scheme of examination is introduced as per following table:

BBA Examination	Attempt 1	Attempt 2	Attempt 3
BBA Part I	Winter 2016	Summer 2017	Winter 2017
BBA Part II	Winter 2017	Summer 2018	Winter 2018
BBA Part III	Winter 2018	Summer 2019	Winter 2019

The students are required to clear all their papers within the stipulated time. The students clearing all the papers of old scheme of Examination (Introduced in 2014) shall be awarded Degree according to old scheme of Examination. But, the students who failed to clear their course in three consecutive attempts as per this clause, will be required to appear afresh for BBA (CBS) examination provided under this direction.

- a) The failure students of BBA I and BBA II of old course (Annual Pattern - Introduced in 2014) can be admitted to the 3<sup>rd</sup> and 5<sup>th</sup> semester of BBA Course respectively under this direction under the ATKT rules prevailing in Old Course (Introduced in 2014). However, they will be required to clear papers of annual pattern course in which they failed in 3 attempts as mentioned above.
  - b) The candidates who have cleared BBA Part I of old course (Annual Pattern - Introduced in 2014) examination shall get admission to Third Semester of BBA Part II of the new course directly.
  - c) The candidates who have cleared BBA Part II of old course (Annual Pattern - Introduced in 2014) examination shall get admission to Fifth Semester of BBA Part III of the Semester Pattern directly.
2. The absorption of students of old course (Introduced in 2014) referred above shall be made to the new course in the following manner:
    - A student who has passed all subjects BBA I of old course (Introduced in 2014), under Direction No.15 of 2014, shall be admitted to BBA 3<sup>rd</sup> Semester course without any restriction.
    - B. A student who has failed in some subjects of BBA I of old course (Introduced in 2014) but qualifying the conditions of ATKT prevailing under the Direction No. 15 of 2014 can be admitted to BBA 3<sup>rd</sup> Semester course. Such a student shall clear those subjects of BBA I in maximum three attempts, as shown in the above table. Where a student fails to clear those subjects in the maximum permissible attempts he/she will have to take casual admission in the first and second semesters of the new course under this Direction, by

paying fee of Rupees Five Hundred for each semester, and clear the papers of those semesters. However, such a student shall be given exemption in the equivalent subjects of the first and second semesters.

- C. A student who has passed all subjects BBA II of old course (Introduced in 2014) shall be admitted to BBA 5<sup>th</sup> Semester course.
- D. A student who has failed in some subjects of BBA II of old course (Introduced in 2014) but qualifying the conditions of ATKT prevailing under the said direction can be admitted to BBA 5<sup>th</sup> Semester course. Such a student shall clear these subjects in maximum three attempts, as shown in the table above. Where a student fails to clear those subjects in the maximum permissible attempts he/she will have to take casual admission in the Third and Fourth semesters of the new course under this Direction, by paying fee of Rupees Five Hundred for each semester, and clear the papers of those semesters. However, such a student shall be given exemption in the equivalent subjects of the Third and Fourth semesters.
- E. Similarly, a student of BBA III of old course (Introduced in 2014), if not able to pass all the subjects till Winter 2019 examination he/she will have to take casual admission in the Fifth and Sixth semesters of the new course under this Direction, by paying fee of Rupees Five Hundred for each semester, and clear the papers of those semesters. However, such a student shall be given exemption in the equivalent subjects of the Fifth and Sixth semesters.

### **3. Declaration of Result and Preparation of Marklist**

The final year Marklist of students absorbed from BBA Old Course (Introduced in 2014) shall be prepared on the following guidelines:

- A. Where a student who has passed BBA I in the annual pattern (Introduced in 2014) has been absorbed under the absorption scheme hereunder, the marks of the BBA I of such student being out of 700 shall be converted to out of 800 so as to bring uniformity in the mark sheets of the regular students under this Direction and the students absorbed under the absorption scheme.
- B. Similarly where a student has passed BBA I and II in annual pattern (Introduced in 2014) and has been absorbed under the scheme under this direction (Semester Pattern), the total marks obtained by such a student in BBA I and II examinations being out of 700 shall be converted to out of 800 each for the BBA I and II examinations each.
- 4. The equivalence & exemption of subjects for the students absorbed in the new course shall be as follows:

<b>BBA New Course Examination (Semester Pattern)</b>	<b>Name of Subject in New Course Examination (Semester Pattern)</b>	<b>BBA Old Course Examination (2014)</b>	<b>Equivalent Subject in Old Course</b>	<b>Status of Exemption</b>
<b>Semester I</b>	English	BBA Part I	English & Business Communication	Yes
	Fundamentals of Business Management	BBA Part I	Principles of Management	Yes
	Computer Applications for Business	BBA Part I	Computer Applications for Business	Yes

	Cost Accounting	BBA Part I	Financial & Cost Accounting	Yes
Semester II	Principles of Marketing Management	BBA Part II	Principles of Marketing Management	Yes
	Financial & Management Accounting	BBA Part I	Financial & Cost Accounting	Yes
	Micro-Economic Fundamentals	BBA Part I	Business Economics	Yes
	English	BBA Part I	English & Business Communication	Yes
Semester III	Principles of Financial Management	BBA Part II	Management Accounting & Financial Management	Yes
	Basic Statistical Techniques	BBA Part II	Statistical Methods for Business	Yes
	<b>Evolution of Business &amp; Commercial Geography</b>		---	No*
	Environment Management	BBA Part II	Environment Management	Yes
Semester IV	Principles of Human Resource Management	BBA Part II	Human Resource Management	Yes
	Money, Banking & Finance	BBA Part I	Business Economics	Yes
	<b>Introduction to Sociology &amp; Psychology</b>		---	No*
	Business Legislations	BBA Part II	Business & Industrial Laws	Yes
Semester V	Entrepreneurship Development	BBA Part III	Entrepreneurship Development	Yes
	Principles of Operations Management	BBA Part III	Production & Operations Management	Yes
	<b>International Business Environment</b>		---	No*
	Research Methodology	BBA Part II	Research Methodology	Yes
Semester VI	Financial Management - Paper 1	BBA Part III	Financial Management - Paper 1	Yes
	Financial Management - Paper 2	BBA Part III	Financial Management - Paper 2	Yes
	Human Resource Management - Paper 1	BBA Part III	Human Resource Management - Paper 1	Yes
	Human Resource Management - Paper 2	BBA Part III	Human Resource Management - Paper 2	Yes
	Marketing Management - Paper 1	BBA Part III	Marketing Management -Paper 1	Yes
	Marketing Management - Paper 2	BBA Part III	Marketing Management -Paper 2	Yes

(\*) All these subjects have no equivalent subjects in the BBA Old Course Examination (introduced in 2014). Hence, students desiring for absorption in New Course under this Direction are mandatorily required to appear for these subjects in respective semesters.

5. If a student who had opted for final year 'Service Sector Management' specialization papers of old syllabus (2014) & could not pass it in three attempts, he shall appear for a new specialization subject as per semester pattern scheme.
  
6. The above absorption scheme of B.B.A. shall be effective till the introduction of new Syllabus.

## **27. Guidelines for Project Work :**

### **Objective**

Every student will be assigned a project in 6<sup>th</sup> Semester of BBA and it will be pursued by him/her under the supervision of an internal supervisor. The objective of the Project Work is to help the student develop his/her ability to apply multi-disciplinary concepts, tools and techniques to solve organizational problems and/or to evolve new/innovative theoretical frame work.

### **Type of Project**

The Project may take any one of the following forms:

- i) Comprehensive case study (covering single organization/multifunctional area problem, formulation, analysis and recommendations)
- ii) Inter-organizational study aimed at inter-organizational comparison/ validation of theory/survey of management services.
- iii) Evolution of any new conceptual / theoretical framework.
- iv) Field study (Empirical study).
- v) Software analysis, Design and solutions for organizational achievement ( Applicable to IT)

### **Selection of Project Topic:**

- Project topic has to be selected with respect to the programme of study and area elected by the student.
- Title of the project should clearly specify the objective and scope of the study. It should be specific and neither too vague nor centralistic. The topics should be designed meticulously. It can be designed like "Employee Welfare Measures" - A case study of XYZ Ltd.
- Project selection has to be made in consultation with the supervisor who will act as a Project guide for the student.

### **Scope of Work**

The student is expected to carry out following activities in the project:

1. Prepare a synopsis and get it approved by the supervisor as assigned by the respective Institutes.
2. Undertake a detailed literature survey on the subject matter.
3. Make relevant data collection/observation.
4. Consult experts of the field.
5. Visit related organizations/institutions/industries.
6. Compile data in proper format.
7. Make proper conclusion/recommendations.
8. Prepare a Project Report.
9. The volume of the project-report should be ranging from 60-80 pages.
10. Obtain approval of Project Report by project supervisor.
11. Submit two hard bound copies of the Project Report at the Institute.
12. Submission of the Project Report shall be one month prior to the date of the commencement of the 6<sup>th</sup> Semester Examinations for BBA.

### **General Format of the Report**

The project report should preferably be written in the following format:

- a) Executive Summary
- b) Introduction to topic
- c) Research Methodology
- d) Analysis and Findings of the study

- e) Conclusions and Recommendations of the study
- f) Bibliography
- g) Appendices – to include questionnaire, if any

#### **Examination and Evaluation**

The Project is to be treated as a paper of study of the BBA-6<sup>th</sup> Semester comprising of 200 marks. The external assessment shall be done on the basis of the project report and Viva Voce. The Project shall be evaluated by an External faculty for 150 marks and of which 100 marks will be allocated to the Written Report Content and Presentation and 50 marks for Viva Voce. The Project work shall be evaluated by internal and external examiners for 100 marks (as mentioned above) at the respective institute / college as per the scheduled fixed by the university. One such External Examiner shall not examine more than 20 students in one academic year.

**28.** This direction shall come into force phase wise from the academic session 2016-17.

Nagpur  
Date : 29.08.2017

**Sd/-**  
**Dr. S. P. Kane**  
Vice-Chancellor

## Appendix A

### Subject/Paper Summary for BBA Program

Semester	Subject Code	Name of Subject
I	1T1	English
	1T2	Fundamentals of Business Management
	1T3	Computer Applications for Business
	1T4	Cost Accounting
II	2T1	Principles of Marketing Management
	2T2	Financial & Management Accounting
	2T3	Micro-Economic Fundamentals
	2T4	English
III	3T1	Principles of Financial Management
	3T2	Basic Statistical Techniques
	3T3	Evolution of Business & Commercial Geography
	3T4	Environment Management
IV	4T1	Principles of Human Resource Management
	4T2	Money, Banking & Finance
	4T3	Introduction to Sociology & Psychology
	4T4	Business Legislations
V	5T1	Entrepreneurship Development
	5T2	Principles of Operations Management
	5T3	International Business Environment
	5T4	Research Methodology
VI	6T1	Elective – Paper 1
	6T2	Elective – Paper 2
	6P1	Project Work

## Appendix B

### List of Elective Subjects

Group Area	Paper	Name of Subject
Financial Management	1	Fundamentals of Business Finance
	2	Advanced Financial Management
Human Resource Management	1	Fundamentals of Human Resource Management
	2	Advanced Human Resource Management
Marketing Management	1	Fundamentals of Marketing Management
	2	Advanced Marketing Management

## **Appendix C**

### **Detailed Syllabus**

#### **Bachelor of Business Administration (BBA) Examination**

#### **Semester - I**

#### **1T1- English**

**Unit I:** Basic Grammar – Tense, Forms of the Verb, Preposition, Articles, Punctuation, Single Word for a Group of Words, Sentence Construction, Comprehension.

**Unit II:** Business Letter Writing- Enquiries and replies, Placing and fulfilling orders , Complaints and follow-up letters , Sales letters, Circular letters, Application for employment and Resume.

**Unit III:** Business Manners- Body Language, Gestures, Telephone etiquette, E-mail etiquette.

Textbook:

- 1) The Bet – Anton Chekov
- 2) Socrates and the Schoolmaster – F. L. Brayne

**Unit IV:** Textbook:

- 1) An Astrologer's Day – R. K. Narayan
- 2) The Gift of the Magi – O' Henry
- 3) With the Photographer – Stephen Leacock

**Reference Books:**

1. Textbook entitled 'Prism: Spoken and Written Communication, Prose & Poetry' published by Orient Longman
2. Orient Longman, Raj N Bakshi 2003-2007.
3. The grammar Tree, MridulaKaul, BeenaSugathan, ArchanaGilani- Oxford university press 2011
4. Grammar for All, N Ramalingam, Himalaya Publishing House, 2<sup>nd</sup> Edition 2014.
5. John Eastwood, Oxford Practice Grammar with answers
6. High School English Grammar & Composition, Wren & Martin Revised by NDV Prasad Rao, S Chand Publication
7. Business Correspondence & Report Writing, R C Sharma &Krisha Mohan, 3<sup>rd</sup> Edition, Tata Mcgrall Hill
8. Communication, C S Rayudu, Himalaya Publication July 2008
9. Business Communication, UrmilaRai, S M Rai, Himalaya Publication 9<sup>th</sup> Edition.

#### **1T1- ENGLISH**

#### **QUESTION PAPER PATTERN**

[Maximum Marks – 80

1. (A) Comprehension of Unseen Passage (**UNIT-I**)  
(Four Very Short Answer Questions based on the given Passage)  
4 X 2 Marks= 8 Marks

(B) Four items out of Six based on any one of the Grammar/Vocabulary items prescribed in **UNIT-I**

4 X 1 Mark = 4 Marks

(C) Four items out of Six based on any one of the Grammar/Vocabulary items prescribed in **UNIT-I**

4 X 1 Mark = 4 Marks

2. (A) ONE out of TWO Questions from **UNIT-II** (Business Letter Writing)

1 X 8 Marks = 8 Marks

(B) ONE out of TWO Questions from **UNIT-II** (Business Letter Writing)

1 X 8 Marks = 8 Marks

3. (A) ONE out of TWO Questions from **UNIT-III** (Business Manners)

1 X 8 Marks = 8 Marks

(B) ONE out of TWO Long Answer Questions (to be answered in about 150 words) based on the prescribed Lessons in **UNIT-III** from the textbook *Prism*

1 X 8 Marks = 8 Marks

4. (A) TWO Short Answer Questions (to be answered in about 75 words) out of THREE based on the Lessons Prescribed in **UNIT-III**

2 X 4 Marks = 8 Marks

(B) ONE out of TWO Long Answer Questions (to be answered in about 150 words) based on the prescribed Lessons in **UNIT-IV** from the textbook *Prism*

1 X 8 Marks = 8 Marks

5. (A) TWO Short Answer Questions (to be answered in about 75 words) out of THREE based on the prescribed Lessons in **UNIT-IV** from the textbook *Prism*

2 X 4 Marks = 8 Marks

(B) FOUR Very Short Answer Questions out of SIX to be answered in one or two sentences each from the prescribed Lessons (from *Prism*) in **UNIT-III&UNIT-IV**

4 X 2 Marks = 8 Marks

## **1T2 - Fundamentals of Business Management**

**Unit I: Introduction** -Nature, function, definition and importance of management, Definition, nature, purpose and scope of management, Functions of a manager, is management a science or art? Development of Management Thought -Scientific management; Contribution of Taylor, Fayol, Mary Follett, Elton Mayo; Hawthorne experiments, Contingency approach.

**Unit II: Management and Administration**-Management and administration, Management as a profession, Professionalism of management in India, Management ethics and management culture, Skills required of manager, Classification of skills, Methods of skills development.

**Unit III: Management Planning**-Concept of planning, objectives, Nature, Types of plan, Stages involved in planning, Characteristics of a good plan, Importance, Limitations of planning, Making planning effective, Strategic planning in Indian Industry.

**Unit VI: Decision Making**-Concept, characteristics of decisions, Types of decisions, Steps Involved in decision making, Importance of decision making, Methods of decision making, Committee Decision Making. Organisation -Concepts, Principle of organization, Importance, Features of good organization structure, Types of Organisation structure.

**Reference Books:**

1. Essential of Business Administration - K.Aswathapa Himalaya Publishing House
2. Management: Concept and Strategies By J. S. Chandan, Vikas Publishing
3. Principles of Management, By Tripathi, Reddy Tata McGraw Hill
4. Principles of Management By Ramasamy T, Himalaya Publishing House
5. Principles of Management, Dr.NeeluVashisht&Dr.Namita Rajput, Taxmann

## **1T3 - Computer Applications for Business**

**Unit I: Introduction to Computers** - Generation of Computers, Block Diagram, Working of Computer, Hardware and Software, Programming and Flow Charts concepts, Operating systems (MSDOS, Windows, UNIX, Linux), Networking concepts.

**Unit II: Working with Computers** - Introduction to Word, Excel, PowerPoint, Internet,. Lab Activity would be based on the following topics: a. MS Word b. MS Excel c. MS PowerPoint

**Unit III: Introduction to e-Commerce**, e-Learning and e-Business, M-Commerce. Introduction to Basic Web Page designing Language (HTML), using Tags: - Structural, Formatting, List tags and Table.

**Unit IV: IT Consulting** – Basic concepts of business, strategy and operation; Business / Strategic Consulting: Reengineering, BPR; Operations Consulting: domain knowledge concept, domain-consulting. IT Enabled Services (ITES) – Processes, Outsourcing Function, Call Centres; BPO's: Captive BPO's (GE and Dell) and Third Party BPO's (Infosys BPO, Wipro BOP, Mphasis, Daksh and EXL etc).

**Reference Books:**

1. E-Commerce- ParagDewan (Excel Books),
2. P.K.Sinha -Computer Fundamentals.
3. World Wide Web -design with HTML -C Xavier ,
4. Computer Application in Management -NirupmaPathak ,
5. BPO- SarikaKulkarni,
6. BPO' Processes & Challenges By Harsh Bharghav& Deepak Kumar,
7. IT Enabled Retailing by k. Suresh,
8. IT Strategies for Business- FarhaKulkarni
9. Computer Applications in Management- UshaDahiya&SapnaNagpala, Taxmann

## **1T4 - Cost Accounting**

**Unit -I: Introduction** -Meaning of Cost, Costing and Cost Accounting, Features, Scope and Functions of Cost Accounting, Advantages and Limitations of Cost Accounting; Concept of Cost; Analysis and Classification of Costs; Elements of Cost; Preparation of Cost Sheet (Statement of Cost); Quotations and tender. Introduction and need for reconciliation between financial accounts and cost account, reasons for disagreement in Profit; Preparation of Reconciliation Statement.

**Unit -II: Process Costing:** Meaning, features and applicability, difference between process and job costing, wastage and by-products, normal and abnormal loss. Preparation of process accounts

**Unit III: Operating Costing:** Classification of costs, Features of operating costing: Transport costing (Standard charge, running and operating cost, maintenance charges and log sheet)

**Unit IV Marginal Costing:** Introduction, Application of Marginal costing in terms of cost control, level of activity planning- Break-even-analysis: Application of BEP for various business problems.

Simple Numerical will be based on Unit II, III and IV

**Reference Books:**

- 1) Management Accounting, Bhagwati&Pillai, Second Edition, S. Chand & Company Ltd.
- 2) Cost & Management Accounting, Ravi M Kishore, Taxmann Publications Pvt. Ltd.
- 3) Cost and Management Accounting V. K. Saxena& C. D. Vashist, Sultan Chand & Sons Publication.
- 4) Cost Accounting, Text and Problems, MC Shuka, TS Grewal and MP Gupta, S Chand Publications

**Question Paper Pattern for BB4 - Cost Accounting**

Question No.	Unit	Nature	Max. Marks
1	I	a. Theory Question b. Theory Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
2	II	a. Numerical Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
3	III	a. Numerical Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
4	IV	a. Numerical Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
5	I II III IV	Short Answer Theory Question Short Answer Theory Question Short Answer Theory Question Short Answer Theory Question	4 Marks each
TOTAL MARKS			80

**Bachelor of Business Administration (BBA) Examination**

**Semester - II**

**2T1- Principles of Marketing Management**

**Unit I Marketing :**Definition, nature, scope & importance, MarketingManagement, Core concepts of marketing, selling concept, production concept, modern marketing concept.

**Unit II Segmentation:** Concept, basis of segmentation, Importance inmarketing; Targeting : Concept Types, Importance; Positioning: Concept, Importance, Brand positioning, Repositioning.

**Unit III Marketing Mix:** Product : Product Mix, New Product development, levels of product, types of product, Product life cycle, Branding and packaging, different types of distribution channels.

**Unit IV Price:** Meaning, objective, factors influencing pricing, methods of pricing. **Promotion :** Promotional mix, tools, objectives, media selection & management. **Process & Scope Marketing**

**Information Systems :** Meaning Importance and Scope **Consumer Behaviour :** Concept, Importance and Factors influencing consumer behaviour.

**Reference Books:**

1. Marketing Mgt. by Philip Kotler (PHI)
2. Marketing Management by Rajan Saxena
3. Marketing Management by Namaswamy & Ramakumari.

## **2T2 – Financial & Management Accounting**

**Unit -I: Introduction** - Meaning, Scope and importance of Financial Accounting. Financial Accounting - concepts and conventions, classification of accounts, Rules and principles governing Double Entry Book-keeping system (Preparation of Journal), Nature and function of financial Reporting, GAAP.

**Unit -II: Final Accounts of Companies** - Final Accounts of Joint Stock Companies – contents and preparation of Trading and Profit and Loss Account, Profit and Loss Appropriation Account and Balance sheet with adjustment, Closing Entries (Simple entries)

**Unit III: Management Accounting** - Meaning, Scope, Importance, and Limitations of Management Accounting, Difference between Financial Accounting and Management Accounting, Break even analysis, Analysis of Financial Statements (using ratio analysis-simple ratios)

**Unit IV: Budgetary Control** - Business budgets and budgetary control – Types of budget and its utility, preparation of cash & flexible budgets.

**Note: Simple Numericals will be based on all Units.**

**Reference Books:**

1. S. N Maheshwari : Financial Accounting Theory and problems – S.Chand (G/L) & Company Ltd,
2. Pillai R. S. N. – Management Accounting – S. Chand & Co. Pvt. Ltd.
3. Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
4. Management Accounting & Financial Management :-Arora M N (Himalaya Publishing
5. House Pvt. Ltd.)
6. Accounting for Management- Dr. Ashok Sehgal & Dr. Deepak Sehgal, Taxmann

### **Illustrative Question Paper Pattern for BB6 – Financial & Management Accounting**

Question No.	Unit	Nature	Max. Marks
1	I	a. Theory Question b. Theory Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
2	II	a. Numerical Question b. Numerical Question	8 Marks 8 Marks

		OR c. Numerical Question	16 Marks
3	III	a. Numerical Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
4	IV	a. Numerical Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
5	I II III IV	Short Answer Theory Question Short Answer Theory Question Short Answer Theory Question Short Answer Theory Question	4 Marks each
<b>TOTAL MARKS</b>			<b>80</b>

### **2T3- Micro-Economic Fundamentals**

**Unit I: Introduction to Micro Economics-** Meaning, Definition, Importance of Micro Economics, Factors affecting Micro Economics. Difference between Micro-Economics & Macro Economics.

**Unit-II Demand and Supply Analysis -** Concept of Demand, Law of Demand-Meaning, Definition, Assumptions & Exceptions. Elasticity of Demand- Meaning, Types and Factors affecting Elasticity of Demand; The Indifference Curve Theory; Supply- Concept of Supply, Elasticity of Supply, Types and Factors affecting Elasticity of Supply.

**Unit III: Production & Cost Analysis -** Production & Production Function: Concept, Forms of Production function, Law of Variable Proportions, Returns to scale. Cost Concepts, Short term and Long term cost output relationship, The Isocost and Isoquant Approach, Economic Region and Economies & Diseconomies of scale.

**Unit IV: Market Structures-** Characteristics and price determination in various market structures - Perfect Competition, Monopoly, Monopolistic Competition, Oligopoly. Pricing: Meaning, Types of Pricing.

**Reference Books:**

1. Agarwala S.K., Microeconomic Theory, Excel Books, New Delhi
2. Appannaiah, Reddy & Shanthi, BBM Semester Economics, 2006, Himalaya Publishing House, Mumbai.
3. Dholka R H & Oza A.N., 1996, Oxford University Press, New Delhi
4. Dominick Salvatore, Managerial economics in a Global economy, 2006, Thomson learning Press
5. Jhingan, 2004, M.L., Microeconomic Theory, Veranda Publishers, New Delhi.
6. Ravindra R Dholakia, Ajay N Oza, Micro -Economics for Management Studies, Oxford University Press, Delhi
7. Robert S. Pindyck, Daniel L. Rubinfeld, Prem L. Mehta, Microeconomics, 2006, Pearson, New Delhi.
8. Suma Damodran, Managerial Economics, 2006, Oxford University Press, New Delhi
9. Sundaram K P. M, microeconomics, Sultan Chand & Sons.

## 2T4 - ENGLISH

**(To be implemented from the Session 2016-2017 onwards)**

1	Unit I	<p>Basic Grammar &amp; Vocabulary :</p> <ul style="list-style-type: none"> <li>• Subject-Verb-Agreement / Concord of Nouns, Pronouns and Possessive Adjectives</li> <li>• Spotting errors and rewriting sentences correctly.</li> <li>• Phrasal Verbs, Collocations and Idioms (based on the exercises at the end of the prescribed lessons from <i>Golden Harvest</i>)</li> <li>• Words Often Confused</li> </ul>	<p>Reference Books:</p> <ol style="list-style-type: none"> <li>1. Macmillan Foundation English by R. K. Dwivedi and A. Kumar (Macmillan/Trinity)</li> <li>2. Learners' English Grammar and Composition by N. D. V. Prasad Rao (S.Chand Publication)</li> <li>3. Developing Communication Skills by Krishna Mohan and Meera Banerji ( Trinity)</li> </ol>
2	UNIT II	<p>Business Communication</p> <ul style="list-style-type: none"> <li>• Memorandum Writing</li> <li>• Notice, Agenda and Minutes</li> </ul>	<ol style="list-style-type: none"> <li>1. Developing Communication Skills by Krishna Mohan and Meera Banerji ( Trinity)</li> </ol>
		<ul style="list-style-type: none"> <li>• Writing Advertisements for: Rent, Sale, Situations Vacant</li> </ul>	<ol style="list-style-type: none"> <li>2. Write Right by Sarita Manuja (Macmillan/ Trinity)</li> </ol>
3	UNIT III	<p>Prose Items:</p> <ul style="list-style-type: none"> <li>• A Real Good Smile: Bill Naughton</li> <li>• What India Inc Wants: <ul style="list-style-type: none"> <li>a. Our Muddled Generation: Dinesh Kumar</li> <li>b. Employers Look for Potential Employees, not Exam Results: Manish Sabharwal</li> </ul> </li> <li>• The Thief: Ruskin Bond</li> </ul>	<p>Prescribed text : <i>Golden Harvest</i> by Orient BlackSwan</p>

4	UNIT IV	<p>Prose Items:</p> <ul style="list-style-type: none"> <li>• A Simple Philosophy: Seathl</li> <li>• Go, Kiss the World: SubrotoBagchi</li> <li>• My Struggle for an Education: Booker T. Washington</li> </ul>	Prescribed text : <i>Golden Harvest</i> by Orient BlackSwan
---	---------	--	---

### **2T4 - ENGLISH**

#### **(QUESTION PAPER PATTERN)**

[Maximum Marks – 80]

1. (A) FIVE items out of SEVEN based on Subject-Verb- Agreement/Concord (fill in the blanks )- **UNIT-I**                     $5 \times 1$  Mark = 5 Marks  
 (B) FIVE items out of SEVEN based on Spotting Errors and Rewriting Sentences correctly. - **UNIT-I**                     $5 \times 1$  Mark = 5 Marks  
 (C) FIVE items out of SEVEN based on Phrasal Verbs/ Collocations/Idioms - **UNIT-I**                     $5 \times 1$  Mark = 5 Marks  
 (D) FIVE items out of SEVEN based on Words Often Confused ( fill in the blanks) -        **UNIT- I**                     $5 \times 1$  Mark = 5 Marks
  
2. (A) ONE out of TWO items on Memorandum Writing - **UNIT-II**  
 $1 \times 5$  Marks = 5 Marks  
 (B) ONE out of TWO questions based on Notice, Agenda and Minutes - **UNIT-II**  $1 \times 10$  Marks = 10 Marks  
 (C) ONE out of TWO questions based on Writing Advertisements-  
**UNIT-II**                     $1 \times 5$  Marks = 5 Marks
  
3. (A) ONE out of TWO Long Answer Questions to be answered in about 150 words - **UNIT-III** (Prescribed Text)                     $1 \times 10$  Marks = 10 Marks  
 (B) TWO out of THREE Short Answer Questions to be answered in about 75 words - **UNIT-III** (Prescribed Text)                     $2 \times 5$  Marks = 10 Marks
  
4. (A) ONE out of TWO Long Answer Questions to be answered in about 150 words - **UNIT-IV** (Prescribed Text)                     $1 \times 10$  Marks = 10 Marks  
 (B) TWO out of THREE Short Answer Questions to be answered in about 75 words - **UNIT-IV** (Prescribed Text)                     $2 \times 5$  Marks = 10 Marks

## **Bachelor of Business Administration (BBA) Examination**

### **Semester - III**

#### **3T1 - Principles of Financial Management**

**Unit -I: Introduction of Business Finance** - Meaning, Scope and importance of Business Finance. Finance Functions. Goals & objectives of financial management

**Unit -II: Sources of Financing** - LONG TERM: Equity shares, Preference Shares, debentures,/ Bonds (Types, features & utility), term loans, lease & hire purchase, retained earnings,; SHORT TERM: trade credit, bank finance, commercial paper, factoring & bills discounting.

**Unit III: Cost of Capital** - Cost of capital, Cost of different sources of finance, weighted average cost of capital, Concept of Leverage, Concepts of Capital Structure.

**Unit IV: Working Capital Management** - Meaning, Scope, Importance, and Limitations of Working Capital, Factors affecting Working Capital needs, Various Approaches for financing Working Capital. Concept of Operating Cycle, Estimation of Working Capital Requirement

**Note:** Simple Numerical will be based on Unit III and IV only.

#### **Reference Books:**

- 1) Financial Management by Ravi Kishore, Taxmann Publications Pvt Ltd
- 2) Financial Management - I M Pandey - S. Chand & Co. Pvt. Ltd. (Old editions in Vikas Publications)
- 3) Financial Management , Theory, Concepts and Problems by Dr. R. P. Rustagi, Taxmann Publications Pvt Ltd
- 4) Financial Management, Text, Problems and Cases, by M Y Khan and P K Jain, McGraw-Hill Publications

#### **BBA Sem III**

#### **3T2 - Basic Statistical Techniques**

**Unit I** – Definition, functions, scope and role of statistics in business and importance of statistics. Classification of data, tabulation, frequency distribution, diagrams & graphs.

**Unit II** – Importance and requisites of a good statistical average, types of averages – arithmetic mean, median, mode, geometric mean, harmonic mean, weighted average, relationship amongst different averages.

**Unit III** – Meaning and significance of dispersion, methods of measuring dispersion – range, quartile deviation, mean deviation, standard deviation and coefficient of skewness.

**Unit IV** – Definition of correlation, significance of correlation, types of correlation, merits and limitations of coefficient, Calculation of coefficient of correlation and probable error for simple series, calculation of coefficient of correlation and probable error for continuous series.

**Numerical shall be based on Unit II, Unit III, and Unit IV**

**Reference Books:**

1. Fundamentals of statistics : D. V. Elhance&VeenaElhance
2. Statistices : V. K. Kapoor - S. Chand & Sons
3. Statistics : B. New Gupta - SahityaBhavan Agra
4. Statistics Methods : S.P. Gupta - S. Chand & Sons
5. Fundamental of Statistics : S. C. Gupta - Himalaya Publishing House
6. Business Mathematics & Statistics : NEWK Nag & S.C. Chanda - Kalyani Publishers

**Illustrative Question Paper Pattern for BB10 – Basic Statistical Techniques**

Question No.	Unit	Nature	Max. Marks
1	I	a. Theory Question b. Theory Question OR c. Theory Question d. Theory Question	8 Marks each
2	II	a. Theory Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
3	III	a. Theory Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
4	IV	a. Numerical Question b. Numerical Question OR c. Numerical Question	8 Marks 8 Marks 16 Marks
5	I II III IV	Short Answer Theory Question Short Answer Theory Question Short Answer Theory Question Short Answer Theory Question	4 Marks each
TOTAL MARKS			80

**3T3 – Evolution of Business & Commercial Geography**

**Unit I**-Evolution of Business & Economy: Industrial revolution (1820-1850); Rise of European business (1850-1900); Impact of First World War on International Business; The Great Depression and its effect on International Business; Impact of Second World War on International Business.

**Unit II** - Evolution of Business in post WWII Scenario: Cold War and its impact on International Business; OPEC Crises and its impact on International Business; Gulf War and its impact on International Business; Dawn of IT era and its impact on business & economy.

**Unit III - Commercial Geography:** Geography - meaning & its relation with Commerce & Commercial Geography - Nature and scope. Approaches of commercial Geography. 2. Geographical Environment & Commerce - Relationship between geographical environment and Commerce, Economic activities, Determinism and possibilism, Physical environment - Location, size and shape of the country relief, climate, water bodies, soils, vegetation, animals, minerals, Cultural environment, settlements, transport, communication and technology.

**Unit IV -Industries :** Role of industries in Economic development; Factors of industrial location - Raw material, power, market, transport and communication, land capital, technology; Webers theory of industrial location, Iron & steel industry - India & USA, Cotton textile industry - India & USA. Engineering industry in India - Major industrial regions of the world and India.

**Reference Books:**

1. Global Governmentality – Edited by Wendy Larner& William Walters, Routledge Resource
2. The Origins of Globalisation – Karl Moore & David Charles Louis, Routledge Resource
3. British Business History (1720-1994) – John F Wilson, Manchester University Press
4. The History of Family Business (1850-2000) – Andrea Colli, Cambridge University Press
5. Exporting the American Model: The Post war transformation of European Business – Marie-Laure Djelic, Oxford University Press
6. Order and Disorder after the Cold War – Brad Roberts, MIT Press
7. Commercial Geography - Sir Dudley Stamp.
8. Fundamentals of Economic Geography - Van Royen&Bengston.
9. Economic Geography - J. Alexander
10. Economic Geography - Jones &Darkenwald.

### **3T4 – Environment Management**

**Unit I: Introduction to Environment Management:** Definition, Scope importance, Need for public awareness, sustainable development, Natural Resources- renewable and non- renewable resources, role of individual in conservation of natural resources( Forest, water, land, energy, mineral)

**Unit II: Environment Pollution:** Types of pollution- air, water, soil, noise, thermal and Nuclear, causes effectsna control measures, Global warming, green house effect, Ozone layer depletion, Acid rains

**Unit III: Human Population:** Global population growth, variations among nations, Population explosion-causes and impact, Family welfare Programs-methods of sterilization; Infectious diseases, water related diseases, risk due to chemicals in food, Cancer and environment

**Unit IV: Social Issues in Environment:** Construction of dams: problems and concerns of resettlement, rehabilitation of affected people; Environmental ethics- issues and possible solutions, resource consumption patterns and need for equitable utilization; Equity disparity in western and eastern countries; Urban and rural equity issues; Need for gender equity.

**Reference Books:**

1. A text book of environmental by K M Agrawal, P K Sikdar, S C Deb”, published by Macmillan
2. Environment management by N K Uberoi”, published by Excel Books
3. Environment management by Dr. Swapan Deb”, published by Jaico Publishing House.
4. Environmental Management by S K Agrawal”, published by A.P.H. publishing Corporation.

### **Bachelor of Business Administration (BBA) Examination Semester - IV**

#### **4T1 – Principles of Human Resource Management**

**Unit 1 : Introduction to Human Resource Management:** Definition, concept and Scope of H. R. M., Difference between Personnel Management and H.R.M., Importance and Functions of H.R.M. Role of H.R Department.

**Unit 2 : Job Analysis, Job Design:** Meaning of Job Analysis, Uses, Process and methods of collecting data for job analysis, Job Description, Job Specifications. Meaning of Job Design, Techniques of Job Design

**Unit 3 : Human Resource Planning - Recruitment - Selection:** Definition and objectives of Human Resource planning, process of Human Resource planning factors influencing estimation of Human Resources, Concept of Recruitment & Selection, sources of recruitment, Selection Procedure

**Unit 4 : Induction & Training :** Concept of Induction, Training- Need for training, benefits of training, identification of training needs and methods/ types of training. Evaluation of effectiveness of training programs. Placement, Transfer, Promotion, Demotion.

**Reference Books:**

- Dr. S S Khanka : Human Resource Management,
- Aswathappa, K.; Human Resource and Personnel Management (Text and Cases), Tata McGraw Hill Publishing Company
- Dessler,Gary; Human Resource Management;Prentice Hall
- SubbaRao, Personnel and Human Resources management, HPH.
- Human Resource Management- Text and Cases-- VSP Rao

## **4T2 – Money, Banking and Finance**

**Unit I: Money** - Concept and functions of Money, Origin and development of Money, Limitations of Barter System, Classification of Money, Importance of Money, Qualities of Good Money, Defects of money.

**Unit-II – Banking and Finance** - Commercial Banking- Role and functions of Commercial Banks, Credit creation and its limitations Central Banking-Functions of Central Bank. Reserve Bank of India -Role in Indian Economy, Monetary & Non-Monetary functions of RBI.

**Unit III: National Income Determination-** Meaning, Method & Difficulties of Measuring National Income; Concept of GDP, GNP, NNP, PI, DPI. Inflation and Deflation- Types, Causes and Measures to Control.

**Unit IV: Monetary and Fiscal Policy-** Concept, Objectives, Instruments, Limitations of Monetary and Fiscal policy, Public Finance- Meaning, Scope and Importance of Public Finance, Public Finance Vs Private Finance.

**Reference Books:**

1. Appannaiah, Reddy &Shanthi, BBM Semester Economics, 2006, Himalaya Publishing House, Mumbai.
2. Chaturvedi D., Macro Economics, 2005, Galgotia Publishing Company, New Delhi.
3. Dominick Salvatore, Managerial economics in a Global economy, 2006, Thomson learning Press
4. Datt, Ruddar and K P M Sundharam, 2005, Indian Economy, S.Chand and Co. Pvt. Ltd. New Delhi
5. Jhingan, 2004, M.L., Money Banking International Trade and Public Finance, Ed. 8, Veranda Publishers, New Delhi.

6. Mithani D. M., Money, Banking, International trade and Public Finance,2006, Himalaya Publishing House, Mumbai
7. Samuelson, Paul Anthony and William D. Nordhaus, 1998, Economics, Ed. 6 New Delhi: Tata McGraw Hill Publishing Company Ltd, New Delhi.
8. Somashekhar N T., Money, Banking, International trade and Public Finance,2006,Himalaya Publishing House, Mumbai
9. Suma Damodran, Managerial Economics, 2006, Oxford University Press, New Delhi.

### **4T3 – Introduction to Sociology & Psychology**

**Unit I:Sociology as the Science of Society:** (a) Sociology – Meaning and Definitions, (b) Characteristics of Sociology as a science (empirical, theoretical, cumulative and nonethical), (c) Development of Modern Industrial Society – Characteristics, industrialism, capitalism, urbanism, liberal democracy, (d) Postmodern Society – Nature and Characteristics, (e) Culture – Meaning and elements, (cognitive elements, beliefs, values and norms and signs), Meaning, stages and agencies of socialisation.

**Unit II:Social Structure and Social Change:** (a) Structural aspects of social system – Institutions, groups, subgroups, roles, norms and values, (b) Social change – Its sources – Internal and External, (c) Types of Social Change – Changes in social values with reference to pattern variables, changes in occupational structure and demographic changes

**Unit III:Introduction to Psychology:**(a) Definition, Nature, Scope and Applications of Psychology. (b)Methods: Introspection, Observation, Experimental, Interview, Questionnaire and Case Study. (c)Contemporary Perspectives: Biological, Cognitive, Psychoanalytical, Humanistic, Evolutionary and Cross-cultural. (d)Biological Bases of Behaviour: Evolution, Genes and Behaviour. The Response Mechanism: Receptors, Effectors and Adjustors. (e)The Nervous System: The Basic Structure, Functions and Divisions of the Peripheral and Central Nervous System.

**Unit IV:Social Psychology:**(a)Introduction: Nature and Scope; Methods of Studying Social Behaviour: Observation, Experimental, Field Study, Survey, Sociometry and Cross-cultural. (b)Socialization: Agents and Mechanisms, Socialization and Deviation. (c)Perceiving Others: Forming Impressions; Role of Non-verbal Cues, Group stereotypes, Central Traits; Primary and Recency Effects; Models of Information Integration; Attribution of Causality: Biases and Theories (Jones and Davis, Kelley).

#### **Reference Books:**

1. Inkeles, Alex, "What is Sociology?", Prentice Hall of India, New Delhi, 1987
2. Jayaram N., "Introduction to Sociology", Macmillan India, Madras, 1988
3. Ghode R.N. and BhauDaydar, "Sociology: Basic Concepts", Spectrum Publications, Nagpur
4. Atkinson and Hilgard (2002). Introduction to Psychology. New York: Thomson Wadsworth
5. Feldman, R. S. (2006). Understanding Psychology. India: Tata McGraw Hill.
6. Feldman, R. S. (1985). Social Psychology: Theories, Research and Application. New York: McGraw Hill.
7. Myers, David, G (1994). Exploring Social Psychology. New York: McGraw Hill.

## **4T4 – Business Legislations**

**Unit I: Administration of law & legal system in India** - Introduction to legal aspects of Business in general; Freedom of Trade, Profession and Occupation (Constitutional Provisions).

**Unit II: Indian Contract Act (1872)** - a) Definition (Sec.2) b) Essential elements of a valid contract c) Competency to enter in contracts (Sec. 11 & 12).d) Consent – Free consent, Coercion, undue influence, fraud, misrepresentation, mistake (sec 13-23).Void Agreement (sec 24-30) f) Consequences of breach of contract (sec73-75).

**Unit III: The Companies Act (1956)** - Definition & characteristics of a company, Company distinguished from partnership, Kinds of Companies, Provisions relating to incorporation, lifting the Corporate Veil. Memorandum of Association, Doctrine of ultra-vires, Articles of Association, Doctrine of indoor management & constructive notice, Concept of Prospectus.**Company Management And Board Meeting :** Administrative Hierarchy, Board of Director – Director- Legal Position, Appointment, Qualification, Disqualification, Removals Power, duties, Liabilities etc. Managing Director – Meaning, Appointment, and Disqualification.Manager-Meaning, Disqualification.Company Meetings Meaning of meeting-General Body meeting – statutory Meeting, Annual General meeting, Extra ordinary meeting Board Meeting.

**Unit IV: The Consumer Protection Act,1986** Salient features of Act. Definitions- Consumer, Complaint, Services, Defect and Deficiency, Complainant. Rights and Reliefs available to consumer.Procedure to file complaint.Consumer Disputes Redressal Agencies.(Composition, Jurisdiction, Powers and Functions.) Procedure followed by Redressal Agencies. Introduction to GST

### **Reference Books:**

- 1) Business and Commercial Laws-Sen and Mitra.
- 2) An Introduction to Mercantile Laws-N. D. Kapoor
- 3) Business Laws-N. M. Wechlekar
- 4) Company Law-Avatar Singh
- 5) Law of Contract-Avtar Singh
- 6) Consumer Protection Act in India .Niraj Kumar
- 7) Consumer protection in India. V.K.Agrawal
- 8) Consumer Grievance Redressal under CPA. Deepa Sharma.

## **Bachelor of Business Administration (BBA) Examination**

### **Semester – V**

## **5T1 – Entrepreneurship Development**

**Unit I:Entrepreneur & Entrepreneurship:** Evolution of the concept of Entrepreneurs, Characteristics of an Entrepreneur, Distinction between an entrepreneur and a manager; functions of an entrepreneur, types of entrepreneurs, concept of intrapreneurs; growth of entrepreneurship in India, role of entrepreneurship in economic development.

**Unit II:Entrepreneurial growth:** Factors - Economic factors, non-economic factors, Government actions; Entrepreneurial competencies – meaning, major competencies, developing competencies; Entrepreneurship Development Programs (EDPs) - Need, objectives, course content of EDPs, phases of EDPs, evaluating EDPs.

**Unit III:Small Enterprises:** An introductory framework: Definition, characteristics, relationship between small and large units, rationale, objectives, scope, opportunities for entrepreneurial career, problems of SSIs; Project Identification and Selection (PIS) - Meaning of project, project identification, project selection, contents of project reports, formulation of project reports; Project Appraisal - Concept, methods, economic analysis, financial analysis, market analysis, technical feasibility, managerial competence.

**Unit IV:Institutional& financial support to Entrepreneurs:** Need for institutional support, various institutions supporting entrepreneurship in India – MIDC, MSME, MCED, DIC, SSIB, MSSIDC, BIFR; Financial support to entrepreneurs: Commercial banks, other financial institutions – IDBI, IFCI, SFCs, SIDBI, venture capital.

**Reference Books:**

1. Entrepreneurship 6 th edition. Robert D Hisrich , Tata McGraw-Hill.
2. Kuratko- Entrepreneurship – A Contemporary Approach, (Thomson Learning Books)
3. Small-Scale Industries and Entrepreneurship. Desai, Vasant (2003). Himalaya Publishing House, Delhi.
4. S.S. Khanka – Entrepreneurial Development (S. Chand & Co.)
5. Exploring Entrepreneurship, Blundel& Lockett, Oxford University Press
6. Entrepreneurship, Roy, Oxford University Press

## 5T2 - Principles of Operations Management

**Unit I: Introduction to Operations Management:** Introduction to Operations Management, its Nature, Scope, Importance and Functions. Difference between production, manufacturing and service. Concept and types of production, mass, job-based, batch and assembly line production system. Types of services.

**Unit II: Facilities and Production Planning :** Factors affecting plant location, types of plant layouts – product layout, process layout, fixed position layout, cellular layout, types of service layouts. Concept of production planning, definitions of capacities, master production schedule, material planning. Introduction to maintenance.

**Unit III: Material Management:** Scope of materials management, Purchase and Stores Functions, Introduction to warehouse management, Concept of Lead time, re-order level, minimum and maximum stock, Basic concepts of Inventory management, inventory costs, ordering and carrying cost.

**Unit IV: Quality Management and Productivity:** Introduction to quality, dimensions of quality, concept of product, process and service quality. Introduction to Quality Management System, concept of TQM, ISO, Kaizen, Quality circles, Six-sigma.Concepts of productivity, machine, labour and cost productivity.

**Reference Books:**

1. Operations Management by Shridhar, Himalaya Publishing House
2. Operations Management Nair: TMH
3. Production and Operations Management, Adam & Ebert, Prentice Hall India
4. Operations Management by Chary ,Mcgraw Publications, 4th edition.
5. Production and Operations Management, K.Aswathappa&K.ShridharaBhat, Himalaya Publication
6. Production and Operations Management, R.Panneerselvam, 3<sup>rd</sup> Edition, Eastern Economy Edition.

## 5T3 – International Business Environment

z

**Unit I: Introduction to International Business:** Importance, nature and scope of International business; Modes of entry into International Business; Internationalization process and managerial implications; Issues in foreign investments, technology transfer, pricing and regulations; International collaborative arrangements and strategic alliances; Concept and significance of balance of payments account

**Unit II: International Business Environment:** Economic, Political, Cultural and Legal environments in International Business. Framework for analyzing international business environment.

**Unit III: Global Trading and Investment Environment:** World trade in goods and services – Major trends and developments; World trade and protectionism – Tariff and non-tariff barriers; Foreign investments-Pattern, Structure and effects; Movements in foreign exchange and interest rates and their impact on trade and investment flows.

**Unit IV: International Economic Institutions and Agreements:** WTO, WTO and Developing Countries, IMF, World Bank, UNCTAD, International commodity trading and agreements. Structure and functioning of EC and NAFTA, Regional Economic Groupings in Practice: Levels of Regional Economic Integration; Regionalism vs. Multilateralism; Important Regional Economic Groupings in the World.

**Reference Books:**

1. Bennet, Roger, International Business, Financial Times, Pitman Publishing, London.
2. Bhattacharya, B., Going International: Response Strategies of the Indian Sector, Wheeler Publishing, New Delhi.
3. Czinkota, Michael R., et. al., International Business, the Dryden Press, Fortworth.
4. Danoes, John D. and Radebaugh, Lee H., International Business: Environment and Operations, Addison Wesley, Readings.
5. Hill, Charles W. L., International Business, McGraw Hill, New York.

## **5T4 – Research Methodology**

**Unit I: Introduction** - Meaning, Objectives and Types of research, Research Approach, Research Process, Relevance & scope of research in management. **Research Design** - Features of good Design, Types of Research Design,

**Unit II: Sampling Design** - Steps in sample Design, Characteristics of a good sample Design, Probability & Non Probability sampling. Hypothesis – Meaning, Types, Process, Formation of Hypothesis, Testing of Hypothesis

**Unit III: Measurement & scaling techniques** - Errors in measurement. Test of sound measurement, Scaling and scale construction technique. Attitude Measurement and Scales: Introduction to attitude - Various Methods to measure attitude.

**Unit IV: Methods of data collection** - Primary data – questionnaire and interviews; Collection of secondary data. **Interpretation of data** - Techniques of Interpretation, Report writing, Layout of a project report, preparing research reports.

**Reference Books:**

1. Research Methodology – C.R. Kothari
2. Business Research Methods – Naval Bajpai
3. Business Research Methodology – J K. Sachdev

**Bachelor of Business Administration (BBA) Examination**  
**Semester - VI**

**Elective A - Financial Management**  
**Paper 1**

**6T1- Fundamentals of Business Finance**

**Unit -I: Mathematics of Finance** – Concept of Time Value of Money, Compounding and Discounting of single cash flow, series of cash flow and annuity. Simple problems based on Time Value of Money

**Unit -II: Capital Budgeting** - Premises of Capital Budgeting Decisions, Tools in Capital Budgeting, Pay Back Period, Average Rate of Return on Investments, Net Present Value, IRR.

**Unit -III: Dividend decision and Management of Earnings** - Relevance approach of dividend valuation models, Irrelevance approach of dividend valuation models, Stability of dividend, Factors determining dividend decisions.

**Unit IV: Corporate Restructuring** - Reasons & drivers of corporate restructuring, Methods of restructuring- mergers (types of merger), takeovers, acquisitions (Types of Takeover/ acquisition), divesting/ demerger, spin-off, split ups

**Simple Numerical will be based on Unit I, II and III only.**

**Reference Books:**

- 1) Financial Management by Ravi Kishore, Taxmann Publications Pvt Ltd
- 2) Financial Management – I M Pandey – S. Chand & Co. Pvt. Ltd. (Old editions in Vikas Publications)
- 3) Financial Management , Theory, Concepts and Problems by Dr. R. P. Rustagi, Taxmann Publications Pvt Ltd
- 4) Financial Management, Text, Problems and Cases, by M Y Khan and P K Jain, McGraw-Hill Publications

**Paper 2**  
**6T2 – Advanced Financial Management**

**Unit -I: Banking Services and Operations** -Definition of banks, Functions of Commercial Banks, Banking Structure in India, Role of RBI vis-a-vis other commercial banks, Introduction to Bank Deposits, Types of Deposit Accounts, KYC

**Unit -II: Insurance Services** - Concept of insurance, principles of insurance, Traditional and Unit linked policies, individual and group policies, Different type of insurance products – whole life products, term assurance annuities, and endowment, Medi-Claim and health insurance products.

**Unit -III: Mutual Funds** - Organization Structure, Classification of Funds -Types of Funds – Equity Funds, Debt Funds, Liquid Funds, Balanced Funds, Monthly Income Plans, ETFs, Commodity Funds, Fund of Funds, Sectoral Funds, ELSS; Calculation of NAV; Systematic Investment Plans; Concept of Cost Averaging and Value Averaging.

**Unit IV: Capital Market** - Introduction to Capital Markets, Structure of Capital Market, Primary and Secondary Market, Stock Exchanges in India- BSE, NSE, OTCEI, ICSEI, Functions of Stock Exchange, SEBI and Role of SEBI in Capital Market

**Reference Books:**

- 1) Indian Financial System by Bharti V Pathak Pearson Publications
- 2) Indian Financial System by M Y Khan McGraw-Hill Publications
- 3) Financial Markets and Services , Gordon and Natrajan, Himalaya Publications
- 4) Financial Services, SandeepGoel, PHI Publications
- 5) Know Your Bank (volume I to VI) published by IIBF
- 6) Life and Health Insurance, 13th Edition by Kenneth Black Jr., Harold D. Skipper Jr., PHI Publications

## **Elective B-Human Resource Management**

### **Paper 1**

#### **6T1- Fundamentals of Human Resource Management**

**Unit 1 :**Introduction: Concept, HRM ; Evolution of HRM; Challenges of HRM; Role of Human Resource Management in strategic management, Characteristics of Workforce today

**Unit 2 : Performance Appraisal** :Concept and Introduction, Importance, process – methods of performance appraisal – Traditional & Modern Methods.

**Unit 3 : Job Evaluation & Compensation management:** Concept, objectives and methods of Job Evaluation, Wages & Salary, components of employee remuneration -- base and supplementary. Wages & Salary Administration

**Unit 4 : Legal Aspects :**Introduction to Provident Fund Act, Employee State Insurance Corporation Act, Minimum Wages Act, Industrial Relations Act, Industrial Dispute Act.

**Reference Books :**

- Dr. S S Khanka : Human Resource Management,
- Aswathappa, K.; Human Resource and Personnel Management (Text and Cases), Tata
- Rao,V S P,Human Resource Management,Text and Cases
- Dessler,Gary; Human Resource Management;Prentice Hall
- SubbaRao, Personnel and Human Resources management, HPH.
- SeemaSanghi , Human Resource Management

### **Paper 2**

#### **6T2- Advanced Human Resource Management**

**Unit 1 : Job Analysis, Job Design & Job Evaluation:** Job Analysis & Design - Job Analysis – Meaning, Uses, Competency approach to job analysis, Job Description, Job Specifications & Role Analysis, Factors affecting Job Design, Techniques of Job Design, Cases and Exercises in understanding Job Analysis. Job Evaluation –Concept, objective & methods.

**Unit 2:Performance Appraisal:** Nature, Objectives of Performance Appraisal, Performance Planning and Potential Appraisal, Pitfalls of Appraisal, Praise and Recognition; Rewards and Incentives; Promotions. HR Records, MIS HR Reports, HR Formats – Personnel Files, Attendance, Leave, Medical Records.

**Unit 3 : Industrial Relations :**Nature, Concept, scope, objectives & significance of Industrial Relations, Trade unions, Functions of Trade Unions - Forms of collective bargaining - Workers' participation in management, Nature & causes of Industrial Dispute and Settlement of Industrial Disputes.

**Unit 4 : Ancillary Topics:** Goal Setting, Promotions and Transfers; Separations- Retirement, VRS, Deputation, Death, Retrenchment, Pink Slips, Competency Mapping, Employee Manual / PPP Handbook. Concept of Retention and Attrition. Online recruitment; Employee referrals; Recruitment process outsourcing Head hunting; Downsizing; Voluntary retirement schemes (VRS) HR outsourcing, Job Rotation & Transfer

#### Reference Books :

- Dr. S S Khanka : Human Resource Management,
- Aswathappa, K.; Human Resource and Personnel Management (Text and Cases), Tata
- Rao,V S P,Human Resource Management,Text and Cases
- Dessler,Gary; Human Resource Management;Prentice Hall
- SubbaRao, Personnel and Human Resources management, HPH.
- SeemaSanghi , Human Resource Management

## Elective C-Marketing Management

### Paper 1

#### 6T1- Fundamentals of Marketing Management

**Unit - I: Integrated Communication Mix (IMC)** -meaning, importance; Communication meaning, importance, process, communication mix-components, role in marketing,

**Unit - II: Branding** - meaning, brand recall, brand positioning. Importance of branding and advertising. Digital Marketing – Scope and Importance, Search Engine Optimisation (SEO), Out of home (OOH).

**Unit - III: Sales Organisation and Relationship** : Purpose of sales organization, Types of sales organization structures, Sales department external relations, Distributive network relations.

**Unit - IV: Concept of services** - Nature & characteristics of services, Marketing Mix and strategies in Service Marketing, Product decisions, pricing strategies, Promotion of services, Placing or Distribution methods of services, Service vision & Strategies: Includes Advertisements, Branding, Packaging of Services.

#### Reference Books:

1. Marketing Mgt. by Philip Kotler (PHI)
2. Marketing Management by RajanSaxena, Tata McGraw Hill, Education
3. Service Sector Management by S M Jha
4. Sales Management - Cundiff, Still, Govoni

## **Paper 2**

### **6T2- Advanced Marketing Management**

**Unit - I : Sales Management :** - Evolution of sales function, Objectives of sales management positions, Functions of Sales executives, Relation with other executives, Salesmanship : Theories of personal selling, Types of Sales executives, Qualities of sales executives, Prospecting, pre-approach and post-approach, Organising display, showroom & exhibition

**Unit - II: Distribution network Management:** Product Distribution Channel & Types of Marketing Channels, Factors affecting the choice of channel, Types of middleman and their characteristics, Wholesale and Retail, Supply Chain Management (SCM) and introduction to Supply Chain Management, Various types of Warehousing and transportation facilities.

**Unit - III: Service Quality** - Impact of service Quality, Approaches to service Quality, Ten original dimensions of Service Quality, How to improve service Quality, Service quality information systems, Benchmarking and certification. Marketing challenges in services business; Classification of services; End user, Profit orientation, Services tangibility, People based services, Expertise. Role of IT in service industry.

**Unit - IV: Customer Retention & Relationship Marketing:** CB-Services, Facts & Importance of CB in services, Evolution of Relationship Marketing, Enhancement of Internal & External relationships, Customer Retention (Operations, Delivery System). Various types of services offered to customers – hotel, hospital, transport, insurance, banking and education.

#### **Reference Books:**

1. Marketing Mgt. by Philip Kotler (PHI)
2. Marketing Management by RajanSaxena, Tata McGraw Hill Education
3. Service Sector Management by S M Jha
4. Sales Management - Cundiff, Still, Govoni

**R.T.M.Nagpur University, Nagpur**

**Syllabus**

**Bachelor of Business Administration (BBA)**

**Semester – I**

**English(1T1)**

**Prescribed Text: INSPIRATIONS –Raghav Publishers & Distributors, Nagpur**

**Edited by : Board of Editors**

**UNIT-I -Prose**

1. Home coming Dr. Tapati Dey
2. The Lighthouse Keeper of Aspinwall –Henry Sienkiewicz
3. Ilyas-Leo Tolstoy

**Unit-II - Prose**

1. Social Media- Dr.Sujata Chakravorty
2. World of Advertising- Dr.Pranjali Kane
3. OYO -Reinventing Hospitality

**Unit III: (A)Communication**

i)Business Manners- Body Language, Gestures, Telephone etiquette, E-mail etiquette.

**(B) Business Correspondence**

Business Letter Writing- Enquiries and replies, Placing and fulfilling orders , Complaints and follow-up letters , Sales letters, Circular letters, Application for employment and Resume.

**Unit IV:** Basic Grammar – Tense, Forms of the Verb, Preposition, Articles, Punctuation, Single Word for a Group of Words, Sentence Construction, Comprehension.

## **Reference Books:**

1. A Course in English Grammar by R.N.Bakshi - Orient Longman, 2003-2007.
2. The grammar Tree, MridulaKaul, BeenaSugathan, ArchanaGilani- Oxford university press 2011
3. Grammar for All, N Ramalingam, Himalaya Publishing House, 2nd Edition 2014.
4. John Eastwood, Oxford Practice Grammar with answers
5. High School English Grammar & Composition, Wren & Martin Revised by NDV Prasad Rao, S Chand Publication
6. Business Correspondence & Report Writing, R C Sharma &Krisha Mohan, 3rd Edition, Tata Mcgrall Hill
7. Communication, C S Rayudu, Himalaya Publication July 2008
8. Business Communication, Urmila Rai, S M Rai, Himalaya Publication 9th Edition.

## **Bachelor of Business Administration (BBA)**

### **QUESTION PAPER PATTERN**

#### **1T1- ENGLISH**

**Time:3 Hrs** **Maximum Marks – 80**

**VSAQ-Very Short answer questions to be answered in one or two sentences**

**SAQ-Short answer questions to be answered in 75-100 words**

**PRQ-Personal Response questions to be answered in 75-100 words**

- |   |                             |
|---|-----------------------------|
| Q1. A. TWO SAQs out of THREE from Prose section of Unit I (2x5)=                                    | 10 Marks                    |
| B.TWO PRQs from Prose Section of Unit I (2x5)=  | 10 Marks                    |
| Q2. A. Two SAQs out of THREE from Prose section of Unit II (2x5)=                                   | 10 Marks                    |
| B.TWO PRQs from Prose Section of Unit II (2x5)=   | 10 Marks                    |
| Q.3. (A) TWO out of FOUR Questions from UNIT-III(A)<br>(Business Manners)                           | (2 X 5)=10 Marks            |
| (B) ONE out of TWO Questions from UNIT-III(B)<br>(Business Letter Writing)                          | ( 1 X 5 ) Marks =0 5 Marks  |
| (C)ONE out of TWO Questions from UNIT-III(B)<br>(Business Letter Writing)                           | ( 1 X 05 ) Marks = 05 Marks |
| Q.4.(A) .Comprehension of Unseen Passage<br><br>(Five VSAQs based on the given Passage)             | 5 X 2 Marks= 10 Marks       |
| (B) Five items out of Six based on any one of the Grammar/Vocabulary items prescribed in<br>UNIT-IV | 5 X 1 Mark = 5 Marks        |
| (C) Five items out of Six based on any one of the Grammar/Vocabulary items prescribed in<br>UNIT-IV | 5 X 1 Mark = 5 Marks        |

**INTERNAL ASSESSMENT OF ENGLISH AND BUSINESS COMMUNICATION: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from units from Units III, IV & V with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons prescribed in the syllabus and give a **powerpoint presentation/oral presentation**.

**2 Assignments–5+5 = 10 Marks**

**Powerpoint Presentation/Oral Presentation–5 Marks**

**Attendance-5 Marks**

**TOTAL–20 MARKS**

## **SEMESTER-II**

### **Bachelor of Business Administration (BBA)**

#### **2T4 – ENGLISH**

##### **UNIT I: Prose**

**Prescribed text : INSPIRATIONS - Raghav Publishers & Distributors, Nagpur**

**Edited by : Board of Editors**

1. The Dispenser of Holy Water- Guy de Maupassant
2. After Twenty Years-O.Henry
3. The Wall- Dr.Sunilkumar Navin

##### **UNIT II: Prose**

**Prescribed text : INSPIRATIONS - Raghav Publishers & Distributors, Nagpur**

- 1.Beware, You are Being Tracked!- Dr.Supantho Bhattacharya
- 2.What is integrity? Subroto Bagchi
3. Unsung Women Achievers of Contemporary India-Dr.Subhashree Mukherjee

##### **UNIT III -Business Communication**

- Memorandum Writing
- Notice, Agenda and Minutes
- Writing Advertisements for: Rent, Sale, Situations Vacant

##### **Unit IV -Basic Grammar& Vocabulary**

- Subject-Verb-Agreement / Concord of Nouns, Pronouns and Possessive Adjectives
- Spotting errors and rewriting sentences correctly.
- Synonyms & Antonyms (based on the exercises at the end of the prescribed lessons from **INSPIRATIONS**)
- Words Often Confused

## **Text Book**

### **UNIT I & II: INSPIRATIONS – Raghav Publishers & Distributors, Nagpur**

Edited by: Dr. Indrajit Orke, Dr. Manjushree Sardeshpande, Dr. Maroti Wagh, Dr. Narayan Mehare, Dr. Veena Ilame

## **Reference Books**

### **UNIT III**

1. Developing Communication Skills by Krishna Mohan and Meera Banerji ( Trinity )
2. Write Right by Sarita Manuja ( Macmillan/ Trinity )

### **UNIT IV**

1. Macmillan Foundation English by R. K. Dwivedi and A. Kumar ( Macmillan/Trinity )
2. Learners' English Grammar and Composition by N. D. V. Prasad Rao ( S.Chand Publication )
3. Developing Communication Skills by Krishna Mohan and Meera Banerji ( Trinity )

**BBA**  
**(QUESTION PAPER PATTERN)**  
**2T4 - ENGLISH**

**Time : 3 HRS**

**[Maximum Marks – 80]**

**VSAQ-Very Short answer questions to be answered in one or two sentences**

**SAQ-Short answer questions to be answered in 75-100 words**

**PRQ-Personal Response questions to be answered in 75-100 words**

**Q.1. (A) TWO out of THREE SAQS to be answered in about 75-100 words –**

**UNIT-I (Prescribed Text)**

**2 X 05Marks = 10 Marks**

**(B) THREE VSAQs to be answered in about one or two sentences –**

**UNIT-I (Prescribed Text)**

**3x2 Marks = 06 Marks**

**(C) ONE PRQ out of TWO to be answered in 75-100 words**

**From Unit-I**

**1x4marks-04**

**Q.2. (A) TWO out of THREE SAQS to be answered in about 75-100 words –**

**UNIT-I I-(Prescribed Text)**

**2 X 05Marks = 10 Marks**

**(B) THREE VSAQs to be answered in about one or two sentences –**

**UNIT-II (Prescribed Text)**

**3x2 Marks = 06 Marks**

**(C) ONE PRQ out of TWO to be answered in 75-100 words**

**Unit -II**

**1x4marks-04**

**Q.3. (A) ONE out of TWO items on Memorandum Writing – UNIT-III**

**1 X 5 Marks = 05 Marks**

**(B) ONE out of TWO questions**

**based on Notice, Agenda and Minutes – UNIT-III**

**1 X 05 Marks = 05 Marks**

**(C) ONE out of TWO questions**

**based on Writing Advertisements- UNIT-III**

**1 X 05 Marks = 05 Marks**

**(D) Report Writing**

**05 Marks**

**Q.4.(A) FIVE items out of SEVEN**

**based on Subject-Verb- Agreement/Concord (fill in the blanks )- UNIT IV      5 x 1 Mark = 5 Marks**

**(B) FIVE items out of SEVEN**

**based on Spotting Errors and Rewriting Sentences correctly. – UNIT-IV**

**5 x 1 Mark = 5 Marks**

**(C) FIVE items out of SEVEN**

**Synonyms and Antonyms– UNIT-I & II**

**5 x 1 Mark = 5 Marks**

**(D) FIVE items out of SEVEN**

**based on Words Often Confused ( fill in the blanks) – UNIT- IV**

**5 x 1 Mark = 5 Marks**

## **INTERNAL ASSESSMENT OF ENGLISH AND BUSINESS COMMUNICATION: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from units from Units III, IV & V with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons prescribed in the syllabus and give a **powerpoint presentation/oral presentation.**

**2 Assignments–5+5 = 10 Marks**

**Powerpoint Presentation/Oral Presentation–5 Marks**

**Attendance-5 Marks**

**TOTAL–20 MARKS**



RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR (Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Public Universities Act, 2016)

DIERCTION NO. 5....OF 2020

**ADMISSIONS AND EXAMINATIONS LEADING TO THE AWARD OF DEGREE OF  
BACHELOR OF COMMERCE (COMPUTER APPLICATION) (B.C.C.A.) (NEW) (CREDIT  
BASED SEMESTER PATTERN) DIRECTION 2020.**

**Whereas**, the Maharashtra Public Universities Act, 2016(VI of 2017) (hereinafter the Act VI of 2017) has come in to force in the State of Maharashtra, with effect from 1<sup>st</sup> March 2017, repealing the Maharashtra Universities Act,1994;

AND

**Whereas**, the Rashtrasant Tukkoji Maharaj Nagpur University (hereinafter the ‘University’), hitherto governed by the Maharashtra Universities Act,1994, is now being governed by the Act (VI of 2017);

AND

**Whereas**, under section 34(2) of the Act VI of 2017 the University shall have only four faculties specified in said section;

AND

**Whereas**, the composition of each faculty in the University is to be such as may be prescribed by the University and the University has issued Direction No. 15 of 2017 prescribing the composition of each faculty in the University; whereby erstwhile faculty of commerce is included in the new Faculty of Commerce and Management;

AND

**Whereas**, the university has issued the Direction No. 10 of 2019 prescribing certain Common conditions for the entire undergraduate and post-graduate programmes /courses in the university;

AND

**Whereas**, the University had issued the Direction No. 59 of 2016 introducing the Bachelor of Commerce (Computer Application)-(B.C.C.A.) (Credit Based Semester Pattern) programme in the former faculty of Commerce from the academic session 2016-17;

AND

**Whereas**, the Board of Studies, in its meeting held on 26.02.2019 recommended minor

S  
R

changes in the syllabus which were approved and recommended in the Faculty of Commerce and Management in its meeting dated 30.5.2019 and these changes have been approved by the Academic council in its meeting dated 10.6.2019

**AND**

**Whereas**, by virtue of the provisions of the proviso to section 12(8) of the Act the Direction No. 59 of 2016 has lapsed, necessitating issuance of the fresh Direction incorporating the provisions of Direction No. 59 of 2019 along with the minor changes in the syllabus as recommended and approved by the various academic bodies;

**AND**

**Whereas**, Ordinance making involves a time consuming process and there is necessity to issue a fresh Direction for regulating the admissions and examinations of the programme leading to the award of the degree of Bachelor of Commerce - (Computer Application) (B.C.C.A.) (New)(Credit Based Semester Pattern) in the faculty of Commerce and Management,

Now, therefore, I, Dr. Siddharthavinayaka P. Kane, Vice-Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of the powers vested in me under Section 12(8) of the Maharashtra Public Universities Act of 2016 do hereby issue the following Direction:

1. This Direction shall be called "**ADMISSIONS AND EXAMINATIONS LEADING TO THE AWARD OF DEGREE OF BACHELOR OF COMMERCE (COMPUTER APPLICATION) (B.C.C.A.) (NEW) (CREDIT BASED SEMESTER PATTERN) DIRECTION 2020**".

2. This Direction shall govern all new admissions and examinations for First semester in the academic session 2019-2020 and onwards.

3. **INTERPRETATION CLAUSE:** In this Direction, unless the context requires otherwise the words and phrases shall have following meaning:-

- a. "**Academic Council**" means Academic Council of R.T.M. Nagpur University.
- b. "**ATKT**" refers to allowed to keep term in higher semester.
- c. "**Board of Studies**" means Board of Studies for various subjects of commerce in the faculty of Commerce and Management in the University.
- d. "**Competent Authority**" (for admission purpose) means an "Authority" established or assigned the duty to regulate admissions in the course by the Government of Maharashtra or an authority constituted by the University, for this purpose.

- e. "**Credit Points**" refer to the product of No. of credits multiplied by the Grade Point for a given course/paper.
- f. "**Credit**" (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and a multiplier of half (1/2) for practical (laboratory) hours.
- g. "**Course**" means a paper/subject (theory or practical) prescribed for any semester of the programme.
- h. "**Cumulative Grade Point Average (CGPA)**" refers to the Cumulative Grade Point Average weighted across all semesters (4 semesters)
- i. "**Degree**" means the Under Graduate Degree awarded after successful completion of the programme governed by this Direction.
- j. "**Fees**" means the fees prescribed by the University/ Shikshan Shulka Samiti of Government of Maharashtra, for the Under Graduate programme under this Direction, from time to time.
- k. "**Grade letter**" is an index to indicate the performance of a student in a particular course (Paper). It is the transformation of actual marks secured by a student in a course/paper. Grade letters are O, A, B, C, P, F and AB.
- l. "**Grade Point**" is the weightage allotted to each grade letter depending on the range of marks awarded in a course/paper.
- m. "**Graduate programme**" means Bachelors' degree programme in Commerce (Computer Application).
- n. "**Semester Grade Point Average (SGPA)**" refers to the performance of the student in a given semester. SGPA is based on the total credit points earned by the student in all the courses and the total number of credits assigned to the courses/papers in a Semester.
- o. "**Student**" means student admitted to Bachelors degree programme in commerce under this direction.
- p. "**University**" means Rashtrasant Tukadoji Maharaj Nagpur University.

#### 4. ELIGIBILITY FOR ADMISSION:

- a. Subject to the provisions of general ordinances of the university regarding admissions in various courses of the university, including reservation of seats, an applicant for admission to this programme, governed by this Direction, shall have passed:-
  - i. XII Standard Examination of the Maharashtra State Board of Secondary and Higher

Secondary Education, with English at Higher or Lower level and any Modern Indian Language at higher or lower level with any combination of optional subjects;

OR

ii. XII Standard Examination of Maharashtra State Board of Secondary and Higher Secondary Education in Vocational Stream with one language only, or any other examination recognized as equivalent thereto; in such subjects and with such standards of attainments as may be prescribed to be Minimum Competency Vocation Course (MCVC) by the competent authority.

OR

iii. Any other Equivalent Examination of any other State Board, Central Board or International Board in 10+2 pattern with English language as a compulsory subject and any combination of other subjects.

OR

iv. Any equivalent Qualification from any foreign country recognized by the university.

b. No person shall be admitted to this Programme, if he has already passed the same Programme or a Programme of any other statutory University, which has been recognized as equivalent to this programme.

c. A student admitted to the programme under this Direction shall not be allowed to join any other programme in this University or any other University simultaneously. Any violation of this condition will amount to an unfair practice and shall be actionable as per the relevant rules of the university.

**5. THE DURATION OF THE PROGRAMME:** The duration of the programme shall be of **three** academic years consisting of **six** semesters with university examination at the end of each semester.

**6. THE STRUCTURE OF THE PROGRAMME:**

i. The Bachelor of Commerce Computer Application (B.C.C.A.) (Credit Based Semester Pattern) programme shall consist of Six Semesters. The no. of courses in each semester, the maximum marks and the credits for each course and the minimum passing marks for each course, absorption scheme in respective semesters shall be as detailed in APPENDIX- I to this Direction. Detail syllabus & paper pattern is enclosed in APPENDIX-II.

ii. For all Theory Papers there shall be FIVE Periods Per week per Subject of 48 Minutes duration each. Each Theory Paper must cover minimum 60 Clock Hours of Teaching in each semester.

iii. The college shall offer the subjects of any particular Elective Groups only if 20 or more

students are opting for the particular subject.

- iv. The fees for the programme and the University examinations shall be as prescribed by the University from time to time.
- v. The name and number of courses, passing marks, pattern of examination and credits assigned etc. shall be as given in APPENDIX -I, AND II to this Direction.

#### **7. RULES OF EXAMINATION:**

i. The Examinations for Semesters I, II, III, IV, V and VI shall be held twice a year. The university examinations shall be held at such places and on such dates as may be notified by the University.

ii. the passing heads in respect of all the courses, including languages, shall consist of the university theory examination and internal assessment marks taken together.

iii. In order to pass any subject (course) a student must secure not less than 40 % of the maximum marks prescribed for that course, i.e. to say, out of total 100 marks (80 for university examination and 20 for internal assessment), the student must obtained minimum 40 marks together in the university examination and internal assessment.

iv. The results of successful candidates at the end of semester-VI shall be classified on the basis of aggregate marks obtained in all the six semesters.

v. The candidates who pass all the semester examinations in the first attempt and have completed program in minimum prescribed period for the programme, are eligible for ranks.

vi. The results of the candidates who have passed the Semester-VI examination but not passed the lower semester examinations shall be declared as NCL (not completed lower semester examinations). Such candidates shall be eligible for the Degree only after successful completion of all the lower semester examinations.

vii. Percentage of marks for declaring class:

Distinction- 75% and above (First Class with Distinction).

First Class - 60% and above, upto 75%

Second Class - 45% and above but less than 60%.

Third Class - 40% and above but not more than 45%

viii. An unsuccessful examinee at any end semester examination shall be eligible for re-examination on the payment of a fresh Examination fees prescribed by the University.

ix. As examinee who has successfully passed the examination of all the semesters shall, on payment of the prescribed fees be entitled to receive a Degree of Bachelor of Commerce (Computer Application) in the prescribed form signed by the Vice-Chancellor.

x. The provisions of Ordinance No. 3 of 2007 for the award of grace marks for passing an examination, securing higher grade in subject(s) as updated from time to time shall apply to the examination under this Direction.

**8. CONVERSION OF MARKS INTO GRADES AND CALCULATIONS OF GPA (GRADE POINT AVERAGE) AND CGPA (CUMULATIVE GRADE POINT AVERAGE):**

The overall evaluation of a student shall be designated in terms of Grade. The abbreviations used in grade computation and the evaluation mechanism and formulae used are as follows:-

Abbreviations and Formulae :

G :Grade

GP : Grade Points

C :Credits

CP : Credit Points

CG : Credits X Grades (Product of credits & Grades)

SGPA =  $\Sigma$ CG: Sum of Product of Credits & Grades points /  $\Sigma$ C: Sum of Credits points

SGPA : Semester Grade Point Average shall be calculated for individual semesters. (It is also designated as GPA)

CGPA : Cumulative Grade Point Average shall be calculated for the entire Programme by considering all the semesters taken together.

While calculating the CG the value of Grade Point 1 shall be consider Zero (0) in case of learners who failed in the concerned course/s i.e. obtained the marks below 40. After calculating the SGPA for an individual semester and the CGPA for entire programme, the value can be matched with the grade in the Grade Point table as per the Five (05) Points Grading System and expressed as a single designated GRADE such as O,A,B,C, F. (Fail).

Marks	Grade	Grade Points (out of 10)
85 TO 100	O	10
75 TO 84	A+	09
71 TO 74	A	08
61 TO 70	B+	07
55 TO 60	B	06
50 TO 54	C	05
40 TO 49	P	04
00 TO 39	F (Fail)	00
AB	AB(Absent)	00

<b>CGPA</b>	<b>Grade</b>	<b>Division</b>
<b>9.01 to 10</b>	O (Outstanding)	<b>First Division ( outstanding)</b>
<b>8.01to 9.00</b>	A+(Distinction)	<b>First Division ( Distinction)</b>
<b>7.01 to 8.00</b>	A (Very Good)	<b>First Division ( Very Good)</b>
<b>6.01 to 7.00</b>	B+(Good)	<b>First Division ( Good)</b>
<b>5.55 to 6.00</b>	B ( Above Average)	<b>Second Division (Above Average)</b>
<b>5.00 to 5.54</b>	C ( Average)	<b>Second Division ( Average)</b>
<b>4.00 to 4.99</b>	P ( Pass)	<b>Pass</b>
<b>0.00 to 3.99</b>	F ( Fail)	<b>Fail</b>
<b>0</b>	AB ( Absent)	<b>Absent</b>

Note:-Consider Grade Points equal to Zero for (C x G) calculations of failed Learner/s in the concerned course/s.

Conversion formula from CGPA to Percentage: % = (CGPA- 0.75)\* 10

The illustration for the conversion of marks into grades in a course and semester Illustrations of Calculation:- Pass

Subjects	Total Maximum Marks	Total Minimum Marks	Total Marks Obtained	Grade(G)	Grade points (GP)	Credit of the Course(C)	(Credit X (Grade points))( CX GP)	SGPA=ΣCG/ΣC
1T1	100	40	60	A	9	4	36	SGPA =176/20 =8.8  Grade B RESULT =PASS
1T2	100	40	50	B	8	4	32	
1T3	100	40	75	O	10	4	40	
1T4	100	40	70	A	9	4	36	
P-I	100	40	48	B	8	4	32	
<b>Total</b>	<b>500</b>	<b>200</b>	<b>303</b>	--	<b>44</b>	<b>20</b>	<b>176</b>	

Illustrations of Calculation:- Fail

Subjects	Total Maximum Marks	Total Marks Obtained	Grade (G)	Grade points(GP)	Credit of the Course (C)	(Credit) X (Grade points) (CX GP)	$SGPA = \Sigma CG / \Sigma C$
3T1	100	32	F	0	4	00	<b>SGPA</b> =72/20 =3.6 <b>Grade F</b> <b>RESULT</b> =FAIL
3T2	100	34	F	0	4	00	
3T3	100	60	B	8	4	32	
3T4	100	75	O	10	4	40	
P-I	100	33	F	0	4	00	
<b>Total</b>	<b>500</b>	<b>234</b>	--	<b>10</b>	<b>20</b>	<b>72</b>	

9. **ATKT Rules:** Rules of ATKT shall be as given in the following table:

Admission to Semester	Candidate should have filled in the examination form of the R.T.M. Nagpur University	Requirement of passing Semester and/or courses
II Semester	Semester - I	-
III Semester	Semester - II	Candidate should have passed in at least 50% of passing heads of Semester I and II taken together
IV Semester	Semester III	-
V Semester	Semester - IV	Candidate should have passed Semester I & II and Candidate should have passed in at least 50% of passing heads of Semester III &IV taken together*
VI Semester	Semester V	-

\*Note: For calculating the requirement of fifty percent passing heads fraction is to be ignored as per the provisions of Direction no. 10 of 2019.

10. This Direction shall be made applicable to the students who shall be admitted as regular

students in Semester -I of BCCA Part -I from the academic year 2019-2020, and shall be applied to succeeding examinations in phased manner.

11. All the students who had taken admission in BCCA programme under earlier Direction, i.e. 59 of 2016 (Old Course) shall continue to be governed by the said Direction till the New Programme reach the respective semester in natural progression, thereafter students of the old course shall be given three additional chances to clear the backlog, if any, thereafter they shall be absorbed in the New Programme under this Direction as per the absorption scheme appended to this Direction.
12. If any question of interpretation of any clause of this Direction arises the same shall be referred to the Dean, Faculty of Commerce and Management whose opinion shall be final and binding.

Nagpur

Date----- **5/3/2020**

*S. Kane*  
( Dr. Siddharthavinayaka P. Kane)  
Vice-Chancellor

## APPENDIX - I

### Teaching and Examination Scheme

#### B.Com. (Computer Application) (BCCA) NEW

##### (A) BCCA Part –I

##### Semester – I

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits
			Theory (Periods)	Practical (Periods)	Total (Periods)	Max Marks-Theory Paper (TH)	Max Marks – Internal Assessment	Total	Min Passing Marks	Max Mark - Practical (PR)	Min Passing Marks		
<b>Theory</b>													
1T1	English and Business Communication - I	I	5	-	5	80	20	100	40	-	-	100	4
1T2	Financial Accounting	II	5	-	5	80	20	100	40	-	-	100	4
1T3	Fundamentals of Computer	III	5	-	5	80	20	100	40	-	-	100	4
1T4	Programming in 'C'	IV	5	-	5	80	20	100	40	-	-	100	4
<b>Practical</b>													
1P1	Fundamentals of Computer & Programming in 'C'	P- I	-	6	6	-	-	-	-	100	40	100	4
	<b>Total</b>		<b>20</b>	<b>6</b>	<b>26</b>							<b>500</b>	<b>20</b>

**(B) BCCA Part –I**

**Semester – II**

<b>Course Code</b>	<b>Subjects</b>	<b>Paper</b>	<b>Teaching Scheme per weeks</b>			<b>Examination Scheme</b>						<b>Total Marks</b>	<b>Credits</b>	
						<b>Theory</b>			<b>Practical</b>					
<b>Theory</b>														
2T1	English and Business Communication - II	I	5	-	5	80	20	100	40	-	-	100	4	
2T2	Principles of Business Management	II	5	-	5	80	20	100	40	-	-	100	4	
2T3	Programming in C++'	III	5	-	5	80	20	100	40	-	-	100	4	
2T4	E-Commerce and Web Designing	IV	5	-	5	80	20	100	40	-	-	100	4	
<b>Practical</b>														
2P1	Programming in C++ & E-Commerce and Web Designing	P- I	-	6	6	-	-	-	-	100	40	100	4	
<b>Total</b>			<b>20</b>	<b>6</b>	<b>26</b>							<b>500</b>	<b>20</b>	

**(C)BCCA Part -II**

**Semester – III**

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks Credits		
						Theory			Practical					
			Theory (Periods)	Practical (Periods)	Total (Periods)	Max Marks - Theory Paper (TH)	Max Marks - Internal Assessment	Total	Min Passing Marks	Max Marks - Practical (PR)	Min Passing Marks			
<b>Theory</b>														
3T1	Environmental Studies	I	5	-	5	80	20	100	40	-	-	100	4	
3T2	Business Economics	II	5	-	5	80	20	100	40	-	-	100	4	
3T3	Visual Basic Programming	III	5	-	5	80	20	100	40	-	-	100	4	
3T4	Database Management System	IV	5	-	5	80	20	100	40	-	-	100	4	
<b>Practical</b>														
3P1	Visual Basic Programming &Database Management System	P- I	-	6	6	-	-	-	-	100	40	100	4	
	<b>Total</b>		<b>20</b>	<b>6</b>	<b>26</b>							<b>500</b>	<b>20</b>	

**(D) BCCA Part -II**

**Semester – IV**

<b>Course Code</b>	<b>Subjects</b>	<b>Paper</b>	<b>Teaching Scheme per weeks</b>			<b>Examination Scheme</b>						<b>Total Marks</b>	<b>Credits</b>	
						<b>Theory</b>			<b>Practical</b>					
<b>Theory</b>														
4T1	Statistical Techniques	I	5	-	5	80	20	100	40	-	-	100	4	
4T2	Business Law	II	5	-	5	80	20	100	40	-	-	100	4	
4T3	Core Java	III	5	-	5	80	20	100	40	-	-	100	4	
4T4	PHP & MySQL	IV	5	-	5	80	20	100	40	-	-	100	4	
<b>Practical</b>														
4P1	Core Java& PHP & MySQL	P- I	-	6	6	-	-	-	-	100	40	100	4	
	<b>Total</b>		<b>20</b>	<b>6</b>	<b>26</b>							<b>500</b>	<b>20</b>	

**(E) BCCA Part –III**

Course Code	Subjects	Paper	Teaching Scheme per weeks			Examination Scheme						Total Marks	Credits		
			Theory (Periods)	Practical (Periods)	Total (Periods)	Theory			Practical						
						Max Marks - Theory Paper (TH)	Max Marks - Internal Assessment	Total	Min Passing Marks	Max Marks - Practical (PR)	Min Passing Marks				
<b>Theory</b>															
5T1	Computerized Accounting using Tally	I	5	-	5	80	20	100	40	-	-	100	4		
5T2	VB.Net	II	5	-	5	80	20	100	40	-	-	100	4		
5T3	<b>SEC – I :</b> (i) Management Information Systems (ii) System analysis &Design	III	5	-	5	80	20	100	40	-	-	100	4		
5T4	<b>DSE– I :</b> (i) Cost & Management Accounting (ii) Corporate Accounting	IV	5	-	5	80	20	100	40	-	-	100	4		
<b>Practical</b>															
5P1	Tally & VB.Net	P- I	-	6	6	-	-	-	-	100	40	100	4		
	<b>Total</b>		<b>20</b>	<b>6</b>	<b>26</b>							<b>500</b>	<b>20</b>		

### BCCA Part -III

### Semester – VI

Course Code	Subjects	Paper	Teaching Scheme per weeks		Examination Scheme						Total Marks	Credits	
			Theory (Periods)	Practical (Periods)	Theory			Practical					
			Total (Periods)	Max Marks - Theory Paper (TH)	Max Marks - Internal Assessment	Total	Min Passing Marks	Max Marks - Practical (PR)	Min Passing Marks				
<b>Theory</b>													
6T1	C#.Net	I	5	-	5	80	20	100	40	-	-	100	4
6T2	<b>SEC– II :</b> (i) Python (ii) Ruby on Rail	II	5	-	5	80	20	100	40	-	-	100	4
6T3	<b>DSE– II :</b> (i) Entrepreneurship Development (ii) Company Law and Secretarial Practice	III	5	-	5	80	20	100	40	-	-	100	4
<b>Practical</b>													
6P1	C#.Net & SEC - II	P- I	-	6	6	-	-	-	-	100	40	100	4
6P2	<b>Project</b>	Project	-	6	6	-	-	-	-	100	40	100	4
	<b>Total</b>		<b>15</b>	<b>12</b>	<b>27</b>							<b>50</b>	<b>20</b>

#### Notes:

1. TH = Theory, PR = Practical, IA = Internal Assessment, SEC = Skill Enhancement Course, DSE = Discipline Specific Elective.
2. The practical shall be treated as a separate passing head.
3. Practical Record File should be prepared for Practical Subjects. Both subjects should be included in Practical Record File.
4. The Practical batch size shall be of 60 (Sixty) students per batch with Two students sharing one computer terminal.
5. The candidate has to pass theory papers and Practical Paper separately.
6. Above instructions are applicable for all semesters.

## **ABSORPTION SCHEME**

**B.Com (COMPUTER APPLICATION) (BCCA) NEW course**

**(From Annual Pattern Introduced in 2013-2014 & CBS Semester pattern introduced in 2016-17 (referred as OLD Course hereafter) to CBS semester Pattern introduced in Session 2019- 20 (referred as NEW Course hereafter)**

It is notified for general information of all concerned that the failure students of **B.Com. (Computer Application) (BCCA) Annual pattern Course (introduced in 2013-2014) & CBS Semester pattern (introduced in 2016-2017) old Course shall be absorbed in the NEW Course CBS Semester Pattern introduced from the session 2019-2020 examination with the following scheme.**

- 1. Those who have completed & passed B.Com. (Computer Application) (BCCA) Part-I as per Annual pattern course are eligible for admission in the B.Com. (Computer Application) (BCCA) SEM - III CBS Pattern introduced from the session 2019-2020 (NEW Course).**
  
- 2. Failure students of B.Com. (Computer Application) (BCCA) Part – I - Annual Pattern course and having ATKT as per rules mention in direction No. 12 of 2014, are eligible to take admission in B.Com. (Computer Application) (BCCA) SEM - III CBS Pattern introduced from the session 2019-2020 (NEW Course).**

**Such students will have to compulsorily fill Semester-I and Semester-II exam form and appear for the papers which have no exemptions as mentioned below-**

**(A) BCCA Part –I**

<b>Absorption Scheme B.Com.(Computer Application)</b>								
<b>CBS Semester Pattern Introduced in 2019-2020 (New course) with CBS semester pattern Introduced in 2016-2017 (Old course) and with Annual Pattern introduced in 2013-2014</b>								
<b>BCCA - PART - I - SEMESTER - I</b>								
Sr. No	CBS Semester Pattern - (New Course) introduced in 2019-2020	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2016-2017	Max Marks	Sr. No	(Annual Pattern) Course introduced in 2013-14	Max Marks
<b>Theory</b>			<b>Theory</b>			<b>Theory</b>		
1T1	English and Business Communication - I	80	1T1	English and Business Communication - I	80	1	English & Business Communication	80
1T2	Financial Accounting	80	1T2	Financial Accounting	80	3	Financial Accounting	80
1T3	Fundamentals of Computer	80	1T3	Fundamentals of Computer	80	4	Information Systems	80
1T4	Programming in <u>=C'</u>	80	1T4	Programming in <u>=C'</u>	80	6	Introduction to Operating Systems	80
<b>Practical</b>			<b>Practical</b>			<b>Practical</b>		
1P1	Practical - I :(Semester - I) - Fundamentals of Computer & Programming in <u>=C'</u>	100	1P1	Practical - I :(Semester - I) - Fundamentals of Computer & Programming in <u>=C'</u>	100		Practical-I : Microsoft Office	100

<b>Absorption Scheme B.Com.(Computer Application)</b>								
<b>CBS Semester Pattern Introduced in 2019-2020 (New course) with CBS semester pattern Introduced in 2016-2017 (Old Course) and with Annual Pattern course introduced in 2013-2014</b>								
<b>BCCA - PART - I - SEMESTER - II</b>								
Sr. No	CBS Semester Pattern - (New Course) introduced in 2019-2020	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2016-2017	Max Marks	Sr. No	(Annual Pattern) Course introduced in 2013-14	Max Marks
<b>Theory</b>			<b>Theory</b>			<b>Theory</b>		
2T1	English and Business Communication - II (Sem - II)	80	2T1	English and Business Communication - II (Sem - II)	<b>To be appeared compulsorily</b>			
2T2	Principles of Business Management	80	2T2	Principles of Business Management	80	2	Principles of Business Management	80
2T3	Programming in C++ (Sem - II)	80	2T3	Programming in C++ (Sem - II)	<b>To be appeared compulsorily</b>			
2T4	E-Commerce and Web Designing	80	2T4	E-Commerce and Web Designing	80	5	Information Technology	80
<b>Practical</b>			<b>Practical</b>			<b>Practical</b>		
1P1	Practical - I :(Semester - I) - Fundamentals of Computer & Programming in <u>=C'</u>	100	1P1	Practical - I :(Semester - I) - Fundamentals of Computer & Programming in <u>=C'</u>	100	1P1	Practical - I :(Semester - I) - Fundamentals of Computer & Programming in <u>=C'</u>	100
<b>All the students absorbed in semester pattern course will have to compulsorily fill Semester I and Semester II exam forms and appear for these two papers of (New course). Other papers if any to be appeared as per exemption mentioned</b>								

3. Those who have completed & passed **B.Com. (Computer Application)(BCCA) Part-I & B.Com. (Computer Application) (BCCA) Part - II as per (Annual Pattern) course** are eligible for admission in the **B.Com. (Computer Application) (BCCA) (NEW Course) CBS scheme (Part – III) Sem – V.**

4. Failure students of **B.Com. (Computer Application) (BCCA) Part - II (Annual Pattern) course** and having ATKT as per rules are eligible to take admission in **B.Com. (Computer Application) (BCCA) (NEW Course) Part-III Sem – V CBS pattern introduced in 2019-2020**. Such students will have to compulsorily fill Semester-III and Semester-IV exam form and appear for the papers which have no exemptions as mentioned below-

**(B) BCCA Part –II**

<b>BCCA - PART - II - SEMESTER - III</b>								
<b>CBS Semester Pattern Introduced in 2019-2020 with (New course) CBS semester pattern Introduced in 2016-2017 (Old Course) and with Annual Pattern introduced in 2013-2014</b>								
Sr. No	CBS Semester Pattern - (New Course) introduced in 2019-2020	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2016-2017	Max Marks	Sr. No	(Annual Pattern) Course introduced in 2013-14	Max Marks
<b>Theory</b>			<b>Theory</b>			<b>Theory</b>		
3T1	Environment Studies of Sem-III	80	3T1	Environment Studies of Sem-III	<b>To be appeared compulsorily</b>			
3T2	Business Economics	80	3T2	Business Economics	80	2	Business Economics	80
3T3	Visual Basic Programming	80	3T3	Visual Basic Programming	80	4	Programming Skills (C Prog.)	80
3T4	Database Management System	80	3T4	Database Management System	80	6	MIS & System Analysis	80
<b>Practical</b>			<b>Practical</b>			<b>Practical</b>		
3P1	Practical - I : (Semster - III) - Visual Basic Programming & Database Management System	100	3P1	Practical - I : (Semster - III) - Visual Basic Programming & Database Management System	100	7	Practical-I : Programming Skills	100

<b>BCCA - PART - II - SEMESTER - IV</b>								
<b>CBS Semester Pattern Introduced in 2019-2020 with (New course) CBS semester pattern Introduced in 2016-2017 (Old Course) and with Annual Pattern introduced in 2013-2014</b>								
Sr. No	CBS Semester Pattern - (New Course) introduced in 2019-2020	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2016-2017	Max Marks	Sr. No	(Annual Pattern) Course introduced in 2013-14	Max Marks
<b>Theory</b>			<b>Theory</b>			<b>Theory</b>		
4T1	Mathematics	80	4T1	Mathematics	80	1	Statistics Techniques	80
4T2	Business Law	80	4T2	Business Law	80	3	Cost & Management Accounting	80
4T3	Core Java of Sem - IV	80	4T3	<b>Core Java of Sem - IV</b>	<b>To be appeared compulsorily</b>			
4T4	PHP & MySQL	80	4T4	PHP & MySQL	80	5	E-Commerce & Web Designing	80
<b>Practical</b>			<b>Practical</b>			<b>Practical</b>		
4P1	<b>Practical - I : (Semester - IV) - PHP &amp; MySQL</b>	100	4P1	<b>Practical - I : (Semester - IV) - PHP &amp; MySQL</b>	100	8	<b>Practical-II : HTML</b>	100
All the students absorbed in semester pattern course will have to compulsorily fill Semester III and Semester IV exam forms and appear for these two papers of <b>(New course)</b> . Other papers if any to be appeared as per exemption mentioned								

5. Failure students of **B.Com. (Computer Application) (BCCA) Part-III (Annual Pattern) course** are having chances upto **winter 2019** examination (**Last Chance**). So they should appear **B.Com. (Computer Application) (BCCA) Part-III (Annual Pattern) course** examination & is required to clear their backlog. After that those who will have backlog, will have to compulsorily fill Semester-V and Semester-VI exam form of **BCCA (New course)** and appear for papers which have no exemptions as mention below –

**(C) BCCA Part –III**

<b>BCCA - PART - III - SEMESTER - V</b>								
<b>CBS Semester Pattern Introduced in 2019-2020 with (New course) CBS semester pattern Introduced in 2016-2017 (Old Course) and with Annual Pattern introduced in 2013-2014</b>								
Sr. No	CBS Semester Pattern - (New Course) introduced in 2019-2020	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2016-2017	Max Marks	Sr. No	(Annual Pattern) Course introduced in 2013-14	Max Marks
<b>Theory</b>			<b>Theory</b>			<b>Theory</b>		
5T1	Computerized Accounting using Tally	80	5T1	Computerized Accounting using Tally	80	2	Computerized Accounting (TALLY)	80
5T2	VB.Net	80	5T2	VB.Net	80	5	DBMS and Oracle	80
5T3	<b>SEC – I : (Any One)</b>		5T3	<b>SEC – I : (Any One)</b>				
	(i) Management Information Systems	80		(i) Management Information Systems	80	3	Software Product and Project Management	80
	(ii) System analysis & Design	80		(ii) System analysis & Design	80			
5T4	<b>DSE – I : (Any One)</b>		5T4	<b>DSE – I : (Any One)</b>				
	(i) Cost & Management Accounting	80		(i) Cost & Management Accounting	80	1	Business Law	80
	(ii) Corporate Accounting	80		(ii) Corporate Accounting	80			
<b>Practical</b>			<b>Practical</b>			<b>Practical</b>		
5P1	<b>Practical - I : (Semester - V) - Computerized Accounting using Tally &amp; Visual Basic</b>	100	5P1	<b>Practical - I : (Semester - V) - Computerized Accounting using Tally &amp; Visual Basic</b>	100	6	Practical-I : Tally	100

<b>BCCA - PART - III - SEMESTER - VI</b>								
<b>CBS Semester Pattern Introduced in 2019-2020 with (New course) CBS semester pattern Introduced in 2016-2017 (Old Course) and with Annual Pattern introduced in 2013-2014</b>								
Sr. No	CBS Semester Pattern - (New Course) introduced in 2019-2020	Max Marks	Sr. No	CBS Semester Pattern - (Old Course) introduced in 2016-2017	Max Marks	Sr. No	(Annual Pattern) Course introduced in 2013-14	Max Marks
<b>Theory</b>			<b>Theory</b>			<b>Theory</b>		
6T1	C#.Net	80	6T1	C#.Net	80	4	Front End Development	80
6T2	<b>SEC-II (Any One)</b>		6T2	<b>SEC-II (Any One)</b>	<b>To be appeared compulsorily (Any One)</b>			
	(i) Python	80		(i) Python				
	(ii) Ruby on Rail	80		(ii) Ruby on Rail				
6T3	<b>DSE-II (Any One)</b>		6T3	<b>DSE-II (Any One)</b>	<b>To be appeared compulsorily (Any One)</b>			
	(i) Entrepreneurship Development	80		(i) Entrepreneurship Development				
	(ii) Company Law and Secretarial Practice	80		(ii) Company Law and Secretarial Practice				
<b>Practical</b>			<b>Practical</b>			<b>Practical</b>		
6P1	<b>Practical - I : (Semester - VI) - C#.Net &amp; SEC-II (Any One - Python / Ruby on Rail)</b>	100	6P1	<b>Practical - I : (Semester - VI) - C#.Net &amp; SEC-II (Any One - Python / Ruby on Rail)</b>	100	7	Practical-II : VB & Oracle	100
<b>Project</b>			<b>Project</b>			<b>Project</b>		
6P2	<b>Project</b>	100	6P2	<b>Project</b>	100	8	PROJECT	100
<b>All the students absorbed in semester pattern course will have to compulsorily fill Semester V and Semester VI exam forms and appear for these two papers of (New course). Other papers if any to be appeared as per exemption mentioned</b>								

## APPENDIX – II

### QUESTION PAPER PATTERN

**First / Second / Third / Fourth / Fifth / Sixth Semester**

**Bachelor of Commerce(Computer Application)- (BCCA) CBS Examination**

**Semester – I – (Financial Accounting),**

**Semester – II - Principles of Business Management),**

**Semester – III – (Environmental Studies, Business Economics),**

**Semester – IV- (Statistical Techniques, Business Law),**

**Semester – V – (Cost and Management Accounting, Corporate Accounting),**

**Semester – VI – (Entrepreneurship Development, Company Law and**

**Secretarial Practice)**

**Time: 3 Hours**

**Total Marks: 80**

---

N. B. - a) Draw well labeled diagram wherever necessary.

b) All questions are compulsory.

**Q1.    4 x 4 = 16**

- a.      Unit – I
- b.      Unit – II
- c.      Unit – III
- d.      Unit - IV

**Q2. Either**

- (A) 8 -      Unit – I
- (B) 8 -      Unit - I

**OR**

- (C) 16 -      Unit - I

**Q3. Either**

- (A) 8 -      Unit - II
- (B) 8 -      Unit - II

**OR**

- (C) 16 -      Unit - II

**Q4. Either**

- (A) 8 -      Unit - III
- (B) 8 -      Unit - III

**OR**

- (C) 16 -      Unit - III

**Q5. Either**

- (A) 8 -      Unit - IV
- (B) 8 -      Unit - IV

**OR**

- (C) 16 -      Unit – IV

## **QUESTION PAPER PATTERN**

**First / Second / Third / Fourth / Fifth / Sixth Semester**

**Bachelor of Commerce(Computer Application)- (BCCA) CBS Examination**

**Semester – I – (Fundamentals of Computer, Programming in C),**

**Semester – II – (Programming in C++, E-Commerce and web Designing),**

**Semester – III – (Visual Basic Programming, Database Management System),**

**Semester – IV – (Core Java, PHP & MySQL),**

**Semester – V – (Computerized Accounting using Tally, VB.Net, Management Information Systems, System Analysis & Design),**

**Semester – VI – C#.Net, Python, Ruby on Rail,**

**Time: 3 Hours**

**Total Marks: 80**

---

**N. B. - a) Draw well labeled diagram wherever necessary.**

**b) All questions are compulsory.**

**Q1.**

**$8 \times 2 = 16$**

**N. B. – 1. Each question carries two marks.**

**2. Answers should not more than five lines.**

- A. Unit I
- B. Unit I
- C. Unit II
- D. Unit II
- E. Unit III
- F. Unit III
- G. Unit IV
- H. Unit IV

**Q2.**

**$8 \times 3 = 24$**

**N. B. – 1. Each question carries three marks.**

**2. Answers should not more than ten lines.**

- A. Unit I
- B. Unit I
- C. Unit II
- D. Unit II
- E. Unit III

- F. Unit III
- G. Unit IV
- H. Unit IV

**N. B. – 1. Each question carries five or ten marks.**

**2. Answers should not more than 400 words for 5 marks questions and 600 words for 10 Marks questions respectively.**

**Q3. Either**

- (A) 5 Unit I
- (B) 5 Unit I

**OR**

- (C) 10            Unit I

**Q4. Either**

- (A) 5 Unit II
- (B) 5 Unit II

**OR**

- (C) 10            Unit II

**Q5. Either**

- (A) 5 Unit III
- (B) 5 Unit III

**OR**

- (C) 10            Unit III

**Q6. Either**

- (A) 5 Unit IV
- (B) 5 Unit IV

**OR**

- (C) 10            Unit IV

## **QUESTION PAPER PATTERN OF ENGLISH AND BUSINESS COMMUNICATION**

**Subject: English and Business Communication – I**

**SEMESTER – I**

**Time:3Hours]**

**[Total Marks:80**

**Q1. A. Comprehension of Unseen Passage from Unit-I 10 Marks**

**(Five VSAQs of 2 Marks each based on the Unseen Passage)**

**B. Questions on ANY TWO components of Enriching Vocabulary from  
Unit -I**

**(Five items to be solved out of Eight (5 x 1 Mark)X2) 10 Marks**

**(Synonyms/Antonyms to be given in match the following format–5 words  
against 8 options)**

**Q2. A. ONE out of TWO Letters (Application for Employment/Job Offer  
Letters) from**

**Unit II 10 Marks**

**B. ONE out of TWO Letters (Sales letters / Claim and Adjustment Letters)  
from**

**Unit - II 10 Marks**

**Q 3. A. ONE LAQ out of TWO from Unit - III (10 x 1) =10 Marks**

**B. TWO SAQs out of THREE from Unit - III (5 x 2) = 10 Marks**

**Q 4. A. THREE SAQs with internal choice from Prose Section of Unit IV  
(3 x 5 Marks)=15 Marks**

**B. ONE SAQ with internal choice from Poetry Section of Unit IV 05 Marks**

**Total = 80 Marks**

**LAQ - Long Answer Questions to be answered in about 150words**

**SAQ - Short Answer Questions to be answered in about 75 words  
approximately.**

## **INTERNAL ASSESSMENT OF ENGLISH AND BUSINESS COMMUNICATION: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

<b>2 Assignments</b>	<b>-</b>	<b>6+6 = 12</b>
<b>Marks Performance &amp; Conduct</b>	<b>-</b>	<b>4</b>
<b>Marks Attendance</b>	<b>-</b>	<b>4 Marks</b>
<b>TOTAL</b>	<b>-</b>	<b>20 MARKS</b>

## **QUESTION PAPER PATTERN OF ENGLISH AND BUSINESS COMMUNICATION**

**Subject: English and Business Communication – II**

**SEMESTER – II**

**Time: 3 Hours]**

**[Total Marks: 80]**

**Q1. A. Comprehension of Unseen Passage from Unit-I 10 Marks  
(Five VSAQs of 2 Marks each based on the Unseen Passage)**

- B. Question from Section B of Unit 10 Marks**
- (Five items out of Eight on meanings of the Words often Confused - (1 x 5 Marks))**
  - (Five items out of Eight on Punctuation -(1 x 5 Marks))**

**Q2. A. ONE out of TWO Letters (Inviting Quotation / Placing Order) from Unit II 10 Marks**

- B. ONE out of TWO Letters (Credit Letters - Granting/Refusing Credit, Letter to Bank for overdraft facility) from Unit-II 10 Marks**

- Q 3.** A. ONE LAQ out of TWO from Unit -III (10 x 1) =10 Marks  
B. TWO SAQs out of THREE from Unit-III (5 x 2) = 10 Marks

**Q 4.** A. THREE SAQs with internal choice from Prose Section of Unit IV (3 x 5 Marks) =15 Marks  
B. ONE SAQ with internal choice from Poetry Section of Unit-IV 05 Marks

**Total = 80 Marks**

### **LAQ - Long Answer Questions to be answered in about 150words**

**SAQ** - Short Answer Questions to be answered in about 75 words approximately.

## **INTERNAL ASSESSMENT OF ENGLISH AND BUSINESS COMMUNICATION: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons/poems prescribed in the syllabus.

<b>2Assignments</b>	-	<b>6+6 = 12</b>
<b>Marks Performance &amp; Conduct</b>	-	<b>4</b>
<b>Marks Attendance</b>	-	<b>4 Marks</b>
<b>TOTAL</b>	<b>-</b>	<b>20 MARKS</b>

## **(A) Project and Classification of Marks on Project**

Towards the end of the second year of study, a student will be examined in the course

### -Project Work

- a. Project Work may be done individually or in groups (Maximum 3 students) in case of bigger projects. However if project is done in groups, each student must be given a responsibility for a distinct module and care should be taken to monitor the progress of individual student.
- b. The Project Work should be done using the tools covered in B.Com. (Computer Application) (BCCA).
- c. The Project Work should be of such a nature that it could prove useful or be relevant from the commercial / management angle.
- d. The project work will carry 100marks.
- e. Project Work can be carried out in the Institute or outside with prior permission of the Institute.
- f. The external viva-voice examination for Project Work would be held as per the Examination Time Table of the Third year of study, by a panel of one external and one Internal Examiner.

### **Types of Project**

As majority of the students are expected to work out a project in some industry / research and development laboratories / educational institutions / software export companies, it is suggested that the project is to be chosen which should have some direct relevance in day-to-day activities of the candidates in his/her institution. The Applications Areas of project – Financial / Marketing / Database Management System / Relational Database Management System / E-Commerce / Internet / Manufacturing / web Designing / Scientific / ERP etc.

### **Project Proposal (Synopsis)**

The project proposal should be prepared in consultation with the guide. The project guide must be a RTM Nagpur university approved teacher. The project proposal should clearly state the objectives and environment of the proposed project to be undertaken. It should have full details in the following form:

### **Format of Synopsis for Desktop Application**

1. Title of the Project.
2. Objectives of the Project.
3. Project Category (DBMS / RDBMS / OOPS etc.)
4. Tools / Platform and Languages to be used.
5. Complete Structure of the System:
  - i. Numbers of Modules and its Description.
  - ii. Modular Chart / System Chart.
  - iii. Data Structures or Tables.
  - iv. Process Logic of each Module.
  - v. Types of Report Generation.
6. References.

**Note:** Synopsis should not be more than 3-4 pages.

### **Format of Synopsis for Web Application**

1. Title of the Project.
2. Objectives of the Project.
3. Project Category (DBMS / RDBMS / OOPS etc.).
4. Tools / Platform and Languages to be used.
5. Complete Structure of the System:
  - I. Number of pages and links their short description.
  - II. Use / Information of Pages.
  - III. Feedback Form (if any).
6. References.

**Note:** Synopsis should not be more than 3-4 pages.

### **Project Report Formulation**

Front Page.

College Certificate Page. Declaration Page.

Acknowledgment Page. Project Profile.

Index or Content Page.

- I. \*Contents\_\_\_\_\_.
- II. Appendices

- I. List Figures, Tables& Charts.
- II. Approved copy of Synopsis, Glossary
- III. Contents.
  - I. Introduction.
  - II. Objectives.
  - III. Preliminary System Analysis.
    - Preliminary Investigation.
    - Present System in Use.
    - Flaws in Present System.
    - Need of New System.
    - Feasibility Study.
    - Project Category.
- IV. Software Engineering Paradigm Applied
  - Modules
  - System / Modular Chart.
- V. Software & Hardware Requirement Specification.
- VI. Detailed System Analysis.
  - Data Flow Diagram.
  - Numbers of Modules and Process Logic.
  - Data Structures and Tables.
  - Entity-Relationship Diagram.
- VII. System Design.
  - Form Design.
  - Source Code.
  - Input screen & Output Screen.
- VIII. Testing & Validation Checks.
- IX. System Security Measures.
- X. Implementation, Evaluation and Maintenance.
- XI. Future Scope of the project.
- XII. Suggestion & Conclusion
- XIII. Bibliography & References.

**Note :-**

- i. A Student is expected to complete the Assignments based on Syllabus of Practical subjects and submit the same in the form of a files

- (assignment Record) at the end of Academic Session for the evaluation purpose.
- ii. A student should submit internal assessment of each theory paper prescribed by the subject teacher.
  - iii. A Student is expected to deliver a seminar on any course curricular subject / latest trends in IT relevant subject per semester for internal assessment.

**Classification Of Marks on Project :-**

Report & Documentation	40
Viva-voce (External)	40
Viva-voce (Internal)	20
<b>Total Marks</b>	<b>100</b>

The marks of Project shall be notified as a whole out of 100 in Foil/C-Foil

**(B) Practical and Classification of Marks on Practical**

- 1. Practical exam shall be of 4 hours duration.
- 2. The Practical Record of every student shall carry a certificate as shown below, duly signed by the teacher-in-charge and the Head of the Department.
- 3. If the student fails to submit his / her certified Practical Record duly signed by the Teacher-In-Charge and the Head of the Department, he / she shall not be allowed to appear for the Practical Examination and no Marks shall be allotted to the student.
- 4. After Viva-Voice and evaluation of practical records of a student by the Internal & External Examiner, both examiners should sign on the certificate of practical records.

The certificate template shall be as follows:

**Name of the college/  
Institution name of the department**

**CERTIFICATE**

This is to certify that Mr./Mrs./Ms. \_\_\_\_\_  
of class BCCA \_\_\_\_ Year Semester \_\_\_\_\_ has satisfactorily completed the  
practical experiments prescribed by The Rastrashant Tukdoji Maharaj Nagpur  
University, Nagpur for the subject **Practical - \_\_\_\_\_ -**  
\_\_\_\_\_ during the academic  
year 20 - 20 .

Signature

Signature

**Practical In-charge  
Department**

**Head of the**

Signature

Signature

**Internal Examiner**

**External Examiner**

**Date -**

**Classification of Practical Marks:-**

<b>Practical-I</b>	<b>Marks</b>	<b>Marks</b>
Writing a Program or Problem (Algorithm & Flowchart)	20	20
2. Execute on a computer		
3. Taking Hard Copy		

**Practical – II**

1.Writing a Program or Problem (Algorithm & Program)	10	10
<b>External Viva Voce</b>	10	10
<b>Practical Record</b>	10	10
<hr/>		
<b>Total Marks</b>	<b>50</b>	<b>+ 50 =100</b>

**Note:**

- Since the practical contains two components (i.e. two subjects), so each components has to be evaluated as above.
- Whereas, the marks of Practical shall be notified as a whole out of 100 in Foil / C-Foil.

# **Detailed syllabus for theory papers**

(BCCA)Part-I

## **Semester – I**

### **Paper – I**

**Course name - English and Business Communication – I**

**Course code - 1T1**

#### **UNIT I**

- A. Comprehension of an Unseen Passage
- B. Enriching Vocabulary: Synonyms and Antonyms, Single Word for a Group of Words, Change of Word from Noun to Adjective &vice-versa.

#### **UNIT II**

Business Correspondence: Application for Employment, Job Offer Letters, Sales letters, Claim and Adjustment Letters

#### **UNIT III**

Communication Process: Sender, Channel, Message, Receiver and Response

Types of Communication:

- |   |                                       |
|---|---------------------------------------|
| a. According to mode:                   | a. Oral      b. Written               |
| b. According to Medium:                 | a. Electronic      b. Print           |
| c. According to number of participants: | a. Dyadic      b. Group               |
| d. According to Direction:              | a. One-way      b. Two-way            |
| e. According to Purpose:                | a. General      b. Business(Specific) |

#### **UNIT IV**

Textbook entitled Prism: Spoken and Written Communication, Prose & Poetry published by Orient Black Swan

##### **Prose**

- i) With the Photographer – Stephen Leacock
- ii) Socrates and the Schoolmaster – F. L. Brayne
- iii) Speech on Indian Independence – Jawaharlal Nehru

##### **Poetry**

- i) On Television - Roald Dahl
- ii) The Felling of the Banayan Tree – Dilip Chitre
- iii) Stay Calm - Grenville Kleiser

Reference Books:

##### **(For UNIT I)**

- i) English Grammar – N.D.V. Prasada Rao (S.Chand)

- ii) Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

**(For UNIT II)**

- i) Business Communication: Urmila Rai, S.M. Rai- (Himalaya Publishing House)
- ii) Business Correspondence and Report Writing – R. C. Sharma& Krishna Mohan (Tata McGraw-Hill)
- iii) Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

**(For UNIT III)**

- i) Business Communication and Management- Dr. K.R.Dixit (Vishwa Publishers, Nagpur)

**(For UNIT IV)**

Prescribed Text Book :

- i) Prism: Spoken and Written Communication, Prose & Poetry published by Orient BlackSwan

**Paper - II**

**Course Name - Financial Accounting**

**Course code -1T2**

**UNIT – I**

**Accounting Concepts:-** Introduction, Accounting Concepts and Conventions, Generally Accepted Accounting Principles(GAAP), Conceptual Basis of a Balance Sheet, Capital and Revenue Income and Expenditure, Indian Accounting Standards AS 1 to AS 10.

**Mechanics of Accounting:-** Introduction, Classification of Accounts, Double Entry System, Overview of Accounting cycle, Preparing journals, Subsidiary Books, Ledger, Preparation of Trial Balance (Theory & Numerical)

**UNIT – II**

**Preparation of final Accounts of Sole Traders :-** Introduction, Describe format of P & L Account, Format of Balance Sheet, Treatment of Adjustments, The components of a set of final accounts for a sole trader. Prepare Trading Account, Profit & Loss Account and Balance Sheet (Theory & Numerical)

**UNIT – III**

**Valuation of Goodwill –** Meaning and need for valuation of goodwill, Feature of goodwill, Factors influencing valuation for goodwill, Average profit method (Future

maintainable profit method), Weighted average profit method, Super profit method, Capitalization method, Annuity Method. (Theory & Numerical)

## **UNIT – IV**

**Consignment Accounts :-** Meaning, Needs, Advantages and formalities in consignment, difference between a consignment and a sale, Performa invoice, Account sales, Accounting procedure of consignment, valuation of consignment stock (Theory & Numerical)

### **Reference Books:**

1. M.N. Arora, K.V.Achalapati, S.Binda, Financial Accounting, Taxmann
2. M. Hanif, A. Mukherjee, Financial Accounting, McGraw-Hill.
3. N. Ramachandran, Ram Kumar Kakani, Financial Accounting for management, McGraw-Hill.
4. Dhanesh K Khatri, Accounting for Management, McGraw-Hill.
5. Shukla, M.C., T.S. Grewal and S.C.Gupta. Advanced Accounts. Vol.-I. S. Chand & Co., New Delhi.
6. S. N. Maheshwari, Financial Accounting, Vikas Publication, New Delhi.
7. T.S, Grewal, Introduction to Accounting, S. Chand and Co., New Delhi
8. P.C. Tulsian, Financial Accounting, Tata McGraw Hill, New Delhi
9. Dr. Pramod Fating, Dr. Vijay Bagde, Dr. Sarang Javkhedkar, Dr. Milind Gulhane – Financial Accounting - Sir Sahitya Kendra, Nagpur
10. Dr. K. Karemore, Dr. Vijay Bagde, Dr. Tekade, Prof. G. Khorgade, Dr. T Chaudhari – Financial Accounting - Sir Sahitya Kendra, Nagpur

## **Paper - III**

**Course Name - Fundamentals of Computer**

**Course Code – 1T3**

## **UNIT – I**

**Understanding the Computer:-** Introduction, Evolution, Generation, Classification and Application of computers. **Memory and Storage Systems:** Introduction, Memory representation, Random Access Memory, Read Only Memory, Storage systems, Magnetic storage systems, Optical storage systems, Magneto optical system, Solid-state storage devices.

## **UNIT – II**

**Input Devices:** Introduction, Keyboard, Pointing devices, Scanning devices, Optical recognition devices, Digital camera, Voice recognition system, Data acquisition sensors, Media input devices. **Output Devices:** Introduction, Display monitors, Printers, Impact printers, Non-impact printers, Plotters, Voice output systems, Projectors, Terminals. **Computer Codes:** Introduction, Decimal system, Binary system, Hexadecimal system, Octal system, Conversion of numbers

## **UNIT – III**

**Computer Software:** Introduction, Types of computer software, System management programs, System development programs, standard application programs. **Programming Languages:** Introduction, History of programming languages, Generations of programming languages, Characteristics of good programming languages, Developing a program, Running a program.

**Data Communication and Networks:** Introduction, Data communication using modem, Computer network, Network topologies, Network protocol and software, Application of network.

## **UNIT – IV**

**Operating Systems:** Introduction, History of operating systems, Functions of operating systems, Process management, Memory management, File management, Device management, Security management, Types of operating systems, Providing user interface, Popular operating systems. **Microsoft Software:** Introduction, MS-DOS, MS Word systems, MS Excel systems, MS PowerPoint systems, MS Access systems,

### **Text Book:**

1. E Balagurusamy, Fundamentals of Computers, Mc Graw Hill Education.

### **Reference Books:**

1. Dr. Rajiv Midha, S. Brinda, Fundamental of Information Technology, Taxmann.
2. Madhulika Jain, Shashank Jain, Satish Jain, Information Technology Concepts, BPB Publication.
3. Dr. Rajiv Midha, Information Technology, Taxmann

4. B. Ram, Computer Fundamentals (Architecture & organization), New Age International Publisher.
5. Turban, Rainer, Potter, Introduction to Information Technology, Wiley India Edition.
6. Sanjay Saxena, Introduction to Information Technology, Vikash Publishing House Pvt.Ltd.
7. Dr. Sushila Madan, Information Technology, Taxmann.

### **Paper - IV**

**Course Name – Programming in ‘C’**

**Course Code – 1T4**

#### **UNIT – I**

**Data Types, Operators and some statements:** Identifiers and keywords, Constants, C Operators, Type Conversion. **Writing a Program in C:** Variable declaration, Statements, Simple C Programs, Simple Input Statements, Simple Output Statements. **Control Statements:** Conditional Expressions, Loop Statements, Breaking control statements.

#### **UNIT – II**

**Functions and Program Structures:** Introduction, Defining a Function, Types of User Defined Functions, Return Statement, Actual & Formal Arguments, Local & Global Variables, Scope of Variables, Recursive Functions. **Arrays:** One dimensional array, Array Declaration, Array Initialization, Two dimensional array, Declaration and initialization of two dimensional array, multidimensional array, Character array and Strings functions.

#### **UNIT – III**

**Pointers:** Pointer Declaration, Pointer Arithmetic, Pointers and Functions, Pointers and Arrays, Pointer and Strings, Array of Pointers, Pointers to Pointers. **More on Functions:** Pre-processors, Macros, Header Files, standard Functions.

#### **UNIT-IV**

**Structures, unions and File handling:** Declaration of Structure, Initializing a Structure, Array of Structure, Arrays within Structure, Pointer and Structure,

**Union.****Data File Operations:** Review of input/output Functions, Opening and Closing of files, Simple File Operation, Structures and File Operation, Block Read/Write, More on File operations, Random Access File processing.

**Text Book:**

1. D. Ravichandran, Programming in C, New Age International Publishers.

**Reference Books:**

1. E. Balaguruswami, Programming in ANSI C, McGraw-Hill.
2. R Subburaj, Programming in C, Vikash Publishing House Pvt. Ltd.
3. S.K. Srivastava & Dipali Srivastava, C in Depth, BPB Publication.
4. Yashwant Kanetkar, Let Us C, BPB Publication, 9th Edition.
5. Veugopal Prasad, Mastering C, McGraw-Hill.
6. Schildt, The Complete Reference C, McGraw-Hill.

**Semester – II**

**Paper – I**

**Course Name - English and Business Communication – II**

**Course code - 2T1**

**UNIT-I**

- A. Comprehension of an Unseen Passage
- B. Punctuation, Words often confused

**UNIT-II**

**Business Correspondence:** Inviting Quotations, Placing Orders, Credit Letters - Granting/Refusing Credit, Letter to Bank for overdraft facility

**UNIT-III**

- Elements of communication
- Objectives of communication
- Essentials of effective communication
- Barriers to effective communication
- Suggestions to overcome the barriers

## **UNIT-IV**

Textbook entitled Prism: Spoken and Written Communication, Prose & Poetry' published by Orient Black Swan

### **Prose**

- I. An Astrologer's Day – R. K. Narayan
- II. The Gift of the Magi – O. Henry
- III. The Bet – Anton Chekhov

### **Poetry**

- I. Say Not the Struggle Naught Availeth - Arthur Hugh Clough
- II. No Men are Foreign- James Kirkup
- III. Abou Ben Adhem - James Leigh Hunt

### **Reference Books:**

#### **(For UNIT I)**

1. English Grammar – N. D. V. PrasadaRao (S.Chand)
2. Developing Communication Skills – Krishna Mohan &MeeraBanerji (Macmillan)

#### **(For UNIT II)**

1. Business Communication: Urmila Rai, S. M. Rai - (Himalaya Publishing House)
2. Business Correspondence and Report Writing – R. C. Sharma& Krishna Mohan (Tata McGraw-Hill)
3. Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

#### **(For UNIT III)**

1. Business Communication and Management- Dr. K. R. Dixit (Vishwa Publishers, Nagpur)

#### **(For UNIT IV) Prescribed Text Book:**

*Prism: Spoken and Written Communication, Prose & Poetry* published by Orient BlackSwan

## **Paper - II**

### **Course Name – Principles of Business Management**

## **Course Code – 2T2**

### **UNIT- I**

**Nature And Functions Of Management** – Importance Of Management, Definition Of Management, Management Function Or The Process Of Management, Levels Of Management, Organizational Or Business Functions, Role Of A Senior Management, Managerial Skills, Managerial Effectiveness, Management And Administration, Management- A Science Or An Art?, Management- A Profession?, Professional Management Vs Family Management, Management Of International Business.

**Planning-** Nature Of Planning, Importance Of Planning, Types Of Plans, Steps In Planning, Strategic Planning Process, Limitation Of Planning, Making Planning Effective, Planning Skills, Strategic Planning In The Indian Industry. **Decision**

**Making-** Meaning Of Decision, Types Of Decision, Steps In Relational Decision-Making, Rationality In Decision-Making, Environment Of Decision-Making, Common Difficulties In Decision-Making.

### **UNIT- II**

**Organization-** What Is An Organization?, Process Of Organizing, Principles Of Organizing, Span Of Management, Departmentalization, Process Departmentalization, Purpose Departmentalization, Organization Structure, What Type Of Structure Is Best?, Emerging Organization Structures, Committees, Teams, International Organization Structures. **Coordination** – Distinction Between Coordination And Cooperation, Distinction Between Coordination And Control, Need For Coordination, Requisites For Excellent Coordination, Types Of Coordination, Techniques Of Coordination, Difficulties Of Coordination, **Staffing-** Importance And Need For Proper Staffing, Manpower Planning, Recruitment, Selection, Placement, Induction, Manpower Planning In India.

### **UNIT- III**

**Training And Development-** Difference Between Training, Education And Development, Advantages Of Training, Steps In Setting Up A Training And Development Programme, Design And Development Of The Training Programme, Evaluation Of Training And Development, Executive Training Practices In India,

**Mentoring, Learning Organization, Knowledge Management** **Direction And Supervision-** Requirements Of Effective Direction, Giving Orders, Motivation, Job Satisfaction, Organizational Commitment, Morale, First-Level Or Front- Line Supervision.

## **UNIT- IV**

**Communication-** Importance Of Communication, Purpose Of Communication, Formal Communication, Forms Of Communication, Informal Communication, The Communication Process, Barriers To Communication, Principles Of Effective Communication. **Managerial Control-** Steps In A Control Process, Need For Control System, Benefits Of Control, Essentials Of Effective Control System, Problems Of The Control System, Control Techniques.

### **Text Book:**

1. P. C. Tripathi, P. N. Reddy, Principles of Management, McGraw-Hill.

### **Reference Books:**

1. Prof. Partho S. Sengupta, Principles and Practices of Management, Vikash Publishing House Pvt. Ltd.
2. Neeru Vaisishth, Vibhuti Vasishth, Principles of Management Text & Cases, Taxmann
3. Harold Koontz, Heinz Weihrich, Essentials of management, McGraw-Hill.
4. Neeru Vaisishth, Business Management, Taxmann.
5. R. S. N. Pillai, S. Kala, Principles and Practices of Management, S. Chand.
6. Chandra Bose, Principles of Management & Administration, PHI.

## **Paper - III**

**Course Name – Programming in C++**

**Course Code – 2T3**

## **UNIT – I**

**Introduction to Object Oriented Programming:** Introduction, What is Object Oriented Programming(OOP)?, Structured Procedural programming(SPP), Object

Oriented Programming OOP, Characteristics of OOPs, Advantages of OOPs, Disadvantages of OOPs, Comparison of SPP and OOP, Steps in Developing OOP Programs, Structure of Object Oriented Programs, Object Oriented Languages, Importance of C++. **Data Types, Operators and Expressions:** Identifiers & Keywords, Data Types, C++ Simple Data Types, Literals, Variables, the Const Data type, C++ Operators, Type Conversion. **Input and Output Streams:** Comments, Declaration of Variables, the Main () Function, Simple C++ Programs, Program Termination, Features of IOStream, Keyboard and Screen I/O, Manipulator Functions, Input and Output (I/O) Stream Flags. **Control Statements:** Conditional Expressions, Loop Statements, Nested Control Structures, Breaking Control Statements.

## **UNIT – II**

**Function and Program Structures:** Introduction, Defining a Function, Return Statement, Types of Functions, Actual & Formal Arguments, Local & Global Variables, Default Arguments, Structure of C++ Program, Order of the Function Declaration, Manually invocated Functions, Nested Functions, Scope Rules, Side Effects, Storage Class Specifiers, Recursive Function, Pre-processors, Header Files, Standard Functions. **Arrays:** Introduction, Array Notation, Array Declaration, Array Initialization, Processing with Arrays, Character Array. **Pointers and Strings:** Introduction, Pointer Arithmetic, Pointers and Functions, Pointers and Arrays, Pointer and Strings.

**Structures and Unions:-** Introduction, Declaration of Structure, Processing with Structures, Initialization of Structures, Functions and Structures, Array of Structure, Pointer and Structure, Unions.

## **UNIT – III**

**Classes and Objects:** Introduction, Structures and Classes, Declaration of Class, Member Functions, Defining the Object of a Class, Accessing a Member of Class, Array of Class Objects, Pointer and Classes. **Special Member Function:** Introduction, Constructors, Destructors, Inline Member Functions, Static Class Members, Friend Function, This Pointer. **Single and Multiple Inheritance:** Introduction, Single Inheritance, Types of Base Classes, Type of Derivation, Multiple Inheritance, Member Access Control.

## **UNIT-IV**

**Overloading Functions and Operators:** Function Overloading, Operator Overloading, Overloading of Binary Operators, Overloading of Unary Operators.

**Polymorphism and Virtual Functions:** Polymorphism, Virtual Functions, Pure Virtual Functions, Abstract Base Classes, Virtual Base Classes.

**Data File Operations:** Opening and Closing of Files, Reding/Writing a Character from a File, Binary File Operations.

**Text Book:** - 1. D. Ravichandran, Programming with C++, McGraw-Hill.

### **Reference Books:**

1. E. Balaguruswami, Object Oriented Programming with C++, McGraw-Hill.
2. Rohit Khurana, Object Oriented Programming with C++, Vikash Publishing House Pvt. Ltd.
3. Anirban Das, Goutam Panigrahi, Object Oriented Programming with C++, Vikash Publishing House Pvt. Ltd.
4. Herbert Schildt, The Complete Reference – C++, McGraw-Hill.

## **Paper - IV**

**Course Name – E-Commerce and Web Designing**

**Course Code – 2T4**

## **UNIT – I**

**Introduction to Electronic Commerce- Electronic Commerce :** The Scope of Electronic Commerce, Definition of Electronic Commerce, Electronic Commerce and the Trade Cycle, Electronic Markets, Electronic Data Interchange, Internet Commerce, e-Commerce in Perspective. **Business Strategy in an Electronic Age:**

**The Value Chain, Supply Chains, Porter’s Value Chain Model, Inter Organizational Value Chains.** **Competitive Advantage:** Competitive Strategy, Porter’s Model, First Mover Advantage, Sustainable Competitive Advantage, Competitive advantage using e-Commerce.

## **UNIT – II**

**Business to Business Electronic Commerce - Inter Organizational Transactions:** Inter Organizational Transactions, the Credit Transaction Trade

Cycle, A Variety of Transaction, Pens and Things. **Electronic Markets: Markets**, Electronic Markets, Usage of Electronic Markets, Advantages and Disadvantages of Electronic Markets, Future of Electronic Markets. **Electronic Data Interchange (EDI)**: Introduction to EDI, EDI definition, The Benefits of EDI, EDI Example. **Inter Organizational e-Commerce: Inter** Organizational Transaction, Purchasing Online, After Sales Online, e-Commerce in Desk top Facilities Management, Pens and Things and the Web.

### **UNIT – III**

**Business to Consumer Electronic Commerce** - Internet Shopping and the Trade Cycle, Other e-Commerce Technologies, Advantages and Disadvantages of Consumer e-Commerce, Consumer e- Commerce at Pens and Things. **The Elements of e-Commerce** : Elements, e-Visibility, The e-Shop, Online Payments, Delivering the Goods, After Sales Service, Internet e- Commerce Security, A Web Site Evaluation Model. **Introduction to HTML**: Designing a Home Page, History of HTML, HTML Generations, HTML Documents, Anchor Tag, Hyper Links, Sample Html Documents. **Header and Body Sections**: Header Section, Title, Prologue, Links, Colorful Web Page, Comment Lines, Some Sample Html Documents. **Designing the body Section**: Heading Printing, Aligning the Headings, Horizontal Rule, Paragraph Tab Setting, Image and Pictures, Embedding PNG Format Images.

### **UNIT – IV**

**Ordered and Unordered Lists**: Lists, Unordered Lists, Headings in a List, Ordered Lists, Nested List. **Table Handling: Table**, Table Creation in HTML, Width of the Table and Cells, Cells Spanning Multiple Rows/Columns, Coloring Cells, Columns Specification, Some Sample Tables. **Dhtml and Style Sheets**: Defining Styles, Elements of Styles, Linking a Styles Sheet to an HTML Document, In-Line Styles, External Styles Sheets, Multiple Styles. **Frames**: Frameset Definition, Frame Definition, Nested Framesets. **A web Page Design Project**: Frameset Definition, Animals, Birds, Fish. **Forms: Action** Attribute, Method Attribute, Input type Attribute, Drop Down List, Sample Forms

### **Text Books**

1. David Whiteley, e-Commerce Strategy, Technologies and Applications, McGraw Hill Education
2. CXavier, World Wide Web design with HTML, McGraw Hill Education.

**Reference Books:**

1. Bajaj, Nag, E-Commerce, McGraw-Hill.
2. Eric van der Vlist, Danny Ayers, Erik Bruchez, Joe Fawcett, AlessandroVernet, Professional Web 2.0 Programming, Wiely.
3. Michael P. Papazoglou, Pieter M.A. Ribbers, e-Business, Wiely.
4. Brian P. Hogan, HTML5 and CSS3, Shroff Publishers.
5. Sandeep panda, AngularJS – Novice to Ninja, Shroff Publishers.
6. Web Technologies – Black Book, Dreamtech Press.
7. Mike McGrath, Web Design in Easy Steps, McGraw-Hill.
8. Mike McGrath, JavaScript in Easy Steps, McGraw-Hill.
9. Mike McGrath, CSS3 in Easy Steps, McGraw-Hill.

**BCCA – Part – II**

**Semester – III**

**Paper - I**

**Course Name – Environmental Studies**

**Course Code – 3T1**

**UNIT - I**

Environment, Environment Studies, Need for public Awareness, Environmental Degradation, Shelter Security, Economic Security, Social Security, Effects of Housing on Environment , Effects of Industry on Environment. **Natural Resources-** Introduction, Types of Natural Resource, Forest Resources, Water Resources, mineral Resources, Energy resources, Land Resources, Conservation of Natural Resources, Sustainable Lifestyles, Biogeochemical Cycle.

**UNIT – II**

**Ecosystem-** Introduction to Ecology and Ecological Succession, Ecosystem, FoodChain, Ecological Pyramids, Types of Ecosystems, Forest Ecosystems, Aquatic Ecosystems, Grassland Ecosystem, and Desert Ecosystem.

**Biodiversity and its Conservation-** Biodiversity, Values or Benefits of Biodiversity, Biogeographic Zones of India. Threats to Biodiversity, Human – Wildlife Conflicts, Conservation of Biodiversity.

### **UNIT – III**

Environmental Pollution ,Introduction, Public Health Aspects, Air Pollution, Land Pollution, Soil Pollution, Marine Pollution, Water Pollution, Noise Pollution, Thermal Pollution, Solid Waste Management, Role of Individuals in Pollution Prevention, Disaster Management.

### **UNIT – IV**

**Social Issues and the Environment-** Introduction, Sustainable Development,Urbanization, Water Conservation, Resettlement and Rehabilitation of People ; Its Problems and Concerns, ACTs for Environmental Protection, Carbon Credits, Initiatives and Roles of Nongovernmental Organization (NGOs) in Environmental Protection, Issues Involved in Enforcement of Environmental Legislation . Environment and Human Health, Environmental Education, Role of Information Technology in Environment and Human Health.

#### **Text Book**

1. Shashi Chawla , Environmental Studies, McGraw-Hill.

#### **Reference Books**

1. Dr. D. K. Asthana, Dr. MeeraAsthana ,Environmental Studies, S. Chand.
2. Dr. K. Mukkanti, Environmental Studies, S. Chand.
3. Dr. D. D. Mishra,Fundamental Concepts in Environmental Studies, S.Chand.
4. Benny Joseph, Environmental Studies, McGraw Hill Education.

### **Paper - II**

**Course Name – Business Economics**

**Course Code – 3T2**

### **UNIT I**

**Introduction: Economics and Business Economics**– Meaning, Nature, concept & Scope of Business economics. **Basic problem of an Economy and Role of price Mechanism** – Basic problems of an economy, Classification of Economy, Its features, advantages and disadvantages. Free Enterprise Economy: Meaning & Features.

**Theory of utility : Theory of Consumer Behavior** – Nature of Human wants, Utility Analysis - Meaning and definition of utility, Concepts of Marginal Utility, Total Utility, Cardinal and ordinal approach of utility(Difference), Features of Utility, Law of diminishing Marginal utility.

## **UNIT II**

**Theory of Demand and supply -Theory of Demand:** Concept of Demand, Law of Demand-Meaning, Definition, Assumptions & Exceptions. Elasticity of Demand - Meaning, Types and Factors affecting Elasticity of Demand. **Demand Forecasting** – Meaning, Definition, Importance and scope of Demand Forecasting, Methods of demand forecasting.

**Supply Analysis** – Supply: Meaning, Determinants and functions of Supply. Law of Supply, Elasticity of Supply: Meaning of Elasticity of Supply, Types of Elasticity of Supply

## **Unit – III**

**Theory of Production and cost - Theory of Production:** Meaning of Production, Factors of production, Concepts of Total Product, Average product and Marginal Product, Production Function, Short Run Production Function: Law of Variable Proportion, ISO Quant Curve, Long Run Production Function, Law of Returns to Scale.

**Theory of Cost –** Meaning of Cost, Cost Concepts, Cost Function, Concepts of total Cost ,Average Cost and Marginal Cost, Short Run Average Cost Curves, Long Run Cost Curve, Economies and Diseconomies of Scale

## **UNIT IV**

**Market Structure And Pricing theory- Market Structure:** - Meaning of market, Classification of Market, Concepts of Total revenue, Average revenue and Marginal revenue, Market Structure - Concept ,Features types.

**Price** – Cost and Output Determination under Different types of markets- Perfect Competition, Monopoly, Monopolistic Competition, Equilibrium of firms under different market structures in short run and long run. Price Discrimination in monopoly and oligopoly. Kinked demand curve.

### **Text Book**

1. D. N. Dwivedi, Essentials of Business Economics, Vikas Publishing House Pvt. Ltd.

### **Reference Books**

1. David P. Doane, Lori E. Seward, Applied Statistics in Business and Economics, McGraw-Hill.
2. Amit Kumar Upadhyay, Principles of Economics, Vikas Publishing House Pvt. Ltd.
3. P. K. Mehta, Business Economics, Taxmann.
4. Michael Mandel, Economics The basics, McGraw-Hill.
5. SudipChaudhuri, AnindyaSen, Economics, McGraw-Hill.
6. Geetika, PiyaliGhosh, Purba Roy Choudhury, Managerial Economics, McGraw-Hill.

### **Paper - III**

#### **Course Name – Visual Basic Programming**

#### **Course Code – 3T3**

#### **Unit – I**

**Introduction to Visual Basic** –Advantages of Visual Basic, Features of Visual Basic. **Visual Basic Window Components** – Menu Bar, Standard Toolbar, Project Explorer Window, Form Layout Window, Properties Window, Toolbox, Code Editor Window, Object Browser, **Working With Forms** – Extension & With Function ofthe File, Properties, Events and Method ofthe Form. **Using The Controls Of Visual Basic**–Label Control, Commandbutton Control,Textbox Control, Option Button Control, Frame Control, Checkbox Control, Listbox Control, Combobox Control, Image Control, Scroll Control, Picture Control, sing Timer Control, Drivelistbox Control, Dirlistbox, Filelistbox Control.

#### **Unit – II**

**Basic Programming Fundamentals**– Scope of Variables, Operators, Decision Structure, Loop Structure, Arrays, control array. **Working With Procedure, Functions** Procedure, Functions, Modules **Menus** – Creating Menus, Creating Popup Menu. **Working With Custom Controls** – Imagelist Control, Imagecombo Control, Treeview Control, Listview Control, Toolbar Control, Statusbar Control.

### **Unit – III**

**Creating MDI Applications** – Features of Child Form, **Database Handling** – Creating the Database, Accessing the Database Using ADO Data Control. **Working With Advance Data Controls** – Datalist Control, Datacombo Control, Datagrid Controls, Setting The Properties Of The Datagrid Control, Mshflexgrid Control,

### **Unit – IV**

**Debugging Techniques** – Error handling : Types of errors. Debugging, tools for debugging, handling runtime errors. **Working with Data Environment**-Data Environment and Data Report, Data Environment designer adding connection & commands Data reportcontrols, creating & printing reports.

#### **Text Book**

1. Soma Dasgupta, Visual Basic – to Advance, BPB Publications.

#### **Reference Books**

2. Mohammad Azam, Programming with Visual basic, Vikas Publishing House Pvt. Ltd.
3. Mike McGrath, Visual basics in Easy Steps, McGraw-Hill.
4. Michael Vine, Microsoft Visual Basic Programming, PHI.
5. Evangelos Petroutsos, Mastering Visual basic, Wiley India Pvt. Ltd.

## **Paper - IV**

**Course Name – Database Management System**

**Course Code – 3T4**

### **UNIT – I**

**Introduction:** Concept of the System, Types of Decisions, Information System, Classification of information System, Conventional File Processing System, Database System, Components of Database Management System, Economic

Justification of Database Approach. **Database Concepts:** Introduction, Data, Information, Metadata, Terminologies of Files, Association between Fields, Association between Files (Record Types), File Organization.

## **UNIT – II**

**Data Models:** Introduction, Classification of Data Model, Entity Relationship Model. **Database Design:** Introduction, Steps of Database Design, Normalization, Case Problem, Data Volume and Usage Analysis, Integrated Case Study-Database Design for Academic institution. **Implementation Design:** Introduction, Implementation Design,

## **UNIT – III**

**Structured Query Language - I:** Table fundamentals, viewing data in the tables, Eliminating duplicate rows when using a select statements, sorting data in a table, creating a table from a table, inserting data into a table from another table, delete operations, updating the contents of a table, modifying the structure of tables, renaming tables, truncating tables, destroying tables, creating synonyms.

## **UNIT-IV**

**Structured Query Language - II:** Data Constraints, Types of data constraints, defining different constraints on a table, computations done on table data, ORACLE functions, Date conversion functions, Data functions, Miscellaneous functions, Grouping data from tables in SQL, Subqueries, Joins, concatenating data from table columns, using the UNIONS, INTERSECT and MINUS clause.

### **Text Books**

1. R. Panneerselvan, Database Management Systems, PHI Publication.
2. Ivan Bayross, SQL, PL/SQL, BPB Publications.

### **Reference Books**

1. Silberschatz, Korth, Sudarshan, Database System concepts, McGraw-Hill.
2. Gupta, Database Management Systems, McGraw-Hill.
3. Alexis Leon, Mathews Leon, Database Management System, Leaon Vikas.
4. Mike Mcgrath, SQL in Easy Steps, McGraw-Hill.

**Semester - IV**

**Paper - I**

**Course Name – Statistical Techniques**

**Course Code – 4T1**

**Unit – I**

Statistics and Measures of Central Tendency: – Meaning, Scope, Importance, Functions and Limitations of Statistics. Collection of data, Primary data and Secondary Data, Tabulation and Classification, Frequency distribution, Type of table, Mean, Media, Mode, Geometric Mean and Harmonic Mean (theory & Numerical)

**Unit – II**

Measures of Dispersion: – Meaning and significance of dispersion. Method of measuring dispersion, Range, Mean Deviation, Standard Deviation, Quartile Deviation, Co-efficient of variation (Theory & Numerical)

**Unit – III**

Skewness :- Meaning of Skewness, Type of Skewness, Factor of skewness. Absolute Measures of skewness, relative measures of skewness, Karl Pearson's co-efficient of skewness, Bowley's Co-efficient of skewness (Theory and Numerical)

**Unit – IV**

Correlation and Regression:- Concept of correlation, Types of correlation, Karl Pearson's co-efficient of correlation, Probable error, Interpretation of "r", Rank correlation method.

Concept of regression, Lines of Regression, Co-efficient of Regression (theory &Numerical)

**Text Book**

1. N G Das, J K Das, Business Management and Statistics, McGraw-Hill.

**Reference Books**

1. Mrintunjay Kumar, Business Mathematics, Vikas Publishing House Pvt. Ltd.

2. Ajay Goel, AlkaGoel, Mathematics & Statistics, Taxmann.
3. Walter Rudin, Principles of mathematical Analysis, McGraw-Hill.
4. Dr. Pramod Fating, Dr. Milind Gulhane, Dr. Vijay Badge, Dr. Sarang Javkhedkar – Statistical Techniques – Sir Sahitya Kendra, Nagpur
5. Dr. S. R. Arora, Dr. Kavita Gupta, Business Mathematics and Statistics, Taxmann.

**Paper - II**

**Course Name – Business Law**

**Course Code – 4T2**

**Unit - I**

**THE INDIAN CONTRACT ACT, 1872:** Contract – meaning, characteristics and kinds, Essentials of a valid contract - Offer and acceptance, consideration, contractual capacity, free consent, legality of objects., Void agreements, Discharge of a contract – modes of discharge, breach and remedies against breach of contract, Contingent contracts, Quasi - contracts

**Specific Contracts-** Contract of Indemnity and Guarantee, Contract of Bailment, Contract of Agency

**Unit - II**

**THE SALE OF GOODS ACT, 1930** - Contract of sale, meaning and difference between sale and agreement to sell. Conditions and warranties, Transfer of ownership in goods including sale by a non-owner, Performance of contract of sale. Unpaid seller – meaning, rights of an unpaid seller against the goods and the buyer.

**Unit - III**

**THE INFORMATION TECHNOLOGY ACT, 2000 :-** Definitions, Digital signature, Electronic governance, Attribution, acknowledgement and dispatch of electronic records, Digital Signatures Certificates, Duties of Subscribers, Penalties and adjudication, Appellate Tribunal, Offences

**UNIT - IV**

**THE NEGOTIABLE INSTRUMENTS ACT 1881** - Meaning, Characteristics, and Types of Negotiable Instruments - Promissory Note, Bill of Exchange, Cheque, Holder and Holder in Due Course, Privileges of Holder in Due Course. Negotiation: Types of Endorsements, Crossing of Cheque, Bouncing of Cheque

**Suggested Readings:**

1. M.C. Kuchhal, and Vivek Kuchhal, Business Law, Vikas Publishing House, New Delhi.
2. Avtar Singh, Business Law, Eastern Book Company, Lucknow.
3. SN Maheshwari and SK Maheshwari, Business Law, National Publishing House, New Delhi.
4. Aggarwal S K, Business Law, Galgotia Publishers Company, New Delhi.
5. Sushma Arora, Business Laws, Taxmann Publications.
6. P C Tulsian and Bharat Tulsian, Business Law, McGraw Hill Education
7. Sharma, J.P. and Sunaina Kanodia, Business Laws, Ane Books Pvt. Ltd., New Delhi.
8. Information Technology Rules 2000 with Information Technology Act 2000, Taxmann Publications Pvt. Ltd., New Delhi.

Note: Latest edition of text books may be used.

**Paper - III**

**Course Name – Core Java**

**Course Code – 4T3**

**UNIT – I**

**Java History and Introduction** - Java history, Java features, How java differ from C and C++, Java and internet, Java and world wide web, Java environment. Simple Java programs, Java program structure, Java tokens, Java virtual machine, Command line arguments. **Variables, Data Types and Simple I/O** –Variables, Data Types, Scope of variables, Symbolic constants, Type casting, Standards default values, Getting Simple User Input. **Operators in java**-Introduction, Arithmetic operators, Relational operators, Logical operators, Assignment operators, Increment and decrement operators, Conditional operators, Bitwise operators, Special operators, Mathematical functions. **Decision Making and Branching** –If...Else statement, Nesting of If...Else statement, the switch statement, The? : Operators.

## **UNIT-II**

**Decision Making and Looping** – Introduction, The while statement, the do statement, for statement, Jumps in loops, Labeled loops. **Arrays, Strings** – One Dimensional Array, Two Dimensional Array, Strings. **Classes, Objects and Methods** – Introduction, Defining a class, Methods declaration, Creating objects, Accessing class members, Constructors, Method overloading, Static members, **Inheritance**: Extending a class, Overriding methods, Final variables and methods, Final classes, Finalizer methods, Abstract methods and classes, Visibility Controls. **Interfaces**:- Introduction, Defining interfaces, Implementing interfaces, Accessing interface variables.

## **UNIT - III**

**Packages**:- Introduction, Java API Packages, Using system packages, Naming conventions, Creating packages, Accessing a package, Using a package. **Introduction to Thread** - Creating threads, Life cycle of thread. **Managing Errors and Exceptions** – Introduction, Types of errors, Exceptions, Syntax of exceptions handling code, catch statements, using finally statements, throwing our own exceptions. **Graphics Programming** – Introduction, The graphics class, Lines and rectangles, Circles and ellipses, Drawing arcs, Drawing polygons.

## **UNIT-IV**

**Applet Programming** – Introduction, How applet differ from application, Preparing to write applet, Building applet code, Applet life cycle, Creating an executable applet, Designing a web page, Applet tag, Adding applet to HTML file, Running the applet, Passing parameters to applet, Displaying numerical values, Getting input from the user.

**Managing Input / Output Files in JAVA** – Introduction, Concepts of streams, Streams classes,

Bytes streams classes, Character streams classes, Using the file classes, Input / Output exception, Creation of files, Reading/Writing character, Reading/Writing bytes.

### **Text Book:**

1. E. Balagurusamy, Programming with Java, McGraw-Hill.

## **Reference Books**

2. Java Programming for the absolute beginner, PHI, Joseph P. Russel
3. Schildt,The Complete Reference Java 2, McGraw-Hill.
4. Rashmi Kanta Das, Core Java for Beginners, Vikas Publishing.
5. Joel Murach, Murach's Java Programming, Shroff Publishers.
6. Mike McGrath, Java in Easy Steps, McGraw-Hill

## **Paper - IV**

**Course Name – PHP & MySQL**

**Course Code – 4T4**

### **UNIT- I**

**Getting Started With PHP-** Basic HTML Syntax, Basic PHP Syntax, Using FTP, Testing Your Scripts, Sending Text To The Browser, Adding Comment To The Script, Basic Debugging Steps. **Variables-** What Are Variables?, Variable Syntax, Types Of Variables, Variable Values, Understanding, Quotation Marks. **HTML Forms And PHP-** Creating A Simple Forms, Choosing A Form Data In PHP, Displaying Errors, Error Reporting. **Using Numbers-**, Performing Arithmetic, Formatting Numbers, Understanding Precedence, Incrementing And Decrementing A Number, Creating Random Numbers.

### **UNIT- II**

**Using Strings-** Creating The HTML Forms, Concatenating Strings, Handling Newlines, HTML And PHP, Finding Substrings, Replacing Parts Of A String. **Control Structures-**The if Conditional, Validation Functions, Using Else, More Operators, Using else if, The Switch Conditional, The For Loop. **Using Arrays-** What Is An Array, Creating An Array, Adding Items To An Array, Accessing An Array From A Form.

### **UNIT- III**

**Creating Web Applications-** Creating Templates, Using Constants, Working With The Date And Time, Handling HTML Forms With PHP, Sending Email. **Cookies And Sessions-** What Are Cookies?, Creating Cookies, Reading From Cookies, Adding Parameters To Cookies, Deleting A Cookie, What Are Sessions?, Creating Session,

Accessing Session Variables, Deleting Session. **Creating Functions**- Creating And Using Simple Functions, Creating And Calling Functions That Take Arguments, Setting Default Arguments Values, Creating And Using Functions That Return A Value, Understanding Variable Scope.

#### **UNIT- IV**

**Files And Directories**- File Permissions, Writing To Files, Locking To Files, Reading From Files, **Introduction To Database**- Introduction To SQL, Connecting To MYSQL, MYSQL Error Handling, Creating And Selecting A Database, Creating A Database, Inserting Data Into A Database, Securing Query Data, Retrieving Data From A Database, Deleting Data In A Database, Updating Data In A Database.

**Putting It All Together**- Getting Started, Connecting To The Database, Writing The User-Defined Function, Creating The Template, Adding Quotes, Listing Quotes, Editing Quotes, Deleting Quotes.

#### **Text Book**

1. Larry Ullman, PHP for Web, Pearson.

#### **Reference Books**

1. Holznr, The Complete Reference – PHP, McGraw-Hill.
2. Mike McGrath, PHP & MySQL in Easy Steps, McGraw-Hill.
3. Steve Suehring, Tim Converse & Joyce Park, PHP and MySQL, Wiely.
4. Joel Murach & Ray Harris, murach's PHP and MySQL, Shroff Publishers.
5. Jason Gilmore, Beginning PHP and MySQL.

### **BCCA – Part - III**

#### **Semester – V**

#### **Paper - I**

**Course Name – Computerized Accounting using Tally**

**Course code - 5T1**

#### **UNIT I**

**Introduction to Tally.ERP 9**- Basics of Accounting-Types of accounts-Golden rules of accounting –Accounting principles –Features of Tally- Opening Tally.ERP 9, Components of the Tally.ERP 9 Window, Creating a Company. Accounting masters in Tally –F11: Features –F12 Configurations –Setting up of Account Heads.

## **UNIT II**

**Groups, Ledgers, Vouchers and Orders-** Introducing Groups, Introducing Ledgers, Introducing Vouchers, Introducing Purchase Orders, Introducing a Sales Order, Introducing Invoices.. **Stock and Godown in Tally-** Stock Groups, Stock Categories, Stock Items, Units of Measure, Godowns.

## **UNIT III**

**Stock and Godown in Tally**-Cost Centers and Cost Categories–Bank Reconciliation –Interest Calculations. **Reports in Tally.ERP 9-** Working with Balance Sheet, Working with Profit & Loss A/c Report, Working with Stock Summary Report, Understanding Ratio Analysis, Working with Trial Balance Report, Working with Day Book Report.

## **UNIT IV**

**Taxation –** Indian Tax Structure, Tax deducted at source in tally.ERP 9, Create a Tax Ledger, TDS Vouchers, Printing a TDS Challan, Tax collected at source in Tally.ERP 9, TCS reports in Tally.ERP 9, Calculating GST in Tally.ERP 9, GST Classification, GST Vouchers, GST Reports in Tally.ERP 9. Taking Backup in Tally.ERP 9, Restoring Data inTally. ERP 9,

### **Text Book:**

1. DT Editorial Services, Tally.ERP 9 in Simple Steps, Dreamtech Press.

### **Reference Books:**

1. Computerized Accounting using Tally ERP 9, Sahaj Enterprise, Tally Education Private Ltd (TEPL).
2. Vikas Gupta, Business Accounting with MS Excel and Tally.ERP 9 Course Kit, Dreamtech Press.
3. Vishnu Priya Singh, Tally 9.
4. K. K. Nadhani, Accounting with Tally, BPB Publication.
5. K. K. Nadhani and A.K. Nadhani, Tally Tutorial, BPB Publication.
6. Mr. Ravindra Parmar, Tally ERP 9 with GST – Paperback

## **Paper - II**

**Course Name – VB.Net**

**Course code -5T2**

### **UNIT- I**

**Welcome to Visual Basic.NET** – Windows Versus DOS Programming, Installing Visual Basic.NET, The Visual Basic.NET IDE, Creating a Simple Application, Using the Help System. **The Microsoft.NET Framework** – Microsoft's Reliance on Windows, Writing Software for Windows, Common Language Runtime, The Common Type System and Common Language Specification. **Writing Software** – Information and Data, **Variables**, Comments and Whitespace, Data Types, Sorting Variables, Methods. **Controlling the Flow** – Making Decisions, The if Statement, Select Case, Loops.

### **UNIT- II**

**Working with Data Structure** – Understanding Array, Understanding Constants, Structures, Working with Collection and Lists, Advanced Array Manipulation. **Building Windows Application** – Responding to Events, Building a Simple Application, Creating Complex Applications, Using Multiple Forms. **Displaying Dialog Boxes** – The MessageBox Dialog box, The OpenFileDialog Control, The SaveDialog Control, The FontDialog Control, The ColorDialog Control, The PrintDialog Control.

### **UNIT- III**

**Creating Menu** – Understanding Menu Features, Creating Menu, Context Menu. **Debugging and Error Handling** – Major Error Types, Debugging, Error Handling. **Building Objects** – Understanding Objects, Reusability, Our First Object, Constructor, Inheritance, The Framework Classes.

### **UNIT- IV**

**Accessing Database** – What is Database, SQL Select Statement, Queries in Access, Data Access Components, Data Binding. **Database Programming with SQL Server and ADO.NET** – ADO.NET, The ADO.NET Classes in Action, Data Binding. **Deploying Your Application** – What is Deployment?, Creating a Visual Studio .NET Setup Application, Assemblies as Installers, The Core of Deployment, Deploying Different Solution.

### **Text Book**

1. Jonathan, Richard Blair, Beginning VB.MET 2003, WILEY, Thearon Willis.

### **Reference Books**

1. Thearon Willis, Jonathan Crossland, Richard Blair, Beginning CB.Net 2003, Dreamtech Press, Wiley.
2. Jeffry R. Shapiro, The Complete Reference, Visual Basic .NET, McGraw- Hill.
3. Francesco Balena, Programming Microsoft Visual Basic.net, Microsoft Press.
4. Jeffrey Kent, Visual basic.Net – A Beginner's Guide, McGraw- Hill.

## **SEC – I – Skill Enhancement Course**

### **Elective - I**

#### **Paper - III**

#### **Course Name – Management Information System**

#### **Course code -5T3**

### **UNIT- I**

**Management Information Systems: An Overview** - Introduction, Need for Management Information Systems, Management Information Systems: A Concept, MIS: A definition, Management Information System and Information Technology, Nature and Scope of MIS, MIS Characteristics, Structure of MIS, Types of MIS, Role of MIS in Global Business, Challenges of Managing Information Systems.

**Information, System and Organization Concepts** - Introduction: A definition, Types of Information, Information Quality, Dimensions of Information, System: A definition, Kinds of Systems, System -related Concepts, Elements of a System, Information System, Organization : A Concept, Impact of Information System on Organization.

### **UNIT- II**

**IT Infrastructure and Emerging Technology - Data Resource Management** - Introduction, Database Concepts, Files : The Traditional Approach, The Database Management Approach: The Modern Approach, Database Management System, Data Models, Data Warehousing and Data Mining, Application of DBMS using MS-Access. **Telecommunication and Computer Networks** - Introduction, Telecommunications, Types of Signals, Communication Channels, Characteristics of

Communication Channels, Communication Hardware, Communication Networks, Computer Networks in India, Internet.

### **UNIT- III**

**E-Commerce, e-Business and e-Governance** - Introduction, e-Commerce, e-Commerce Sales Life Cycle, e-Commerce Infrastructure, e-Commerce Applications , e-Commerce Challenges and Opportunities, E-Business, e-Governance. **Enterprise Systems** - Introduction, Enterprise Systems, Enterprise Resource Planning (ERP) System, Customer Relationship Management(CRM) System, Supply Chain Management(SCM) System. **Decision Support Systems** - Introduction, Decision-Making :A Concept, Simon's Model of Decision Making ,Types of Decisions, Methods for Decision-Making, Decision Support Techniques ,Decision Making and Role of MIS, Decision Support Systems (DSSs),Business Intelligence ,Knowledge Management Systems.

### **UNIT- IV**

**Information Requirements Analysis & Systems Design** - Introduction, Systems Analysis, Requirements Determination, Strategies for Requirements Determination, Structured Analysis Tools, System Design. **Evolution and Maintenance of IS** - Introduction Evaluation Approaches, Evaluation Classes, Product-Based MIS Evaluation, Cost/benefit –Based Evaluation, Models Used in Evaluation, Process-based Evaluation, System Maintenance.

#### **Text Book**

1. D. P. Goyal, Management Information System, Vikas Publishing House Pvt Ltd.

#### **Reference Books**

1. Waman S. Jawadekar, Management Information Systems, McGraw-Hill.
2. D. P. Nagpal, Management Information Systems, S. Chand.
3. Dr. SushilaMaden, Management Fundamental and Information System, Taxmann.
4. S. Sadagopan, Management Information Systems, PHI.
5. A. K. Gupta, Management Information Systems, S. Chand.
6. Mahesh Halale, Management Information Systems, Himalaya publishing house.

**SEC – I – Skill Enhancement Course**

**Elective - II**

**Paper - III**

**Course Name – System Analysis & Design**

**Course code - 5T3**

**UNIT- I**

**System Concept And The Information Systems Environment-** Introduction, The Systems Concept, Characteristics Of A System, Elements Of A System, Types Of A System. **The System Development Life Cycle** - Introduction, System Development Life Cycle, Considerations for the Candidate System, Prototyping. **The Role Of System Analyst**- Introduction, Definition, Historical Perspective, The Multifaceted Role Of The Analyst, The Place Of The Analyst In The MIS Organization, Rising Positions In System Development, Conclusions.

**UNIT- II**

**System Analysis- System Planning And The Initial Investigation-** Introduction, Bases For Planning In System Analysis, Initial Investigation. **Information Gathering-** Introduction, What Kinds Of Information Do We Need?, Where Does Information Originate?, Information Gathering Tools. **The Tools Of Structured Analysis-** Introduction, What Is Structured Analysis?, The Tools Of Structured Analysis. **Feasibility Study-** Introduction, System Performance Definition, Feasibility Study.

**UNIT- III**

**System Design- The Process And Stages Of System Design-** Introduction, The Process Of Design, Design Methodologies, Major Development Activities, Audit Consideration. **Input/output And Forms Design-** Introduction, Input Design, Output Design, Forms Design. **File Organization And Data Base Design-** Introduction, File Structure, File Organization, Data Base Design, The Role Of The Data Base Administrator.

**UNIT- IV**

**System Implementation- System Testing And Quality Assurance-** Introduction, Why System Testing?, What Do We Test For?, The Test Plan, Quality Assurance,

Trends In Testing, Role Of Data Processing Auditor. **Implementation And Software Maintenance**- Introduction, Conversion, Combating Resistance To Change, Post-Implementation Review, Software Maintenance. **Hardware/ Software Selection** - Introduction, The Computer Industry, The Software Industry, A Procedure For Hardware/ Software Selection, Financial Considerations In Selection, The Used Computer, The Computer Contract.

### **Text Book**

1. Elias Awad, System Analysis and Design, Galgotia.
- 2.C.S.V.Murthy Management Information System , Himalaya Publication .

### **DSE – I – Discipline Specific Elective (DSE) Course**

**Elective - I**

**Paper - IV**

**Course Name – Cost and Management Accounting**

**Course code -5T4**

#### **Unit-I :- Cost Accounting**

Meaning, Scope, Objective, Importance, Features of cost accounting, Function of Cost Accounting, Advantage, Element of cost, Cost-Absorption, Allocation of overheads and Methods of costing, Type of Costing, Difference between cost Accounting and Financial Accounting. Problems on Cost Sheet, Tender and Quotations. (Theory and Numerical )

#### **Unit-II :- Process Cost Accounting**

Definition, Features of Process costing, Advantages of Process costing, Limitations of process costing, Wastage and By-products, Normal Loss, Abnormal Loss/Gain, Joint Products, Difference between Process cost and Job cost. Problems on Process costing

#### **Unit-III :- Management Accounting**

Meaning, Definitions, Characteristics and Nature of Management Accounting, Objective, Importance, Functions of Management Accounting, Advantage and Limitations of Management Accounting, Difference between management Accounting and Cost Accounting, Difference between Financial Accounting and Management Account. Break-Even Point Analysis (Theory and Numerical)

#### **Unit-IV :- Ratio Analysis**

Meaning, Importance, Limitations of Ratio Analysis, Use and Significance of Ratio Analysis, Classification of Ratio, Computation of Profitability Ratio, Financial Ratio with special reference to Current Ratio, Liquid Ratio, Inventory turnover Ratio, Debtors and Creditors turnover Ratio, Fixed Assets turnover Ratio, Debt-Equity Ratio, Working Capital Ratio, earnings per share Ratio, Gross Profit Ratio, Net Profit Ratio, expenses Ratio, Operating Ratio. (Theory and Numerical)

#### **Reference Books:**

1. Lal, Jawahar and Seema Srivastava , Cost Accounting. Tata McGraw Hill Publishing Co., New Delhi.

2. Nigam, B.M. Lall and I.C. Jain. Cost Accounting: Principles and Practice. Prentice Hall of India, New Delhi.
  3. Mittal, D.K. and Luv Mittal. Cost Accounting. Galgotia Publishing Co., New Delhi.
  4. Arora, M.N. Cost Accounting – Principles and Practice. Vikas Publishing House, New Delhi.
  5. Shukla, M.C., T.S. Grewal and M.P. Gupta. Cost Accounting: Text and Problems. S.Chand & Co. Ltd., New Delhi.
  6. Maheshwari, S.N. and S.N. Mittal. Cost Accounting: Theory and Problems. Shri Mahabir Book Depot, New Delhi.
  7. Jain, S.P. and K.L. Narang. Cost Accounting: Principles and Methods. Kalyani Publishers, Jalandhar.
  8. Horngreen, Charles T., George Foster and Srikant M. Dattar. Cost Accounting: A Managerial Emphasis. Prentice Hall of India Ltd., New Delhi.
  9. H.V. Jhamb ,Fundamentals of Management Accounting, Ane Publishing.
  10. Drury, Colin. Management and Cost Accounting. Thomson Learning.
  11. Lal, Jawahar. Advanced Management Accounting- Text and Cases. S. Chand & Co.,New Delhi.
  12. Khan, M.Y. and P.K. Jain. Management Accounting. Tata McGraw Hill, Publishing
  13. Dr. Vijay Bagde, Dr. Pramod Fating, Dr. Sarang Javkhedkar, Dr. Milind Gulhane – Cost and Management Accounting - Sir Sahitya Kendra, Nagpur
- Note: Latest edition of text books may be used.

### **DSE – I – Discipline Specific Elective (DSE) Course**

#### **Elective – II**

#### **Paper - IV**

#### **Course Name – Corporate Accounting**

#### **Course code -5T4**

#### **Unit-I :- Company Account- Issue of Share Capital and Capital Structure**

Meaning of a company, Characteristics, Kinds of companies, Formation of company, difference between partnership and company , Difference between Private Limited company and Public Limited company, Type of Share, Kinds of Share Capital, Accounting for issue and forfeiture of shares, re-issue of forfeited shares, meaning and need of De-mating of shares. (Theory and Numerical)

#### **Unit-II :- Final Accounts of Companies**

Preparation of Final Accounts of Joint Stock companies with reference to Companies Act 2013. (Theory and Numerical)

#### **Unit-III : Amalgamation and Absorption**

Meaning and Definitions of Amalgamation and Absorption, Types of Amalgamation, characteristics, Difference between amalgamation and absorption, Purchase Consideration. (Theory and Numerical)

#### **Unit-IV : Valuation of Share**

Meaning, Need for valuation of shares, factors influencing valuation of shares, Kinds of value of shares, Methods of valuation of shares. : (Theory and Numerical)

(i) Net Assets Method      (ii) Yield Method      (iii) Fair value method

### **Text Book**

1. Corporate Accounting, V. Rajasekaran, R. Lalitha, Pearson.

### **Reference Books**

1. Corporate Accounting, V. K. Goyal, RuchiGoyal, PHI.
2. Corporate Accounting, S N Maheshwari&Suneel K Maheshwari, Vikas Publishing House Pvt. Ltd..
3. Corporate Financial Accounting, Dr. S.K. Singh, SBPD.
4. Dr. Vijay Bagde, Dr. Pramod Fating, Dr. Sarang Javkhedkar, Dr. Milind Gulhane – Corporate Accounting - Sir Sahitya Kendra, Nagpur

### **Semester – VI**

#### **Paper - I**

**Course Name – C#.Net**

**Course code - 6T1**

### **UNIT – I**

**Introducing C#** - What is C#?, Evaluation of C#, Characteristics of C#, Application of C#, How does C# Differ from C++?, How does C# Differ from Java?.

**Understanding.NET: The C# Environment** – The.NET Framework, The Common Langue Runtime, Framework Base Class,.NET Languages, Benefits of the .NET Approach, C# and .NET. **Overview of C#** - Introduction, A Simple C# Program, Namespaces, Adding Comments, Using Aliases for Namespaces Classes, Passing String Objects to WriteLine Method, Command Line Argument, Main with Class, Providing Interactive Input, Multiple Main Methods, Compile Time Error. **Literals, Variables and Data Types** – Introduction, Literals, Variables, Data Types, Value Types, Reference Type, Declaration Types, Initialization of Variables, Default Value, Constant Variable, Scope of Variables, Boxing and Unboxing. **Operators and Expressions** – Introduction, Operator Precedence and Associativity, Type Conversion,

### **UNIT - II**

**Decision Making and Branching** – Introduction, Decision Making with if Statement, Simple if Statement, The if...else Statement, The else if Ladder, The Switch Statement, The ? : Operator, Decision Making and Looping – Introduction, The while

Statement, The do Statement, for Statement, The for each Statement. **Methods in C#** - Introduction, Declaring Methods, The Main Method, Invoking Methods, Nesting of Methods, Method Parameters, Pass by Value, Pass by Reference, The Output Parameters, Variables Argument List, Methods Overloading. **Handling Arrays** – Introduction, One-Dimensional Array, Creating an Array, Two-Dimensional Array, Variable-Size Arrays,. Manipulating Strings – Introduction, Creating String, String Methods, Inserting String, Comparing String, Finding String, Mutable String Arrays of String,

### **UNIT - III**

**Structures and Enumerations** –Introduction, Structures, Structs with Methods, Difference between Classes and Structs, Enumerations, Enumerator type Conversion. **Classes and Objects** - Introduction, Basic Principle of OOP, Defining a Class, Adding Variables, Adding Methods, Member Access Modifiers, Creating Objects, Accessing Class Members, Constructors, Overloaded Constructors, Static Members, Static Constructors, Private Constructors, Copy Constructors, Destructors, Member Initialization, The This Reference, Nesting of Members, Constant Members, Read-only Members, Properties, Indexers. **Inheritance and Polymorphism** – Introduction, Classical Inheritance, Defining a Subclass, Visibility Control, Defining Subclass Constructors, Multilevel Inheritance, Hierarchical Inheritance, Overriding Methods, Abstract method, Sealed Class: Preventing Inheritance, Sealed Methods, Polymorphism.

### **UNIT - IV**

**Interface: Multiple Inheritance**–Introduction, Defining an Interface, Extending Interface, Implementing Interface, Interface and Inheritance, Explicit Interface Implementation, Abstract Class and Interface. **Operator Overloading** – Introduction, Overloadable Operators, Need for Operator Overloading, Defining Operator Overloading, Overloading Unary Operator, Overloading Binary Operator, Overloading Comparison Operator. **Managing Errors and Exceptions** – Introduction, What is Debugging?, Types of Errors, Exceptions, Syntax of Exception Handling Code, Multiple Catch Statements, The Exception Hierarchy, General Catch Handler, Using Finally Statement, Nested Try Blocks, Throwing Our Own Exceptions, Checked and Unchecked Operators, Using Exceptions for Debugging.

**Text Book:**

1. E. Balagurusamy, Programming in C#, McGraw-Hill.

**Reference Books:**

1. Rod Stephens, C# 5.0 – Programmer's Reference, Wrox A Wiley Brand.
2. Rod Stephens, C# - 24 –Hour Trainer, Wrox A Wiley Brand.
3. Herbert Schildt, The Complete Reference C# 4.0, McGraw-Hill.

**SEC – I – Skill Enhancement Course**

**Elective - I**

**Paper - II**

**Course Name – Python**

**Course code - 6T2**

**UNIT - I**

**Getting Started** -Introducing python, Installing python on windows, Installing python on Linux, Meeting the interpreter, Writing your first program, Employing variables, Obtaining user input, Correcting Errors. **Performing operations**-Doing arithmetic, Assigning values, Comparing Values, Assessing logic. , Examining Conditions, Setting precedence, casting data types, Manipulating bits. **Making statements** - Writing lists, Manipulating lists, Restricting lists, associating list elements, Branching with if, Looping while true, Looping over items, Breaking out of loops.

**UNIT - II**

**Defining Functions**-Understanding scopes, Supplying arguments, Returning Values, Using callbacks, Adding placeholders, producing generators, Handling exceptions, Debugging assertions. **Importing Modules** - ,Storing functions, Owning function names, Interrogating the system, Performing mathematics, Calculating decimals, Telling the time, Running a timer, Matching patterns.

**UNIT - III**

**Managing strings** -Manipulating strings, Formatting strings, Modifying strings, Accessing files, Reading and writing files, Updating file strings, Pickling data  
**Programming objects**, Encapsulating data, Creating instance objects, Addressing

class attributes, Examining built-in attributes, Collecting garbage, Inheriting features, Overriding base methods, Harnessing polymorphism.

## **UNIT - IV**

**Processing requests**- Sending responses, Handling values, Submitting forms, Providing text areas, Checking boxes, Choosing radio buttons, Selecting options, Uploading files **Building interfaces**- Launching a window, Responding to buttons, Displaying messages, Gathering entries, Listing options, Polling radio buttons, Checking boxes, Adding images **Developing applications**- Generating random numbers, Planning the problem, Designing the interface, Assigning static properties, Initializing dynamic properties, Adding runtime functionality, Testing the program, Freezing the program, Deploying the application.

### **Text Book:**

1. Mike McGrath, Python in easy steps, McGraw-Hill.

### **Reference Books:**

1. Charles Dierbach, Introduction to Computer Science using Python, Wiley.
2. Laura Cassell & Alan Gauld, Python Projects, Wrox A Wiley Brand.
3. Allen B. Downey, Think Python, Shroff Publishers, O'Reilly.
4. Paul Greis, Jennifer Campbell, Jason Montojo, Practical Programming – An Introduction to Computer Science using Python, Shroff Publishers.

## **SEC – I – Skill Enhancement Course**

### **Elective – I**

#### **Paper - II**

#### **Course Name – Ruby on Rail**

#### **Course code - 6T2**

## **UNIT - I**

**Introduction** - A Tour of Ruby, Try Ruby, A Sudoku Solver in Ruby. **The Structure and Execution of Ruby Programs** - Lexical Structure, Syntactic Structure, File Structure, Program Encoding, Program Execution. **Data types and Objects** - Numbers, Text, Arrays, Hashes, Ranges, Symbols, True, False, and Nil, Objects.

## **UNIT - II**

**Expressions and Operators** - Literals and Keyword Literals, Variable References, Constant References, Method Invocations, Assignments, Operators. **Statements and Control Structures** -Conditionals, Loops, Iterators and Enumerable Objects, Blocks, Altering Control Flow, Exceptions and Exception Handling, BEGIN and END, Threads, Fibers, and Continuations. Methods, Procs, **Lambdas, and Closures** - Defining Simple Methods, Method Names, Methods and Parentheses, Method Arguments, Procs and Lambdas, Closures, Method Objects, Functional Programming.

## **UNIT - III**

**Classes and Modules** - Defining a Simple Class, Method Visibility: Public, Protected, Private, Subclassing and Inheritance, Object Creation and Initialization, Modules, Loading and Requiring Modules, Singleton Methods and the Eigenclass, Method Lookup, Constant Lookup. **Reflection and Meta programming** - Types, Classes, and Modules, Evaluating Strings and Blocks, Variables and Constants, Methods, Hooks, Tracing, Object Space and GC, Custom Control Structure, Missing Methods and Missing Constants, Dynamically Creating Methods, Alias Chaining, Domain-Specific Languages.

## **UNIT - IV**

**The Ruby Platform** – Strings, Regular Expressions, Numbers and Math, Dates and Times, Collections, Files and Directories, Input/Output, Networking, Threads and Concurrency. **The Ruby Environment** - Invoking the Ruby Interpreter, The Top-Level Environment, Practical Extraction and Reporting Shortcuts, Calling the OS, Security.

### **Text Book:**

1. David Flanagan, Yukihiro Matsumoto, The Ruby Programming language, O'Reilly.

### **Reference Books:**

1. Noel Rappin, Professional Ruby on Rails, Wrox.
2. Michael Fitzgerald, Ruby – Pocket Reference, O'Reilly.
3. Timothy Fisher, Ruby on Rails – Bible, Wrox.
4. Daniel Kehoe, Learn Ruby on Rails, Book One.
5. MichaelHartl, Ruby on Rail Tutorial,

**DSE – I – Discipline Specific Elective (DSE) Course**

**Elective – I**

**Paper - III**

**Course Name – Entrepreneurship Development**

**Course code - 6T3**

**UNIT – I**

**Entrepreneur:** Introduction, Evolution of the concept of Entrepreneur, Characteristics of successful Entrepreneurs, The charms of becoming Entrepreneur, The Entrepreneurial decision process, Functions of Entrepreneur, Need of Entrepreneur, Types of Entrepreneurs, Distinction between an Entrepreneur and a Manager, Intrapreneur, social Entrepreneur. **Entrepreneurship:** Concept of Entrepreneurship, Growth of Entrepreneurship in India, Role of Entrepreneurship in economic development. Types of Entrepreneurship, Family Business

**UNIT - II**

**Agri-Preneurship:** Introduction, Need for developing Agri-Preneurship in India, Opportunities for developing Agri-Preneurship, Challenges involved in developing Agri-Preneurship. **Factors affecting Entrepreneurship growth:** Factors affecting Entrepreneurship, Government Actions. **Entrepreneurial Motivation:** Meaning of Entrepreneurial Motivation, Motivational Cycle or Process, and Theories of Entrepreneurial Motivation. **Entrepreneurial Competencies:** Meaning of Entrepreneurial Competency, Major Entrepreneurial Competencies, Developing Entrepreneurial Competencies.

**UNIT - III**

**Entrepreneurship Development Programmes (EDPs):** Meaning of EDP, Need of EDPs, Objectives of EDPs, Entrepreneurship Development Programmes in India: A Historical Perspective, Course contents and curriculum of EDPs, Phase of EDP, Evaluation of EDPs, and Problems of EDPs. **Micro and small enterprises:** Small enterprise: Meaning & Definition, Essentials, features & Characteristics, Relationship between Micro and Macro enterprises, Rationale behind Micro & small enterprises, Role of Micro enterprise in economic development, Package for promotion of Micro and Small-scale enterprise. **Formulation of Business Plans:** Meaning of business

plan, Contents of business plan, Significance, Formulation of business plan, Network Analysis, Common Errors in business plan formulation.

## **UNIT - IV**

**Project Appraisal:** Concept of Project Appraisal, Methods of Project Appraisal, and Environmental clearance of SMEs. **Financing of Enterprise:** Meaning and need for financial planning, Source of Finance, Capital Structure, Capitalization, Term Loans, Sources of short-term Finance, Venture Capital, Export Finance. **Forms of business Ownership:** Sole Proprietorship, Partnership, Company, Cooperative, And Selection of an appropriate form of ownership structure, **Institutional Finance of entrepreneurs:** Need for institutional finance, Institutional Finance. **Institutional Support to Entrepreneurs:** Need for institutional support, Institutional Support to small Entrepreneurs.

**Text Book-** Dr. S. S. Khanka, Entrepreneurial Development, S. Chand.(Reprint 2016)

### **Reference Books**

1. Robert D. Hisrich, Mathew J. Manimala, Michael P. Peters, Dean A. Shepherd, Entrepreneurship, McGraw-Hill.
2. CA Dr. AbhaMathur, Business Entrepreneurship and Management, Taxmann.
3. Charles E. Bamford, Garry D. Bruton, Entrepreneurship – A Small Business Approach, McGraw-Hill.

## **DSE – I – Discipline Specific Elective (DSE) Course**

### **Elective – I**

#### **Paper - III**

#### **Course Name – Company Law and Secretarial Practice**

#### **Course code - 6T3**

### **Unit - I**

**Company and its Nature and Scope** - Meaning, Definition and characteristics of company. Historical background of company law in India, Companies Act 2013, landmark provisions of the Act, Classification of companies, Lifting the corporate veil.

### **Unit - II**

**Procedure for Incorporation of companies** - Role of promoters, Legal Position of Promoter, functions and liabilities of a promoter, Registration and incorporation of a company, Merits and Demerits of Incorporation of company - Memorandum of Association - Meaning, Purpose, Contents, clauses Ultra vires and Doctrine of Ultravires. Articles of Association - Meaning Purpose, Content. Alteration, Doctrine of Constructive Notice. Distinction between the Memorandum and Articles, Doctrine of Indoor management. Meaning - Formalities of issue Prospectus - Misrepresentation of Prospectus - Golden Rule **Amalgamation and winding up** - Merger and Demerger of Company, Amalgamation, Winding up of a Company, Payment of Liabilities in the event of winding up, Role of Official Liquidator, Court and National Company Law Tribunal.

#### **Unit - III**

**Shares, Debentures and Company Meetings** - Shares - Meaning, Types of Shares and Transfer of shares, price of issue of shares. Share Capital, Meaning, Kinds, Alteration, Reduction and Voting Rights, Global Depository receipts, Sweat Equity shares, bonus shares, buyback of shares. Share Certificate. Debenture - Meaning, Types, Charge-Fixed and Floating, Crystallization of Floating charge. **Company Meetings**:- Annual General Meetings, Extraordinary General Meetings, Persons Entitled To Call EGM, Notice,

#### **Unit - IV**

**Secretary** :- Definition, need and importance, Appointment and dismissal, Work, duties, rights and liabilities, Memorandum of association and secretary, Articles of association and secretary, Prospectus and secretary. **Directors Position, Appointment And Removal**: - Definition Of Directors, Position Of Director In A Company, Composition Of Board Of Directors, Methods and Provisions As To Directors Appointment, Appointment/Reappointment Of Rotational Directors, Director Identification Number, Disqualifications For Director, Vacation Of Office Of Director, Resignation Of Director, Removal Of Directors

#### **Book Recommended:**

1. C.A.Kamal Garg, Bharat's Corporate and Allied Laws, 2013
2. Institute of Company Secretaries of India, Companies Act 2013, CCH Wolter Kluver Business, 2013

3. Lexis Nexis, Corporate Laws 2013 (Palmtop Edition)
4. Avtar Singh : Company Law
5. Dutta on Company Law
6. N.D.Kapoor on Company Law, Charles Wild and Stuart Weinstein Smith and Keenan, Company Law, Pearson Longman, 2009
7. The Companies Acts from 1956 to 2014 as amended up to the date.
8. The New Company Law, Dr. N.V. Paranjape, Central Law Agency.

**R.T.M.Nagpur University, Nagpur**

**Syllabus**

**BCCA**

**SEMESTER I**

**Paper - I: English and Business Communication - (1T1)**

**UNIT-1 Prose**

Prescribed Textbook: **INSPIRATIONS – Raghav Publishers & Distributors, Nagpur**  
Edited by : Board of Editors

**PROSE-I Short Stories**

1. Home coming Dr. Tapati Dey
2. The Lighthouse Keeper of Aspinwall-Henry Sienkiewicz
3. Ilyas-Leo Tolstoy

**UNIT-II Prose**

**Textbook: INSPIRATIONS published by Raghav Publishers & Distributors, Nagpur**

1. Social Media- Dr.Sujata Chakravorty
2. World of Advertising- Dr.Pranjali Kane
3. OYO –Reinventing Hospitality

**UNIT-III -Communication**

Communication Process: Sender, Channel, Message, Receiver and Response

Types of Communication:

- |   |               |                        |
|---|---------------|------------------------|
| a. According to mode:                       | a. Oral       | b. Written             |
| b. According to Medium:                     | a. Electronic | b. Print               |
| c. According to number<br>of participants : | a. Dyadic     | b. Group               |
| d. According to Direction:                  | a. One-way    | b. Two-way             |
| e. According to Purpose:                    | a. General    | b. Business (Specific) |

**UNIT-IV-Business Correspondence:**

Application for Employment, Job Offer Letters, Sales letters, Claim and Adjustment Letters,  
Letter of Acceptance, Joining Letter

## **UNIT-V-Language Study**

- A. Comprehension of an Unseen Passage
- B. Enriching Vocabulary: Synonyms and Antonyms, Single Word for a Group of Words, Change of Word from Noun to Adjective & vice-versa.

## **UNIT-I & II**

Prescribed Textbook: **INSPIRATIONS – Raghav Publishers & Distributors, Nagpur**  
**Edited by : Board of Editors**

## **Reference Books**

### **UNIT-III**

Business Communication and Management  
Dr.K.R.Dixit (Vishwa Publishers, Nagpur)

### **Unit-IV**

- i) Business Communication: Urmila Rai, S.M. Rai-  
(Himalaya Publishing House)
- ii) Business Correspondence and Report Writing –  
R. C. Sharma& Krishna Mohan (Tata McGraw-Hill)
- iii) Developing Communication Skills – Krishna  
Mohan & Meera Banerji (Macmillan)

### **UNIT-V**

- i) English Grammar – N.D.V. Prasada Rao (S.Chand)
- ii) Developing Communication Skills –  
Krishna Mohan &MeeraBanerji  
(Macmillan)
- iii) Synonyms & Antonyms from the prescribed text **INSPRATIONS**

**QUESTION PAPER PATTERN**  
**ENGLISH AND BUSINESS COMMUNICATION**  
**Subject: English and Business Communication - I (1T1)**  
**SEMESTER - I**

**Time: 3 Hours]**

**Total Marks: 80**

Q.1.(A)TWO out of THREE SAQs from prose section of Unit-I (2x4)= 08 Marks  
(B).TWO VSAQs from prose section of Unit -I (2x2)= 04 Marks  
( C ) ONE PRQ out of TWO from Prose section of Unit -I (1x4) = 04 Marks

Q.2.(A)TWO out of THREE SAQs from prose section of Unit-II (2x4)= 08 Marks  
(B).TWO VSAQs from prose section of Unit -II (2x2)= 04 Marks  
( C ) ONE PRQ out of TWO from Prose section of Unit -II (1x4) = 04 Marks

Q 3.A.ONE LAQ out of TWO from Unit III (1x8) = 08 Marks  
B. TWO SAQs out of THREE from Unit III (2 x 4) = 08 Marks

Q 4.A. ONE out of TWO Letters  
(Application for Employment/Job Offer Letters/ Acceptance letter/Joining Letter)  
from Unit IV 08 Marks

B. ONE out of TWO Letters  
(Sales letters / Claim and Adjustment Letters) from Unit IV 08 Marks

Q 5.A. Comprehension of Unseen Passage from Unit -I (4x2)= 08 Marks  
**(Four VSAQs of 2 Marks each based on the Unseen Passage)**

C. Two Questions on each component from Enriching Vocabulary -Unit V (B) = 08 Marks

Total= 80 Marks

**N.B.LAQ-** Long Answer Questions to be answered in about 150-200 words

**SAQ-**Short Answer Questions to be answered in about 75-100 words approximately.

**VSAQ-** Very short answer questions to be answered in one or two sentences.

**INTERNAL ASSESSMENT OF ENGLISH AND BUSINESS COMMUNICATION: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from units from Units III, IV & V with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons prescribed in the syllabus and give a **powerpoint presentation/oral presentation**.

**2 Assignments–5+5 = 10 Marks**

**Powerpoint Presentation/Oral Presentation–5 Marks**

**Attendance–5 Marks**

**TOTAL–20 MARKS**

## **BCCA Part – I**

### **Semester – II**

#### **Paper - I: English and Business Communication – II (2T1)**

##### **UNIT-1 Prose**

Textbook :**INSPIRATIONS** published by **Raghav Publishers & Distributors, Nagpur**

###### **PROSE-I Short Stories**

1. The Dispenser of Holy Water- Guy de Maupassant
2. After Twenty Years-O.Henry
3. The Wall- Dr.Sunilkumar Navin

##### **UNIT-II Prose**

**Textbook: INSPIRATIONS published by Raghav Publishers & Distributors, Nagpur**

1. Beware You are Being Tracked!-Dr.Supantha Bhattacharya
2. What is Integrity?-Subroto Bagchi
3. Unsung Women Achievers of Contemporary India-Dr.Subhashree Mukherjee

##### **UNIT-III- Communication**

- Elements of communication
- Objectives of communication
- Essentials of effective communication
- Barriers to effective communication
- Suggestions to overcome the barriers

##### **UNIT IV-Business Correspondence**

Inviting Quotations, Placing Orders, Cancelling order, Credit Letters - Granting/Refusing Credit, Letter to Bank for overdraft facility

##### **UNIT V- Language Study**

(A) Views and Opinions (Current, Social, Cultural, Political)

(B) Punctuation, Words often confused

## **Books**

### **(For UNIT I & II)**

**Prescribed Text Book: INSPIRATIONS – Raghav Publishers & Distributors, Nagpur**  
**Edited by : Board of Editors**

## **REFERENCE BOOKS**

### **(For UNIT III)**

Business Communication and Management- Dr. K. R. Dixit  
(Vishwa Publishers, Nagpur)

### **(For UNIT IV)**

1. Business Communication: Urmila Rai, S. M. Rai - (Himalaya Publishing House)
2. Business Correspondence and Report Writing – R. C. Sharma& Krishna Mohan (Tata McGraw-Hill)
3. Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

### **(For UNIT V)**

1. English Grammar – N. D. V. PrasadaRao (S.Chand)
2. Developing Communication Skills – Krishna Mohan & Meera Banerji (Macmillan)

**QUESTION PAPER PATTERN**  
**ENGLISH AND BUSINESS COMMUNICATION**  
**Subject: English and Business Communication- II (2T1)**

**SEMESTER – II**

**Time: 3 Hours** **Total Marks: 80**

Q.1.(A)TWO out of THREE SAQs from prose section of Unit-I (2x4)=	08 Marks
(B).TWO VSAQs from prose section of Unit –I (2x2)=	04 Marks
( C ) ONE PRQ out of TWO from Prose section of Unit -I (1x4) =	04 Marks
Q.2.(A)TWO out of THREE SAQs from prose section of Unit-II (2x4)=	08 Marks
(B).TWO VSAQs from prose section of Unit –II (2x2)=	04 Marks
( C ) ONE PRQ out of TWO from Prose section of Unit -II (1x4) =	04 Marks
Q.3 A. One LAQ out of TWO from Unit III (1x8)=	08 Marks
B. TWO SAQs out of THREE from Unit III (2x4)=	08 Marks
Q4.A.ONE out of TWO Letters	08 Marks
<b>(Inviting Quotations/Placing Orders/Cancelling Orders)From Unit IV</b>	
B. ONE out of TWO Letters	08 Marks
<b>(Credit Letters - Granting/Refusing Credit, Letter to Bank for overdraft facility) from Unit IV</b>	
Q 5.A.Views and Opinions on Current Topics	08 Marks
B. Questions from Section B of Unit – 5	08 Marks
<b>(Four items out of Eight on meanings of the Words often Confused - (1 x 4 Marks))</b>	
<b>(Four items out of Eight on Punctuation –(1 x 4 Marks))</b>	

**Total= 80 Marks**

**N.B.LAQ-** Long Answer Questions to be answered in about 150 words

**SAQ-**Short Answer Questions to be answered in about 75 words approximately.

**VSAQ-** Very short answer questions to be answered in one or two sentences

## **INTERNAL ASSESSMENT OF ENGLISH AND BUSINESS COMMUNICATION: 20 MARKS**

The Internal Assessment would be done on the basis of the assignments submitted by the student and his/her performance, attendance and conduct during the Semester. The concerned teacher shall provide, in advance, a list of topics/assessment items/Question Bank (to the students) based on the Units prescribed for the Theory Examination. Students shall finalize 2 topics/items from 2 different units with the approval of the concerned teacher and submit the same within the prescribed deadline.

Students may be given freedom to submit a creative writing assignment on human values/world peace/environmental issues inspired by or related to the lessons prescribed in the syllabus and give a **powerpoint presentation/oral presentation**.

**2 Assignments–5+5 = 10 Marks**

**Powerpoint Presentation/Oral Presentation–5 Marks**

**Attendance–5 Marks**

**TOTAL–20 MARKS**

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**Syllabus for Bachelor of Science /B.Sc (IT)/BCA Part-I**  
**Compulsory English**  
(To be implemented from the session 2020-2021 and onwards)

**Semester I**

Theory - Full Marks : 60

Internal Assessment - Full Marks :15

**Prescribed Textbook :**

*Empowering Minds* by Board of Editors (Raghav Publishers & Distributors)

**Unit I - Prose**

1. My Struggle for an Education - Booker T. Washington
2. Florence Nightingale - Lytton Strachey

**Unit II – Prose**

3. The Birth of Khadi - Mahatma Gandhi
4. Go, Kiss the World! - Subroto Bagchi

**Unit III – Poetry**

1. Ulysses - Alfred Tennyson
2. Yussouf - James Russell Lowell
3. If - Rudyard Kipling

**Unit IV – Comprehension & Grammar**

1. Comprehension of Unseen Passage
2. Prepositions
3. Subject-verb agreement
4. Summarizing

**Recommended books for Unit IV :**

1. Macmillan Foundation English (Macmillan) by R.K.Dwivedi & A.Kumar
2. Oxford Practice Grammar by John Eastwood (Oxford University Press)
3. English for Practical Purposes (Macmillan) by Z.N. Patil, B.S.Valke, Ashok Thorat, Zeenat Merchant
4. Learners' English Grammar and Composition (S.Chand) by N.D.V.Prasada Rao

## **Distribution of Marks**

	LAQ	SAQ 08 (04+04)	VSAQ 02	Total
<b>Unit I (Prose)</b>	<b>06</b>	<b>08 (04+04)</b>	<b>02</b>	<b>16</b>
<b>Unit II (Prose)</b>	<b>06</b>	<b>08 (04+04)</b>	<b>02</b>	<b>16</b>
<b>Unit III (Poetry)</b>	<b>--</b>	<b>08 (04+04)</b>	<b>--</b>	<b>08</b>
<b>Unit IV (Grammar &amp; Composition)</b>	<b>--</b>	<b>--</b>	<b>20</b>	<b>20</b>

(Internal Assessment: Two assignments based on the Items given in the Prescribed Text Book)

## **Pattern of the Question paper**



*Ramirez* B.P.



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**

**Syllabus for Bachelor of Science/B.Sc (IT)/BCA Part-I**

**Compulsory English**

**(To be implemented from the session 2020-2021 and onwards)**

**SEMESTER II**

Theory - Full Marks :60

Internal Assessment – Full Marks :15

**Prescribed Textbook :**

*Empowering Minds* by Board of Editors (Raghav Publishers & Distributors)

**Unit I - Prose**

1. Grassroots Innovation and Social Enterprise: Changing Lives
2. The Two Gentlemen of Verona

**Unit II - Prose**

3. The Verger
4. Synthesis of Science and Spirituality

**Unit III - Poetry**

1. Richard Cory
2. Allow Sanity A Little Space
3. Refugee Blues

**Unit IV – Writing Skills**

1. Paragraph Writing
2. Application and C.V. Writing
3. Phrasal Verbs

**Recommended books for Unit IV :**

1. Macmillan Foundation English (Macmillan) by R.K.Dwivedi & A.Kumar
2. Oxford Practice Grammar (Oxford India) by John Eastwood
3. Learners' English Grammar and Composition (S.Chand) by N.D.V.Prasada Rao
4. English for Practical Purposes (Macmillan) by Z.N. Patil, B.S.Valke, Ashok Thorat, Zeenat Merchant

## Distribution of Marks

	LAQ	SAQ 08 (04+04)	VSAQ 02	Total 16
Unit I (Prose)	06	08 (04+04)	02	16
Unit II (Prose)	06	08 (04+04)	02	16
Unit III (Poetry)	--	08 (04+04)	--	08
Unit IV (Writing Skills)	--	--	20	20

(Internal Assessment: Two assignments based on the Items given in the Prescribed Text Book)

## Pattern of the Question paper

- Q.1. (A) One out of Two LAQs to be answered in about 120 words from Unit I 06  
 (B) One out of Two LAQs to be answered in about 120 words from Unit II 06
- Q. 2. (A) Two SAQs with internal choice to be answered in about 75 words each from Unit I.  
 $04+04 = 08$
- (B) Two SAQs with internal choice to be answered in about 75 words each from Unit II.  
 $04+04 = 08$
- Q.3. (A) Two SAQs with internal choice to be answered in about 75 words each from Unit III.  
 $04+04 = 08$
- (B) 4 VSAQs out of 6 from Unit I & Unit II (3 questions each from both Units)  
 (carrying 01 mark each)  $4 \times 1 = 04$
- Q.4. (A) Write an application and prepare a C.V. for the given post 08  
 (B) Make sentences using the given phrasal verbs (Any 4 out of 6)  $4 \times 1 = 04$
- Q. 5. (A) Write 2 Short Paragraph of about 100 words each on any 2 of the given 3 topics/  
 statements  $2 \times 4 = 08$

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
**Syllabus for Bachelor of Science/ B.Sc (IT)/ BCA/ Part-I**  
**Supplementary English**  
**(To be implemented from the session 2020-2021 and onwards)**

**Semester - I**

Theory Examination - Full Marks : 60

Internal Assessment – Full Marks : 15

**Prescribed Text Book:**

*Pearls of Wisdom* - Board of Editors (Raghav Publishers & Distributors)

**Theory**

**Unit I :** The following Short Stories from the prescribed Text:

1. The Postmaster - Rabindranath Tagore
2. After Twenty Years - O. Henry
3. A Happy Man - Anton Chekov

**Unit II:** The following Short Stories from the prescribed Text:

4. The Three Questions - Leo Tolstoy
5. The Story of an Hour - Kate Chopin
6. Mr. Know-All - W.S.Maugham

**Unit III: Vocabulary Expansion**

(Some Common Foreign Words Used in English; One Word for a Group of Words;  
Idioms and Phrases)

**Unit IV : 1. Essay Writing**

(Topics - Science and Technology; Environment Issues; Social Issues; Personal,  
Reflective Essay)

2. Email (Official)

**Recommended Book for Units III & IV :**

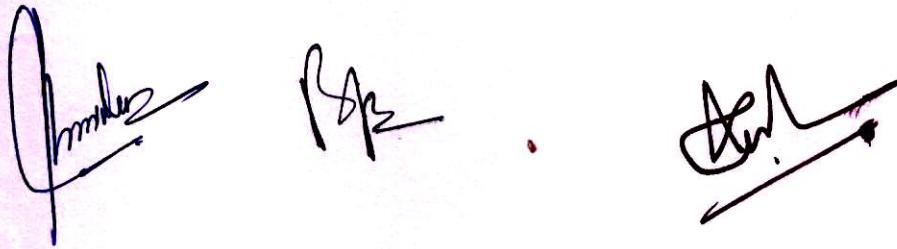
1. **Macmillan Foundation English** by R.K.Dwivedi & A.Kumar (Macmillan)
2. **English for Practical Purposes** (Macmillan) by Z.N. Patil, B.S.Valke, Ashok Thorat,  
Zeenat Merchant

**Internal Assessment:** 2 assignments to be given to the students on the basis of the items  
prescribed in Units I & II. These assignments should be submitted by the students for evaluation  
to the concerned Teacher

## Semester - I

### **Pattern of the Question paper**

- Q.1. (A) One out of Two LAQs to be answered in about 120 words from Unit I 06  
(B) One out of Two LAQs to be answered in about 120 words from Unit II 06
- Q. 2. (A) Two SAQs with internal choice to be answered in about 75 words each from Unit I.  
04 + 04 = 08
- (B) Two SAQs with internal choice to be answered in about 75 words each from Unit II.  
04 + 04 = 08
- Q.3. (A) Four out of Six VSAQs on Some Common Foreign Words Used in English  
(carrying 01 mark each)  $4 \times 1 = 4$   
(B) Write an Essay on any ONE of the given topics 8
- Q.4. (A) Write an Email on any ONE of the given topics 8  
(B) Four words out of Six based on One Word for a Group of Words  $4 \times 1 = 4$
- Q. 5. (A) Four out of Six VSAQs (3 each from both the Units) from Unit I & II  $4 \times 1 = 4$   
(C) Four Idioms and Phrases out of Six to be used in sentences  $4 \times 1 = 4$



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**

**Syllabus for Bachelor of Science / B.Sc (IT) / BCA / Part-I**

**Supplementary English**

(To be implemented from the session 2020-2021 and onwards)

**Semester II**

**Theory Examination - Full Marks : 60**

**Internal Assessment – Full Marks : 15**

**Prescribed Text Book:**

*Pearls of Wisdom* - Board of Editors (Raghav Publishers & Distributors)

**Unit I :** The following Short Stories from the prescribed Text:

1. The Open Window - Hector Hugh Munro
2. The Taxi Driver – K.S.Duggal
3. A Cup of Tea - Katherine Mansfield

**Unit II :** The following Short Stories from the prescribed Text:

4. The Devil - Guy de Maupassant
5. The Model Millionaire - Oscar Wilde
6. Men Who have Shaved Me - Stephen Leacock

**Unit III :** 1. Writing Advertisements (For sale of vehicle(s) / property, For Rent)

2. Letter Writing

(Letter of Complaint to an official; Letter to the editor of a newspaper highlighting an issue in your locality or town/city ; Application to the Principal of the College)

**Unit IV :** 1. Story writing based on the given outline.

2. Reporting an Event

**Recommended Books for UNIT III & IV :**

1. **Write Right** by Sarita Manuja (Macmillan)
2. **Macmillan Foundation English** by R.K.Dwivedi, A.Kumar (Macmillan)
3. **Learners' English Grammar And Composition** by N.D.V.Prasada Rao (S.Chand & Co. Ltd)

**Internal Assessment:** 2 assignments to be given to the students on the basis of the items prescribed in Units I & II. These assignments should be submitted by the students for evaluation to the concerned Teacher

**Semester II**

## **Pattern of the Question Paper**

- |   |                  |
|---|------------------|
| <b>Q.1.</b> (A) One out of Two LAQs to be answered in about 120 words from Unit I.                    | 06               |
| (B) One out of Two LAQs to be answered in about 120 words from Unit II.                               | 06               |
| <br><b>Q. 2.</b> (A) Two SAQs with internal choice to be answered in about 75 words each from Unit I. |                  |
|   | $04 + 04 = 08$   |
| (B) Two SAQs with internal choice to be answered in about 75 words each from Unit II.                 |                  |
|   | $04 + 04 = 08$   |
| <br><b>Q.3.</b> (A) Advertisement (One out of TWO )   | 6                |
| (B) Write a Letter on any One of the Two topics   | 6                |
| <br><b>Q.4</b> (A) Write a story in about 100 words on the basis of the given outline.                | 8                |
| (B) Four out of Six VSAQs (3 each from both the Units) from Unit I & II                               | $4 \times 1 = 4$ |
| <br><b>Q. 5.</b> Write a Report on an Event in about 100 words  | 8                |

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर

Syllabus for Bachelor of Science / B.Sc.(IT) / BCA - Part - I

मराठी

(To be implemented from the session 2020-21 and onwards)

विज्ञान स्नातक भाग १, सत्र १व सत्र २

अनुक्रमणिका

सत्र पहिले  
पाठ्यपुस्तक — साहित्यसेतू

गद्य विभाग

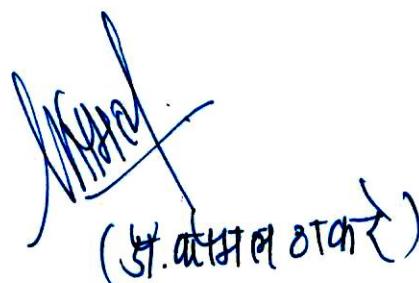
- १ उमाइं नमस्कारे — म्हाइंभट
- २ सार्वजनिक सत्यधर्म — महात्मा जोतीराव फुले
- ३ वाचन — गोपाळ गणेश आगरकर
- ४ भारतीय संविधानाची विज्ञाननिष्ठा — यशवंत मनोहर
- ५ ही श्रीची ईच्छा — श्रीनिवास ठाणेदार

पद्य विभाग

- १ संतवाणी — ज्ञानेश्वर, नामदेव, चोखामेळा, तुकाराम
- २ या भारतात बंधुभाव नित्य वसू दे — राष्ट्रसंत तुकडोजी महाराज
- ३ झापूऱ्या — केशवसूत
- ४ माझ्या मना बन दगड — विंदा करंदीकर
- ५ पाऊस — ग्रेस

व्यावहारिक मराठी

- १ प्रसारमाध्यमांसाठी लेखन — डॉ. संजय भक्ते
- २ शुद्धलेखन



(डॉ. विमल पाटील)

## प्रथम सत्र (Semester -I)

	गुण.
विभाग एक गद्य (पहिल्या भागातील पाच पाठ)	२०
विभाग दोन पद्य (पहिल्या भागातील पाच कविता)	२०
विभाग तीन निबंध — खालील दोनपैकी एका विषयावर	१०
१) विज्ञानावर	
२) सामाजिक समस्या	
विभाग चार व्यावहारिक मराठी	
अ) प्रसारमाध्यमांसाठी लेखन	०५
ब) शुद्धलेखन	०५
सूचना :—	
अभ्यासक्रमात नेमलेल्या साहित्यसेतू पुस्तकातील सर्व पाठ व सर्व कविता	
अभ्यासक्रमात समाविष्ट राहतील. प्रश्नपत्रिका ६० गुणांची राहिल. १५ गुण अंतर्गत	
मूल्यांकनावर (Internal Assessment) राहतील.	
अंतर्गत मूल्यांकनासाठी अभ्यासक्रमातील कोणत्याही घटकांवरील लेखन विद्यार्थ्यांकडून गृहपाठरूपाने सादर करता येईल. अथवा विद्यार्थ्यांच्या सर्जनशील जाणीवा विकसित करण्यासाठी अभ्यासक्रमातील पाठ आणि कवितेवरील आपले स्वतंत्र विचार लिखित स्वरूपात मागण्यात येतील. याशिवाय आणखी नव्या संकल्पना अंतर्गत मूल्यांकनासाठी विद्यार्थ्यांकडून साकार करण्याचे स्वातंत्र्य विषय शिक्षकाला असेल.	

  
 डॉ. प्रेम र. पाटील

प्रश्नपत्रिकेचे स्वरूप व गुण विभागणी :—

वेळ : ३ तास

गुण : ६०

प्रश्न १ ला निबंध (खालील दोनपैकी एका विषयावर २०० शब्दांत)

- १) विज्ञानावर
- २) सामाजिक समस्या  
(विभाग तीन)

१०

प्रश्न २ रा दीर्घोत्तरी प्रश्न (१०० शब्दांत)

२०

- (सहा पैकी चार—पहिल्या भागातील पाच पाठातून)  
(विभाग एक)

प्रश्न ३ रा दीर्घोत्तरी प्रश्न (१०० शब्दांत)

२०

- (सहा पैकी चार — पहिल्या भागातील पाच कवितांतून)  
(विभाग दोन)

प्रश्न ४ था अ) प्रसारमाध्यमांसाठी लेखन

०५

ब) शुद्धलेखन

०५

(विभाग चार)

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर  
Syllabus for Bachelor of Science / B.Sc.(IT)/ BCA - Part - I

मराठी

(To be implemented from the session 2020-21 and onwards)

विज्ञान स्नातक भाग १, सत्र १व सत्र २

अनुक्रमणिका

सत्र दुसरे  
पाठ्यपुस्तक — साहित्यसेतू

गद्य विभाग

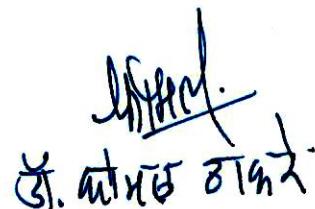
- १ अखेरचे कीर्तन — संत गाडगेबाबा
- २ एक राष्ट्र एक जनता — डॉ. वि. भि. कोलते
- ३ अपांगशाहीचे पंतप्रधान — मधुकर केचे
- ४ भरती — वसंत वराडपांडे
- ५ वैज्ञानिक दृष्टिकोण म्हणजे काय? — डॉ. जयंत नारळीकर

पद्य विभाग

- १ भंगु दे काठीण्य माझे — बा.सी.मर्ढेकर
- २ उषःकाल होता होता — सुरेश भट
- ३ खापराचे दिवे — विठ्ठल वाघ
- ४ आपल्याला नव्हती — अनुराधा पाटील
- ५ तू मदरबोर्ड माझ्या संगणकाचा — अरूण काळे

व्यावहारिक मराठी

- १ अनुवादप्रक्रिया — डॉ. नंदकुमार मोरे
- २ म्हणी व त्यांचा अर्थ

  
डॉ. अमृत ठाकरे

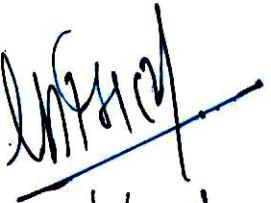
## द्वितीय सत्र (Semester -II)

विभाग एक गद्य (दुसऱ्या भागातील पाच पाठ)	गुण २०
विभाग दोन पद्य (दुसऱ्या भागातील पाच कविता)	२०
विभाग तीन निबंध — खालील दोन पैकी एका विषयावर	१०
१) पर्यावरणावर	
२) कल्पकतेवर	
विभाग चार व्यावहारिक मराठी	०५
अ) अनुवादप्रक्रिया	०५
ब) म्हणीचा अर्थ सांगून वाक्यात उपयोग करा	०५

### सूचना :—

अभ्यासक्रमात नेमलेल्या साहित्यसेतू पुस्तकातील सर्व पाठ व सर्व कविता अभ्यासक्रमात समाविष्ट राहतील. प्रश्नपत्रिका ६० गुणांची राहिल. १५ गुण अंतर्गत मूल्यांकनावर (Internal Assessment) राहतील.

अंतर्गत मूल्यांकनासाठी अभ्यासक्रमातील कोणत्याही घटकांवरील लेखन विद्यार्थ्यांकडून गृहपाठरूपाने सादर करता येईल. अथवा विद्यार्थ्यांच्या सर्जनशील जाणीवा विकसित करण्यासाठी अभ्यासक्रमातील पाठ आणि कवितेवरील आपले स्वतंत्र विचार लिखित स्वरूपात मागण्यात येतील. याशिवाय आणखी नव्या संकल्पना अंतर्गत मूल्यांकनासाठी विद्यार्थ्यांकडून साकार करण्याचे स्वातंत्र्य विषय शिक्षकाला असेल.

  
 (डॉ. वी. म. पाटील)

प्रश्नपत्रिकेचे स्वरूप व गुण विभागणी :—

वेळ : ३ तास

गुण : ६०

प्रश्न १ ला निबंध (खालील दोन पैकी एका विषयावर २०० शब्दांत)

- १) पर्यावरणावर
- २) कल्पकतेवर  
(विभाग तीन)

१०

प्रश्न २ रा दीर्घोत्तरी प्रश्न (१०० शब्दांत)

२०

- (सहा पैकी चार — दुसऱ्या भागातील पाच पाठातून)  
(विभाग एक)

प्रश्न ३ रा दीर्घोत्तरी प्रश्न (१०० शब्दांत)

२०

- (सहा पैकी चार — दुसऱ्या भागातील पाच कवितांतून)  
(विभाग दोन)

प्रश्न ४ था अ) अनुवादप्रक्रिया

०५

- ब) म्हणीचा अर्थ सांगून वाक्यात उपयोग करा  
(विभाग चार)

०५

*महामाल*  
(डॉ. कौरा ठाकरे)

**राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर**  
**Syllabus for Bachelor of Science / B.Sc. (IT)/BCA - Part - I**

**हिन्दी**

(To be implemented from the session 2020-21 and onwards)

**पाठ्यपुस्तक - "मंथन"**

**अनुक्रमणिका**

**प्रथम सत्र (Semester - I)**

**इकाई १ : गद्य-विभाग**

१. सिव सिर मालति माल
२. उसने कहा था
३. पुरस्कार
४. दुर्मुख
५. भोलाराम का जीव
६. लकी

- विद्यानिवास मिश्र
- चंद्रधर शर्मा 'गुलेरी'
- जयशंकर प्रसाद
- महादेवी वर्मा
- हरिशंकर परसाई
- ममता कालिया

**इकाई २ : पद्य-विभाग**

१. कबीर के दोहे
२. भूषणवाणी
३. मनुष्यता
४. जनतंत्र का जन्म
५. वीरों का कैसा हो बसंत
६. जिंदगी की सीख

- कबीरदास
- भूषण
- मैथिलीशरण गुप्त
- रामधारीसिंह 'दिनकर'
- सुभद्राकुमारी चौहान
- कलिका

**इकाई ३ : व्यावहारिक हिन्दी**

१. पारिभाषिक शब्दावली (विज्ञान एवं तकनीकी से संबंधित) - अंग्रेजी से हिन्दी/हिन्दी से अंग्रेजी
२. स्ववृत्त (Biodata) - परिभाषा, सामान्य परिचय, प्रारूप, विशेषताएँ, प्रकार।
३. साक्षात्कार (Interview) - परिभाषा, सीमाएँ, उद्देश्य, सिद्धांत, प्रकार, महत्व।
४. समाचार लेखन (News writing) - शीर्ष पंक्ति (Head line), समाचार लेखन प्रक्रिया, अच्छे समाचार की विशेषताएँ, भाषा-शैली, अच्छे संवाददाता की योग्यताएँ।

अध्ययन एवं  
अध्यापन के  
माध्यम से तैयार  
किया जाए।

**इकाई ४ : अन्य पाठ्य सामग्री**

१. विलोम शब्द
२. अनेक शब्दों के लिए एक शब्द
३. शब्दों का शुद्धिकरण
४. श्रुतिसम भिन्नार्थक शब्द

अध्ययन एवं अध्यापन के  
माध्यम से तैयार किया जाए।

**सूचना :**

- (i) पारिभाषिक शब्दावली (विज्ञान एवं तकनीकी से संबंधित) से अंग्रेजी से हिन्दी/हिन्दी से अंग्रेजी में केवल चार पारिभाषिक शब्द ही पूछे जायेंगे।
- (ii) विलोम शब्द से तीन शब्द, अनेक शब्दों के लिए एक शब्द से तीन शब्द, शब्दों का शुद्धिकरण से तीन शब्द तथा श्रुतिसम भिन्नार्थक शब्द से तीन शब्द ही पूछे जायेंगे।

राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर

Bachelor of Science / B.Sc. (IT)/BCA - Part - I

### हिन्दी

### पाठ्यपुस्तक - "मंथन"

### प्रथम सत्र (Semester - I)

### प्रश्न-पत्र का प्रारूप एवं अंक विभाजन

प्रश्न १ - (i) गद्य-विभाग पर आधारित पाठों में से विकल्प के साथ दीर्घोत्तरी प्रश्न।

अंक-६

(दो प्रश्नों में से एक प्रश्न का उत्तर अपेक्षित है।)

(ii) पद्य-विभाग पर आधारित कविताओं में से विकल्प के साथ दीर्घोत्तरी प्रश्न।

अंक-६

(दो प्रश्नों में से एक प्रश्न का उत्तर अपेक्षित है।)

प्रश्न २ - गद्य-विभाग से छः लघु प्रश्न पूछे जायेंगे, जिनमें से चार प्रश्नों के उत्तर अपेक्षित है।

अंक-१२

प्रश्न ३ - पद्य-विभाग से छः लघु प्रश्न पूछे जायेंगे, जिनमें से चार प्रश्नों के उत्तर अपेक्षित है।

अंक-१२

प्रश्न ४ - व्यावहारिक हिन्दी से चार लघु प्रश्न पूछे जायेंगे, जिनमें से प्रथम प्रश्न पारिभाषिक शब्दावली से,

द्वितीय प्रश्न स्ववृत्त से, तृतीय प्रश्न साक्षात्कार से, चतुर्थ प्रश्न समाचार लेखन से पूछा जायेगा।

इनमें से तीन प्रश्नों के उत्तर अपेक्षित है।

(३ x ४ अंक = १२ अंक)

प्रश्न ५ - अन्य पाठ्य सामग्री से चार अनिवार्य प्रश्न पूछे जायेंगे, जिनमें से प्रथम प्रश्न विलोम शब्द से,

द्वितीय प्रश्न अनेक शब्दों के लिए एक शब्द से, तृतीय प्रश्न शब्दों का शुद्धिकरण से,

चतुर्थ प्रश्न श्रुतिसम भिन्नार्थक शब्द से पूछा जायेगा। सभी प्रश्नों के उत्तर अपेक्षित है। (४ x ३ अंक = १२ अंक)

#### सूचना :

(i) पारिभाषिक शब्दावली (विज्ञान एवं तकनीकी से संबंधित) से अंग्रेजी से हिन्दी/हिन्दी से अंग्रेजी में केवल चार पारिभाषिक शब्द ही पूछे जायेंगे।

(ii) विलोम शब्द से तीन शब्द, अनेक शब्दों के लिए एक शब्द से तीन शब्द, शब्दों का शुद्धिकरण से तीन शब्द तथा श्रुतिसम भिन्नार्थक शब्द से तीन शब्द ही पूछे जायेंगे।

### कुल अंक विभाजन

इकाई १ - गद्य - विभाग - १८ अंक

इकाई २ - पद्य - विभाग - १८ अंक

इकाई ३ - व्यावहारिक हिन्दी - १२ अंक

इकाई ४ - अन्य पाठ्य सामग्री - १२ अंक

कुल अंक - ६० अंक

(अंतर्गत मूल्यांकन १५ अंक का होगा, जिसमें गृहकार्य पर ५ अंक, उपस्थिति पर ५ अंक तथा मौखिकी पर ५ अंक होंगे।)

*मानकृत*

राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर  
Syllabus for Bachelor of Science / B.Sc. (IT)/BCA - Part - I

हिन्दी

(To be implemented from the session 2020-21 and onwards)

पाठ्यपुस्तक - “मंथन”

अनुक्रमणिका

द्वितीय सत्र (Semester - II)

इकाई १ : गद्य-विभाग

१. बड़े भाई साहब
२. मरना : एक कला, एक चान्स
३. रीढ़ की हड्डी
४. दान
५. अभाव
६. हाथी के दाँत

- प्रेमचंद
- कन्हैयालाल मिश्र ‘प्रभाकर’
- जगदीशचंद्र माथुर
- भदन्त आनन्द कौसल्यायन
- विष्णु प्रभाकर
- अनंत गोपाल शेवडे

इकाई २ : पद्य-विभाग

१. रहीम के दोहे
२. तुकड़ोजी महाराज के पद
३. पुष्प की अभिलाषा
४. कर्मवीर
५. अकाल और उसके बाद
६. मन आजाद नहीं है

- रहीम
- राष्ट्रसंत तुकड़ोजी महाराज
- माखनलाल चतुर्वेदी
- अयोध्यासिंह उपाध्याय ‘हरिऔध’
- नागार्जुन
- गोपालदास सक्सेना ‘नीरज’

इकाई ३ : व्यावहारिक हिन्दी

१. कल्पना विस्तार
२. प्रतिवेदन (Report Writing) - अर्थ एवं परिभाषा, विशेषताएँ,  
प्रतिवेदन तैयार करते समय ध्यान देने योग्य बातें।
३. विज्ञापन - अर्थ, परिभाषा, विज्ञापन रचना।
४. अनुवाद - अर्थ, परिभाषा, प्रकार - (i) शब्दानुवाद (ii) भावानुवाद  
(iii) छायानुवाद (iv) आशुअनुवाद।

अध्ययन एवं अध्यापन के  
माध्यम से तैयार किया जाए।

इकाई ४ : अन्य पाठ्य सामग्री

१. देवनागरी लिपि - सामान्य परिचय, विशेषताएँ।
२. राजभाषा
३. संपर्क भाषा
४. राष्ट्रभाषा

अध्ययन एवं अध्यापन के  
माध्यम से तैयार किया जाए।

राष्ट्रसंत तुकड़ोजी महाराज नागपुर विश्वविद्यालय, नागपुर

Bachelor of Science / B.Sc. (IT)/BCA - Part - I

हिन्दी

पाठ्यपुस्तक - "मंथन"

द्वितीय सत्र (Semester - II)

प्रश्न-पत्र का प्रारूप एवं अंक विभाजन

प्रश्न १ - (i) गद्य-विभाग पर आधारित पाठों में से विकल्प के साथ दीर्घोत्तरी प्रश्न।	अंक-६
(दो प्रश्नों में से एक प्रश्न का उत्तर अपेक्षित है।)	
(ii) पद्य-विभाग पर आधारित कविताओं में से विकल्प के साथ दीर्घोत्तरी प्रश्न।	अंक-६
(दो प्रश्नों में से एक प्रश्न का उत्तर अपेक्षित है।)	
प्रश्न २ - गद्य-विभाग से छ: लघु प्रश्न पूछे जायेंगे, जिनमें से चार प्रश्नों के उत्तर अपेक्षित है।	अंक-१२
प्रश्न ३ - पद्य-विभाग से छ: लघु प्रश्न पूछे जायेंगे, जिनमें से चार प्रश्नों के उत्तर अपेक्षित है।	अंक-१२
प्रश्न ४ - व्यावहारिक हिन्दी से चार प्रश्न पूछे जायेंगे, जिनमें से प्रथम प्रश्न कल्पना विस्तार से, द्वितीय प्रश्न प्रतिवेदन से, तृतीय प्रश्न विज्ञापन से, चतुर्थ प्रश्न अनुवाद से पूछा जायेगा।	
तीन प्रश्नों के उत्तर अपेक्षित है।	(३ x ४ अंक = १२ अंक)
प्रश्न ५ - अन्य पाठ्य सामग्री से चार अनिवार्य प्रश्न पूछे जायेंगे, जिनमें से प्रथम प्रश्न देवनागरी लिपि से, द्वितीय प्रश्न राजभाषा से, तृतीय प्रश्न संपर्क भाषा से, चतुर्थ प्रश्न राष्ट्रभाषा से पूछा जायेगा। सभी प्रश्नों के उत्तर अपेक्षित है।	(४ x ३ अंक = १२ अंक)

**कुल अंक विभाजन**

इकाई १ - गद्य - विभाग	-	१८ अंक
इकाई २ - पद्य - विभाग	-	१८ अंक
इकाई ३ - व्यावहारिक हिन्दी	-	१२ अंक
इकाई ४ - अन्य पाठ्य सामग्री	-	१२ अंक
<b>कुल अंक</b>	<b>-</b>	<b>६० अंक</b>

(अंतर्गत मूल्यांकन १५ अंक का होगा, जिसमें गृहकार्य पर ५ अंक, उपस्थिति पर ५ अंक तथा मौखिकी पर ५ अंक होंगे।)

*मानकीय*

विज्ञान रनातक प्रथम वर्ष  
ठैब.ए  
मराठी (आवश्यक भाषा)

निर्धारित पाठ्यपुस्तक : 'शब्दगंध'  
 संपादक: डॉ. शेषराव जुडे  
 प्रकाशक: पिंपळापुरे बुक  
 डिस्ट्रिब्युटर्स, महाल, नागपूर

प्रथम सत्र (मउमेजमत.ए)

		गुण
इकाई एक	गद्य (प्रथम पाच पाठ)	15
इकाई दोन	पद्य (प्रथम पाच कविता)	15
इकाई तीन	(अ) निबंध(दोन पैकी एका विषयावर) (1) वर्तमानकालीन सामाजिक विषयावर (2) पर्यावरणावर (ब) म्हणींचा अर्थ सांगून वाक्यात उपयोग करा.	12
		03
इकाई चार	(अ) सारांश (ब) कार्यालयीन पत्र (क) इंग्रजीच्या उता—याचे मराठीत भाषांतर करा (ड) शुद्धलेखन	04 04 04 03

सुचना :-

नेमलेल्या 'शब्दगंध' पुस्तकातील सर्व पाठ व सर्व कविता अभ्यासक्रमात समाविष्ट राहतील. प्रश्नपत्रिका 60 गुणांची राहील. 15 गुण अंतर्गत मूल्यांकनावर (प्दजमतदंस )मेउमदज) राहतील.

### —:प्रश्नपत्रिकेचे स्वरूप व गुण विभागणी :—

वेळ 3 तास	गुण 60
प्रश्न 1ला निबंध (दोन पैकी एका विषयावर 200 शब्दात)	
(1) वर्तमानकालीन सामाजिक विषयावर	
(2) पर्यावरणावर (इकाई तीन)	12
प्रश्न 2रा दीर्घोत्तरी प्रश्न (200 शब्दात)	12
(दोन पैकी एक पहिल्या पाच पाठातून) (इकाई एक)	
प्रश्न 3रा दीर्घोत्तरी प्रश्न	12
(दोन पैकी एक पहिल्या पाच कवितातून )(इकाई दोन)	
प्रश्न 4 था (अ) लघुत्तरी प्रश्न	03
(दोन पैकी एक पहिल्या पाच पाठातून) (इकाई एक)	
(ब) लघुत्तरी प्रश्न	03
(पहिल्या पाच कवितातून) (इकाई दोन)	
(क) म्हणीचा अर्थ सांगून वाक्यात उपयोग करा.	
03	(इकाई तीन)
(ड) शुद्धलेखन	03
(इकाई चार)	
प्रश्न 5 वा (अ) सारांश (इकाई चार)	04
(ब) पत्र (इकाई चार)	04
(क) इंग्रजीच्या उता—याचे मराठीत भाषांतर करा	04
(इकाई चार)	

	गुण
इकाई एक गद्य (दुसरे पाच पाठ)	15
इकाई दोन पद्य (दुस—या पाच कविता)	15
इकाई तीन (अ) निबंध (दोनपैकी एका विषयावर)	12
(1)विज्ञानावर	
(2)कल्पकतेवर	
(ब) वाक्प्रचाराचा अर्थ सांगून वाक्यात उपयोग करा	03
इकाई चार (अ) सारांश	04
(ब) कौटुंबिक पत्र	04
(क) माहितीचा अधिकार (प्रारंभिक स्वरूपाची माहिती)	04
(ड) शुद्धदलेखन	03

सुचना :-

नेमलेल्या 'शब्दगंध' पुस्तकातील सर्व पाठ व सर्व कविता अभ्यासक्रमात समाविष्ट राहतील. प्रश्नपत्रिका 60 गुणांची राहील. 15 गुण अंतर्गत मूल्यांकनावर (पद्धतदंस मेउमदज) राहतील.

### —: प्रश्नपत्रिकेचे स्वरूप व गुण विभागणी :—

वेळ 3 तास	गुण 60
प्रश्न 1ला निबंध (दोन पैकी एका विषयावर 200 शब्दात)	
(1) विज्ञानावर	
(2) कल्पकतेवर	12
(इकाई तीन)	
प्रश्न 2रा दीर्घोत्तरी प्रश्न (200 शब्दात)	12
(दोन पैकी एक दुस-या पाच पाठातून)	
(इकाई एक)	
प्रश्न 3रा दीर्घोत्तरी प्रश्न (200 शब्दात)	12
(दोन पैकी एक दुस-या पाच कवितातून)	
(इकाई दोन)	
प्रश्न 4 था (अ) लघुत्तरी प्रश्न (गद्यावर)	03
(दोन पैकी एक दुस-या पाच पाठातून)	
(इकाई एक)	
(ब) लघुत्तरी प्रश्न (पद्धावर)	
(दोन पैकी एक दुस-या पाच कवितातून)	03
(इकाई दोन)	
(क) वाक्प्रचाराचा अर्थ सांगून वाक्यात उपयोग करा.	03
(इकाई तीन)	
(ड) शुद्धलेखन	03
(इकाई चार)	
प्रश्न 5 वा (अ) सारांश (इकाई चार)	4
(ब) पत्र (इकाई चार)	4
(क) माहितीचा अधिकार (इकाई चार)	4

**बी.एस.सी.प्रथम वर्ष  
पाठ्यक्रम हिन्दी (प्रथम सेमिस्टर)  
(बी.सी.ए / बी.एस.सी.आईटी)**

समय. 03घण्टे

पूर्णांक : 60

निर्धारित पाठ्यपुस्तक

साहित्य सरीता  
सम्पादक –जोगेन्द्रसिंह बिसेन  
प्रकाशक–ओरियंट ब्लैकस्वॉन

प्रथम इकाई : (अ) निबंध :— समसामायिक विषय  
(ब) मुहावरे

15

द्वितीय इकाई : गद्य (1) ईदगाह  
(2) गुण्डा  
(3) परदा  
(4) जिंदगी और जोंक  
(5) मैं हार गई

15

तृतीय इकाई : पद्य (1) तोड़ती पत्थर  
(2) कालीदास से  
(3) कहॉं तो तय था चिरागँ  
(4) रोटी और संसद  
(5) मारे जायेंगे

15

चतुर्थ इकाई : पत्राचार (पत्रों के प्रकार)  
(अ) (1) कार्यालयीन पत्र  
(2) व्यावसायिक पत्र  
(3) व्यावहारिक पत्र  
(4) आवेदन पत्र  
(ब) नौकरी हेतु आवेदन पत्र

15

## प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न कं 1.	एक निबध्निये (प्रथम इकाई)	12
प्रश्न कं 2.	(अ) दीर्घोत्तरी प्रश्न दो में से एक (द्वितीय इकाई) प्रथम तीन पाठों पर आधारित	06
	(ब) दीर्घोत्तरी प्रश्न दो में से एक प्रथम तीन कविताओं पर आधारित	06
प्रश्न कं 3.	(अ) लघुत्तरी प्रश्न चार में से दो बाकी दो पाठों पर आधारित (द्वितीय इकाई)	06
	(ब) लघुत्तरी प्रश्न चार में से दो बाकी दो कविताओं पर आधारित (तृतीय इकाई)	06
प्रश्न कं 4.	(अ) पत्राचार (चतुर्थ इकाई) (ब) आवेदन पत्र (चतुर्थ इकाई)	06 06
प्रश्न कं 5.	अति लघुत्तरी प्रश्न सम्पूर्ण पाठ्यक्रम पर आधारित	
	गद्य (द्वितीय इकाई)	03
	पद्य (तृतीय इकाई)	03
	पत्राचार (चतुर्थ इकाई)	03
	मुहावरे (प्रथम इकाई)	03

पाठ्यक्रम हिन्दी (द्वितीय सेमिस्टर)

## निर्धारित पाठ्यपुस्तक :

साहित्य सरीता  
सम्पादक – जोगेन्द्रसिंह बिसेन  
प्रकाशक – ओरियन्ट ब्लैकस्वॉन

प्रथम इकाई : (अ) निबंध :-1) विज्ञान 2) कल्पनाशील विषय (ब) लोकोवित	12 03
द्वितीय इकाई : गद्य (1) ढाई आखर प्रेम का (2) वापसी (3) इमाम साहब (4) सलाम (5) छप्पन तोले का करधन	15
तृतीय इकाई : पद्य (1) जागो फिर एक बार (2) यह तुम थी (3) हो गई है पीर पर्वत सी (4) बीस साल बाद (5) प्रजापति	15
चतुर्थ इकाई : 1) पारिभाषिक शब्दावलीका अर्थ हिन्दी से अंग्रेजी पारिभाषिक शब्द अंग्रेजी से हिन्दी पारिभाषिक शब्द 2) शब्दों का शुद्धीकरण	15

## प्रश्नपत्र का प्रारूप एवं अंक विभाजन

प्रश्न कं 1.	एक निबंध लिखिए (प्रथम इकाई )	12
प्रश्न कं 2.	(अ) दीर्घोत्तरी प्रश्न दो में से एक प्रथम तीन पाठों पर आधारित (द्वितीय इकाई)	06
	(ब) दीर्घोत्तरी प्रश्न दो में से एक प्रथम तीन कविताओं पर आधारित (तृतीय इकाई)	06
प्रश्न कं 3.	(अ) लघुत्तरी प्रश्न चार में से दो बाकी दो पाठों पर आधारित (द्वितीय इकाई)	06
	(ब) लघुत्तरी प्रश्न चार में से दो बाकी दो कविताओं पर आधारित (तृतीय इकाई)	06
प्रश्न कं 4.	(अ) पारिभाषिक शब्द (चतुर्थ इकाई)	06
	(ब) शब्द शुद्धीकरण (चतुर्थ इकाई)	06
प्रश्न कं 5.	अति लघुत्तरी प्रश्न सम्पूर्ण पाठ्यक्रम पर आधारित	
गद्य :-	(द्वितीय इकाई)	03
पद्य :-	(तृतीय इकाई)	03
पारिभाषिक शब्द :-	(चतुर्थ इकाई)	03
लोकोक्ति :-	(प्रथम इकाई)	03

ठैबण चंतज .८ मांउपदंजपवद  
**विषय – आवश्यक संस्कृत (बउचनसेवतल “दोतपज)**  
मउपेजमत १ 2013.2014 पासून पुढे

वेळः— ३ तास

एकूण

गुण—75

1) संस्कृत पुष्पहार— गद्य विभाग आणि परिशिष्ट क्र. ९ ते १६ राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, प्रकाशन (सुधारित आवृत्ती 1988)	60 गुण
2) स्वाध्याय (पहदउमदज )'	15 गुण
1) प्रश्न पत्रिका संस्कृत भाषेत राहील.	
2) उत्तरे स्वीकृत भाषेत लिहावीत.	
3) स्वाध्याय परीक्षा (पहदउमदज ) अंतर्गत स्वरूपाची राहील.	

संस्कृत पुष्पहार गद्य विभाग

घटक १.पाठ क्र. १ ते ५	गुण—15
घटक २. पाठ क्र. ६ ते ११	गुण—15
घटक ३. अ) अनुवाद ब) आकलन	गुण—15
घटक ४. परिशिष्ट (चचमदकपग ) १ ते ८	गुण—15

प्रश्न पत्रिकेचे प्रारूप

प्रश्न १) पाठ क्र. १ ते ५ वर आधारित दीर्घोत्तरी प्रश्न (दोन पैकी एक)	गुण
प्रश्न २) पाठ क्र. ६ ते ११ वर आधारित दीर्घोत्तरी प्रश्न (दोन पैकी एक)	12
प्रश्न ३) अ) स्वीकृत भाषेत अनुवाद (पाठ क्र. १ ते ११ वर आधारित दोन परिच्छेदा पैकी एक)	06
ब) परिच्छेदावर आधारित आकलनात्मक संस्कृत प्रश्न (पाठ क्र. १ ते ९ वर आधारित )	06
प्रश्न ४) संक्षिप्त टीपा लिहा (परिशिष्ट १ ते ८ वर आधारित चार पैकी दोन )	12
प्रश्न ५) अ) पाठ क्र. १ ते ५ वर आधारित वाक्यांचे संसदर्भ स्पष्टीकरण ( दोन पैकी एक )	03
ब) पाठ क्र. ६ ते ११ वर आधारित वाक्यांचे संसदर्भ स्पष्टीकरण ( दोन पैकी एक )	03
क) वस्तुनिष्ठ प्रश्न – गद्यपाठावर आधारित	03
ड) जोडया लावा – परिशिष्टावर आधारित	03
अंतर्गत मूल्यमापन १५ गुण का निम्न प्रकार से रहेगा	
1) आचरण –	05 गुण
2) घटक परीक्षा –	05 गुण
3) स्वाध्याय	05 गुण

ठैबण चंतज .८ मांउपदंजपवद

विषय – आवश्यक संस्कृत (बउचनसेवतल “दोतपज)

मउपेजमत प्र 2013.2014 पासून पुढे

वेळः— 3 तास

एकूण

गुण—75

1) संस्कृत पुष्पहार— पद्य विभाग आणि परिशीलन क्र. 9 ते 16 60 गुण

राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, प्रकाशन  
(सुधारित आवृत्ती 1988)

2) स्वाध्याय (पहदउमदज )' 15 गुण

1) प्रश्न पत्रिका संस्कृत भाषेत राहील.

2) उत्तरे स्वीकृत भाषेत लिहावीत.

3) स्वाध्याय परीक्षा (पहदउमदज ) अंतर्गत स्वरूपाची राहील.

संस्कृत पुष्पहार पद्य विभाग

घटक १. पाठ क्र. 1 ते 5	गुण—15
------------------------	--------

घटक २. पाठ क्र. 6 ते 8	गुण—15
------------------------	--------

घटक ३. अ) अनुवाद ब) आकलन	गुण—15
--------------------------	--------

घटक ४. परिशीलन (चचमदकपग ) 9 ते 16	गुण—15
-----------------------------------	--------

गुण

प्रश्न 1) पाठ क्र. 1 ते 5 वर आधारित दीर्घोत्तरी प्रश्न	12
--	----

(दोन पैकी एक)

प्रश्न 2) पाठ क्र. 6 ते 9 वर आधारित दीर्घोत्तरी प्रश्न	12
--	----

(दोन पैकी एक)

प्रश्न 3) अ) स्वीकृत भाषेत अनुवाद	06
-----------------------------------	----

(पाठ क्र. 1 ते 8 वर आधारित दोन परिच्छेदा पैकी एक)

ब) परिच्छेदावर आधारित आकलनात्मक संस्कृत प्रश्न	06
--	----

(पाठ क्र. 1 ते 9 वर आधारित )

प्रश्न 4) संक्षिप्त टीपा लिहा	12
-------------------------------	----

(परिशीलन 9 ते 16 वर आधारित चार पैकी दोन )

प्रश्न 5) अ) पाठ क्र. 1 ते 5 वर आधारित वाक्यांचे संसदर्भ स्पष्टीकरण	03
---	----

( दोन पैकी एक )

ब) पाठ क्र. 6 ते 9 वर आधारित वाक्यांचे संसदर्भ स्पष्टीकरण	03
---	----

( दोन पैकी एक )

क) जोडया लावा — पद्यपाठावर आधारित

ड) जोडया लावा — परिशीलनावर आधारित	03
-----------------------------------	----

अंतर्गत मूल्यमापन 15 गुण का निम्न प्रकार से रहेगा

1) आचरण —	05 गुण
-----------	--------

2) इकाई परीक्षा —	05 गुण
-------------------	--------

3) स्वाध्याय	05 गुण
--------------	--------

## **R.T.M.NAGPUR UNIVERSITY, NAGPUR**

### **Syllabus for**

### **Bachelor of Science Part - I**

### **Supplementary English Course**

(To be implemented from the session 2013-14 and onwards)

### **Semester - I**

Theory Examination - Full Marks : 60

Internal Assessment – Full Marks : 15

#### **Theory**

**Unit I : Prescribed Text: Understanding India** Edited by B. Keralavarma (Macmillan)

The following essays from the prescribed Text:

1. Brother Abdul Rahman – Amaral Hingorani
2. Gandhi and the Western World - Louis Fischer
3. The Cow of the Barricades – Raja Rao
4. The Smaller Gandhis – Mohinder Singh Sarna

**Unit II : The Old Man and the Sea by Ernest Hemingway (Duttsons)**

**Unit III: Vocabulary Expansion**

(Some Common Foreign Words Used in English, One Word for a Group of Words, Idioms and Phrases)

**Unit IV: a) Expansion of an Idea**

**b) Word-formation Rules**

(Noun Forms of Some Adjectives, Noun Forms of Some Verbs)

**c) Precis Writing**

**Recommended Book for Units III & IV :** Macmillan Foundation English by R.K.Dwivedi & A.Kumar (Macmillan)

**Internal Assessment:** The teacher should give regular assignments to students on the basis of the items prescribed in Units I, II, III & IV. These assignments should be submitted by the students for evaluation. This record of assignments should be produced by the students at the time of the Internal Assessment conducted towards the end of the Semester.

## **Pattern of the Question paper**

- Q.1. (A) One out of Two LAQs to be answered in about 150 words from Unit I. 6  
(B) One out of Two LAQs to be answered in about 150 words from Unit II. 6
- Q. 2. (A) Two SAQs with internal choice to be answered in about 75 words each from Unit I.  
 $3+3 = 6$
- (B) Two SAQs with internal choice to be answered in about 75 words each from Unit II.  
 $3+3 = 6$
- Q.3. (A) Six VSAQs on **Some Common Foreign Words Used in English** (Unit III)  
(carrying 01 mark each)  $6 \times 1 = 6$
- (B) Six VSAQs on **One Word for a Group of Words** (Unit III)  
(carrying 01 mark each)  $6 \times 1 = 6$
- Q.4 (A) Expand the idea contained in any **TWO** out of the three given proverbs in about 50 words each. (Unit IV)  $2 \times 4 = 8$   
(B) Four words out of Six based on any one of the items prescribed in Word-formation rules. (Unit IV)  $4 \times 1 = 4$
- Q. 5. (A) Three VSAQs from Unit I  $3 \times 1 = 3$   
(B) Three VSAQs from Unit II  $3 \times 1 = 3$   
(C) Three Idioms and Phrases out of Five to be used in sentences (Unit III)  $3 \times 1 = 3$   
(D) A short passage of about 150-250 words for **Précis Writing.** (Unit IV) 3

**R.T.M.NAGPUR UNIVERSITY, NAGPUR**

**Syllabus for**

**Bachelor of Science Part - I**

**Supplementary English Course**

**(To be implemented from the session 2013-14 and onwards)**

**Semester II**

**Theory Examination - Full Marks : 60**

**Internal Assessment – Full Marks : 15**

**Unit I : Text prescribed : Understanding India Edited by B.Keralavarma (Macmillan)**

The following essays from the prescribed Text:

1. The Idea of India : India's Mosaic of Multiplicities – Shashi Tharoor
2. Roots – Ismat Chughtai
3. A Gandhian in Garhwal – Ramchandra Guha
4. The End of Living and the Beginning of Survival – Chief Seattle

**Unit II : *The Mayor of Casterbridge* by Thomas Hardy (Macmillan, Stories to Remember)**

**Unit III : a) Writing Advertisements (For sale of vehicle(s)/property, For Rent, Situation Vacant, Situation Wanted)**

- b) Newspaper Reports (about accident, fire, functions/events)**  
**c) Precis Writing**

**Recommended Books: 1. Write Right by Sarita Manuja (Macmillan)**

- 2. Macmillan Foundation English by R.K.DwivediA.Kumar (Macmillan)**

**Unit IV : a) Essay Writing (Essays on current topics in about 300 words)**

**b) Word-formation Rules**

(Adjective Forms of Some Nouns, Some Words Changed into Verbs)

**Recommended Book : Macmillan Foundation English by R.K.Dwivedi & A.Kumar (Macmillan)**

**Internal Assessment:** The teacher should give regular assignments to the students on the basis of the items prescribed in Units I, II, III & IV. These assignments should be submitted by the students for evaluation. This record of assignments should be produced by the students at the time of the Internal Assessment conducted towards the end of the Semester.

## **Pattern of the Question paper**

- Q.1. (A) One out of Two LAQs to be answered in about 150 words from Unit I. 6  
(B) One out of Two LAQs to be answered in about 150 words from Unit II. 6
- Q. 2. (A) Two SAQs with internal choice to be answered in about 75 words each from Unit I.  
 $3+3 = 6$   
(B) Two SAQs with internal choice to be answered in about 75 words each from Unit II.  
 $3+3 = 6$
- Q.3. (A) Advertisement (One out of TWO given topics) (Unit III)  $6 \times 1 = 6$   
(B) Newspaper Report (One out of TWO given headlines) (Unit III)  $6 \times 1 = 6$
- Q.4 Write an Essay on any one of the four given topics. (Unit IV)  $1 \times 12 = 12$
- Q. 5. (A) Three VSAQs from Unit I  $3 \times 1 = 3$   
(B) Three VSAQs from Unit II  $3 \times 1 = 3$   
(C) A short passage of about 150-250 words for **Précis Writing** (Unit III) 3  
(D) **Three** words out of **Five** based on any one of the items prescribed in Word-formation Rules (Unit IV)  $3 \times 1 = 3$

निर्धारित पाठ्यपुस्तक

"शुभर-ए-अदब"

संपादक - डॉ. मोहम्मद हयात

प्रकाशक - जमाँ कम्प्युटर, होसानाबाद, कामठी, जि. नांगपूर

समय : 3 घंटे

पूर्णांक : 60

पहला युनिट : (अ) निबंध : चार मे से एक (12)

(1) पर्यावरण

(2) हालाते हाज़ेरा

(ब) मुहावरे (03)

दुसरा युनिट : नसर (1) उम्मीद की खूशी (15)

(2) खुतूते गालिब बनाम मीर मेहदी मजरुह और नवाब अन्वार दौला (2 खुतूत)

(3) भोपाल एक साब

(4) मज़मून कैसे लिखें

(5) अदब और साइंस

तीसरा युनिट : नज़म (गज़ले) (15)

(1) मीर तकीमीर

(i) फकीराना आय सदा कर चले

(ii) पत्ता पत्ता बूटा बूटा हाल हमारा जाने है

(2) मिर्जा गालिब

(i) जिक्र उस परिवेश का और फिर बयान अपना

(ii) नुकता ची है गमे दिल उस को सुनाय नबने

(3) सोमिन खाँ मोमिन

(i) असर उसको जरा नहीं होता

(ii) ठानी थी दिल में अब न मिलेंगे किसी से हम

(4) फैज़ अहमद फैज़

(i) तेरे गम को जाँ की तलाश थी तेरे जाँ निसार चले गये

(ii) दोनों जहाँ तेरी महब्बत मे हार के

(5) नातिक गिलावटवी

(i) खूद हो के कुङ्ग खुदा से मर्दे खुदा न माँग

(ii) मुद्दते हो गई होता नहीं फेरा तेरा

चौथा युनिट : 1) तर्जुमा (04)

2) अखबार रिपोर्टिंग (06)

3) अखबार में इश्तेहार (05)

*Sumit Darshan*  
1.11.2012

*Mustaqi*  
1111112

बी.एससी. प्राथम वर्ष  
पाठ्यक्रम उर्दू (दुसरा सेमिस्टर)  
(बी.सी.ए. / बी.एससी.आई.टी.)

निर्धारित पाठ्यपुस्तक

“शुभ्र-ए-अदब”

संपादक - डॉ. मोहम्मद अजहर इयात

प्रकाशक - जगान कम्प्युटर, हुसैनाबाद, कामठी, जि. नागपूर

समय : 3 घंटे

पूर्णांक : 60

पहला युनिट : (अ) निबंध : चार मे से एक विषय पर (12)

(1) विज्ञान (2) कल्पनाशील विषय

(ब) सनअत (03)

दुसरा युनिट : नसर (1) इम्तेहाज़ (अफसाना) (15)

(2) खताय मुरक्कब (अखलाकी मज़मून)

(3) गुदळी का लाल-नूर खाँ (खाका)

(4) हलदी घाट के बाद (झामा)

(5) उर्दू गज़ल पर एक नज़र (तन्कीदी मज़मून)

तीसरा युनिट : नज़म (1) सिद्धीक (नज़म) (15)

(2) तज़कीर व तानीस (नज़म)

(3) अली अकबर की शहादत (मरसीया)

(4) दर मदहाए फूल (कसीदा)

(5) फूल का चोरी होना (मसन्वी)

चौथा युनिट : अ) जर्दीद गज़ल (10)

नासिर काज़मी :

(1) वो दिल नवाज़ है लैकिन नजर शनास नहीं

(2) दिल में एक लहर सी ठठी है अभी

शाहिद कबीर :

(1) यही नहीं है के सब से जुदा सा लगता है

(2) हरेक हँसी में छूपी खौफ की ठंडासी है

मिदहतुल अखतर :

(1) सुबह मैं सोकर ठठा खाया पिया कलकी तरह

(2) खुद जिस को गिराने के लिए आय हुये हैं

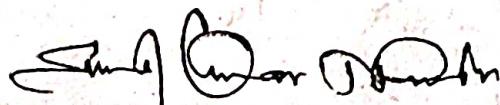
ब) रुबाईयात : (05)

(1) क्या फायदा फिक्र बेशोकम से होगा : शेख इबराहीम जौक

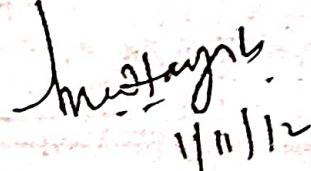
(2) बंदो ने सनम मे जलवा पाया तेरा : अलताफ हुसैन हाली

(3) हिर्स व हवसे हयाते फानी न गई : जगत मोहनलाल रवाँ

(4) कम ज़र्फ अगर दीलत व जर पाता है : सय्यद अहमद हुसैन अमजद



1.11.12

  
11/11/12

## RTM NAGPUR UNIVERSITY NAGPUR

### SEMISTER PATTERN SYLLABUS

(Implemented from session 2017-18)

#### **SUBJECT CHEMISTRY**

##### **B.Sc. –I, Semester - I**

##### **CH – 101: Paper- I (Inorganic Chemistry)**

#### **Unit-I**

**(7.5 Hrs)**

**(A) Atomic structure-**Idea of de-Broglie matter Waves, Heisenberg's uncertainty principle. Schrodinger wave equation, significance of  $\Psi$  and  $\Psi^2$ , Quantum numbers, shapes of s, p, and d orbitals, Aufbau principle, Pauli's exclusion principle and Hund's rule of maximum multiplicity. Electronic Configuration of elements and ions ( $Z = 1$  to 30)

**(B) Periodic Properties:** Atomic and ionic radii, ionization energy, electron affinity and electronegativity- Definition, trends in periodic table. Factors affecting ionization potential. Pauling's and Muliken's scale of electronegativity. Effective nuclear charge and Slater's rule with some numericals.

#### **Unit-II**

**(7.5 Hrs)**

**(A) Covalent Bond:** Valence Bond Theory, Formation of Hydrogen molecule with Potential energy diagram Limitations of VBT, directional characteristics of covalent bond, overlap criterion and bond strength. Bond energy, bond length, Bond order and Bond angle. Various types of hybridization involving s, p, d orbitals and shape of inorganic molecules.

**(B) Ionic solids:** Ionic structures with respect to NaCl and CsCl, Lattice energy and Born- Haber cycle with numericals. Solvation energy and solubility of ionic solids, polarizing power and polarisability of ions, Fajans rule.

#### **Unit – III**

**(7.5 Hrs)**

**(A) s- block elements-** Electronic configuration, Comparative study with respect to atomic and ionic radii, Ionization potential, reducing properties. Diagonal Relationships (Li-Mg). Hydrogen bonding .Classification and effect of Hydrogen bonding on viscosity, solubility, M.pt. and B.pt.

**(B) Chemistry of Noble Gases:** Chemical properties of the noble gases, Preparation, chemical properties, structures, bonding and applications of Xenon fluorides ( $XeF_2$ ,  $XeF_4$ ,  $XeF_6$ ). Structure and bonding in  $XeOF_2$  and  $XeOF_4$

#### **Unit- IV**

**(7.5 Hrs)**

**(A) p-block elements –** Introduction to p-block elements. Comparative study of groups 15, 16 and 17 with respect to their Atomic and ionic radii, Ionization potential, electron affinity, electronegativity, redox properties and oxidation state. Diagonal relationship (B-Si).

**(B) Hydrides:** Comparative study with respect to structure of  $NH_3$ ,  $PH_3$ ,  $AsH_3$  and  $SbH_3$ .

**Oxides:** Structure of  $P_2O_3$  , $P_2O_5$

**Oxyacids of Phosphorous:** Structure of  $H_3PO_3$  and  $H_3PO_4$

**Peroxyacids** of sulphur: Preparation and structure of Caro's and Marshall's acids.

**Hydrides** of boron: Structure and bonding of diborane, structure of borazine.

## **CH – 102: Paper- II (Physical Chemistry)**

### **UNIT-I: Thermodynamics**

**(7.5 Hrs)**

**(A)** Definitions of some common thermodynamic terms: system, surrounding etc. Types of systems (closed, open & isolated). Homogeneous and Heterogeneous systems, extensive and intensive properties, thermodynamic processes (isothermal, adiabatic, isobaric, isochoric, cyclic, reversible & irreversible). State & path functions and their differentiation, concept of heat & work.

**(B)** Statements of first law of thermodynamics, definition of internal energy & enthalpy. Heat capacity, heat capacity at constant volume and at constant pressure & their relationship. Joule-Thomson experiment, Joule-Thomson coefficient & inversion temperature, calculations of w, q,  $\Delta E$  &  $\Delta H$  in isothermal & adiabatic expansion of ideal gases for reversible process.

**(C) Thermo chemistry:** Standard states, Standard enthalpy of formation. Hess's law of constant heat of summation & its applications. Heat of reaction, relation between heat of reaction at constant volume and constant pressure. Average bond energy, bond dissociation energy and its calculations from thermo chemical data. Numerical problems.

### **Unit-II Gaseous State.**

**(7.5 Hrs)**

**A)** Postulates of kinetic theory of gases, derivation of kinetic gas equation, deduction of various gas laws from kinetic gas equation (Boyle's, Charle's, Avogadro's, Graham's, Dalton's law and ideal gas equation). Qualitative discussion of the Maxwell- Boltzmann distribution of molecular velocities. Effect of temperature on molecular velocities. Different types of molecular velocities (most probable, R.M.S. and average and expressions for them), their inter relationships. Definitions of collision diameter, collision number and Mean free path.

**(B)** Ideal gas and real gases, Difference between an ideal and real gases. Deviations from ideal behavior. Explanation of the terms – Compressibility factors and Boyle temperature. Causes of deviation from ideal behaviors. Vander Wall's equation of state, explanation of behavior of real gases by Van der Waal's equation. Andrew's experiment on critical phenomenon of isotherms of CO<sub>2</sub>. Continuity of states. The isotherms of Van der Waal's equation, Relationship between critical constants and Van der Wall's constants. Reduced equation of state and law of corresponding states. Numerical problems

### **Unit- III Liquid State**

**(7.5 Hrs)**

**A)** Intermolecular forces, structure of liquids (a qualitative description), structural differences between solids, liquids and gases, liquid crystals, Difference between liquid crystals, solids and liquids. Classification, structure of Nematic and Cholesteric phases. Thermography and seven segment cell.

**B) Properties of liquid:**

- i) Surface tension: Explanation, measurement of surface tension, Capillary rise method and drop number method, Parachor value and its application.
- ii) Viscosity: Explanation, coefficient of viscosity, Effect of temperature on Viscosity, relative viscosity, specific viscosity, intrinsic viscosity and reduced viscosity. Method of determination of viscosity (Ostwald viscometer method).
- iii) Refractive index: Definition. Method for determination of refractive index (Abbe's Refractometer).specific refraction, molar refractions. Numerical problems.

**Unit- IV Surface Chemistry and Catalysis:**

(7.5 Hrs)

**A) Adsorption-** Introduction, Factors affecting adsorption of Gases by Solids, Difference between physical and chemical adsorptions. Adsorption Isotherms: Freundlich Adsorption Isotherm, Langmuir Adsorption Isotherm, B.E.T. Equation (no derivation), Application of B.E.T. Equation in Determination of Surface Area of Adsorbent, Application of Adsorption.

**B) Catalysis:** - Introduction, Positive and negative catalysis. General characteristics of catalyst. Promoters & Inhibitors. Action of catalytic promoters and Inhibitors. Homogeneous & Heterogeneous Catalysis, Enzyme catalysis, auto catalysis. Kinetics of Enzyme Catalyzed Reactions- Machaelis-Menten Equation. Numerical problems.

**CH-103: Laboratory Course****Practical- I (Inorganic Chemistry): Semi micro Qualitative Analysis**

Qualitative analysis of inorganic salt mixture containing two acidic radicals of different group and two basic radicals of same groups. (At least six mixtures to be analyzed)

**Practical- II (Physical Chemistry)**

- 1) To determine the heat of solution of potassium nitrate calorimetrically.
- 2) To determine the heat of ionization of acetic acid calorimetrically
- 3) Determination of viscosity of unknown liquid by Ostwald viscometer.
- 4) To determine the percentage composition of given binary mixture (Ethanol-water) by viscosity method.
- 5) Determination of surface tension of a given liquid by drop number method (Stalagmometer method)
- 6) To compare cleansing power of two samples of detergent.
- 7) To determine refractive index, specific and molar refraction of given liquids by Abbe's refractometer.
- 8) To study the adsorption of oxalic acid on activated charcoal and verify the Freundlich adsorption isotherm.

(At least six experiments to be performed)

**B.Sc. –I, Semester - II**  
**CH – 201: Paper- I (Organic Chemistry)**

**Unit - I** (7.5 Hrs)

**A) Structure and Bonding:** Hybridization in case of Methane, Ethane, Ethylene and Acetylene. Bond lengths, bond angles and bond energies. Elementary ideas of Inductive effect, Electromeric effect. Resonance effect, Hyperconjugation (definition and examples). Hydrogen bonding in organic compounds (with reference to alcohol) and its consequences.

**B) Mechanism of Organic Reactions:** Homolytic & heterolytic bond fission with examples. Electrophiles & nucleophiles - definition and example both neutral and charged. Types of organic reactions - addition, substitution, elimination, rearrangement. Reactive intermediates – Definition: carbocations, carbanions, free radicals, carbenes, formation, geometry (orbital structure), stability.

**Unit - II** (7.5Hrs)

**Stereochemistry of Organic Compounds:** Concept of isomerism. Types of isomerism with suitable examples. Optical isomerism-elements of symmetry, molecular chirality, enantiomers, stereogenic centre (lactic acid as example). Optical activity, chiral and achiral molecules with two stereogenic centres (Tartaric acid) diastereo-isomers, meso-compound. Resolution of enantiomers biological and chemical methods. Inversion, retention and recemisation. Asymmetric synthesis. Relative and absolute configuration, sequence rules- D & L and R & S system of nomenclature.

**Geometrical isomerism:** E & Z system of nomenclature, geometric isomerism in maleic acid, fumaric acid and 2-butene.

**Conformational isomerism:** Conformational analysis of ethane and n-butane.

Newman's projection and sawhorse formulae. Difference between configuration and conformation.

**Unit - III** (7.5 Hrs)

**A) Alkanes:** IUPAC nomenclature of branched and unbranched alkanes. Alkyl group, methods of formation (Ethane) - Wurtz reaction, Kolbe's reaction, decarboxylation of carboxylic acid. Physical properties and chemical reactions of alkanes: halogenation, nitration, sulphonation, isomerization, cyclization, aromatization, pyrolysis, cracking and oxidation. L. P. G., Octane number. Mechanism of free radical chlorination of methane.

**Cycloalkanes:** Nomenclature. Baeyer's strain theory and its limitations. Ring strain in small rings cyclopropane and cyclobutane. Theory of stainless rings. Conformational analysis of cyclohexane, axial and equatorial bonds.

**B) Alkenes:** Nomenclature of alkenes, methods of formation (ethylene & propylene) – dehydrogenation of alkane, dehydrohalogenation of alkyl halides, dehydration of alcohol, dehalogenation of dihalides. Chemical reactions of alkenes (ethylene and propylene) - hydroboration, oxidation  $\text{KMnO}_4$ ,  $\text{HIO}_4$ , Epoxidation, Ozonolysis, Hydroxylation, Polymerization, Substitution in allylic position of alkenes. Markownikoff's Rule and peroxide effect. Ionic Mechanism of addition of  $\text{Br}_2$  to ethene and HBr to propene Free radical mechanism of addition of HBr to propene.

#### Unit - IV

(7.5 Hrs)

**A) Dienes:** Nomenclature and classification of dienes. Methods of formation of 1, 3 - butadiene. Chemical reactions of butadiene - 1, 2 and 1, 4 additions, Diels-Alder reaction.

**Alkynes:** Nomenclature, structure and bonding in Alkynes. Methods of formation of acetylene from - calcium carbide, dehydrohalogenation of dihalides .Chemical reaction - hydroboration, oxidation ,metal ammonia reduction & polymerization. Oxyacetylene flame. Acidity of alkynes.

**B) Aromatic compounds and Aromaticity:** Nomenclature of Benzene derivatives. Structure of benzene - Molecular formula and Kekule structure, Resonance structure, MO picture. Huckel rule – aromaticity, aromatic ions (cyclopentadienyl anion and cycloheptatrienyl cation). Aromatic electrophilic substitution mechanism with energy profile diagram (e.g. nitration and sulphonation).

### CH – 202: Paper- II (Physical Chemistry)

#### UNIT- I: Thermodynamics

(7.5 Hrs)

**(A) Second law of thermodynamics :** Need for second law of thermodynamics, statements of second law of thermodynamics, Carnot's cycle and its efficiency, Carnot theorem, thermodynamic scale of temperature, concept of entropy, entropy change in reversible and irreversible processes, entropy change of the universe, entropy change for an ideal gas with change in P, V & T, entropy change during physical change, physical significance of entropy, entropy as criteria of spontaneity & equilibrium of a process.

**(B)Free energy functions:** Work function (A) and Gibb's free energy (G), Variation of work function with T and V, variation of Gibb's free energy with T and P. A and G as criteria for spontaneity and equilibrium of a process. Gibb's – Helmholtz equation & its applications.

**(C) Chemical equilibrium:** Law off mass action, law of chemical equilibrium, relationship between  $k_p$  and  $k_c$ . Van't-Hoffs reaction isotherm, relation between standard free energy change & equilibrium constant, effect of temperature on equilibrium constant (reaction isochor), integrated form of Van't Hoff equation. Numerical problems.

#### UNIT-II: Phase Equilibra

(7.5 Hrs)

**(A) Phase rule:** Statement and meaning of the terms: Phase, component and degree of freedom, Derivation of Gibb's Phase rule. Applications of phase rule to one component system i) water

system, ii) Sulphur system. Need of reduced phase rule equation. Application of phase rule to two component system: Lead silver system, Pattinson's process for desilverization of lead.

**(B) Liquid-Liquid mixtures:** Raoult's law of ideal solutions, ideal liquid mixtures, Henry's law, non-ideal systems, azeotropes ( $\text{HCl} - \text{H}_2\text{O}$  &  $\text{C}_2\text{H}_5\text{OH} - \text{H}_2\text{O}$  system). Partial miscible liquids, lower & upper consolute temperature, (phenol-water system, trimethylamine-water and nicotine-water systems), effect of impurity on consolute temperature, Nernst distribution law, conditions for the validity of Nernst distribution law (Association and dissociation). Numerical problems.

### **UNIT-III: Nuclear chemistry and molecular structure:** (7.5 Hrs)

**A) Nuclear chemistry** Composition of Nucleus, Mass defects, Nuclear binding energy, Average binding energy per nucleon, explanation of nuclear stability on the basis of graph between average binding energy per nucleon and atomic mass number.

Nuclear reactions: Fission and fusion.

Nuclear models: Shell model and Liquid drop model, comparison between them. Bohr-Wheeler theory. Applications of radioisotopes in medicine, agriculture, carbon dating and structure determination.

### **(B) Molecular structure:**

Dipole moment, polar and non-polar covalent bond, Electrical polarization of molecules, Orientation of dipoles in an electric field. Determination of dipole moment. Application of dipole moment to %age ionic character, Geometry of molecules, study of geometrical isomers and substituted benzene molecules. Numerical problems.

### **UNIT-IV: Chemical Kinetics** (7.5 Hrs)

**(A)** Rate of reaction, factors affecting the rate of a reaction (concentration, temperature, pressure, solvent, light and catalyst). Order and molecularity of reaction. Reactions of zero order.

Mathematical expression for rate constant of first and second order reactions, their characteristics. Pseudo unimolecular reactions. Methods of determination of order of reaction: Integration method, differential method, graphical method, half life period and isolation method.

**(B)** Theories of chemical kinetics: concepts of activation energy. Arrhenius equation, Effect of temperature on rate of reaction.

Collision theory of bimolecular reactions (hard sphere model). Transition state theory (equilibrium hypothesis). Expression for rate constant based on equilibrium constant and thermodynamic aspects. Lindeman's theory of unimolecular reactions. Numerical problems.

## **CH-203: Laboratory Course**

### **Practical I (Organic Chemistry):**

- A) Qualitative Analysis: Element detection(N, Cl , Br, F & S),Identification of functional groups (-COOH, Phenolic -OH, -CHO, Aromatic -NH<sub>2</sub>, -CONH<sub>2</sub>) ,determination of M.P & B.P.
- B) Preparation: i) Hydrolysis : Preparation of Benzoic acid from Benzamide
- ii) Oxidation: Preparation of Benzoic acid from Benzaldehyde
- iii) Bromination of Phenol

### **Practical II (Physical Chemistry):**

- 1. To determine the integral heat of solution of a salt at two concentrations and hence determine the integral heat of dilution.
- 2 To determine the solubility of benzoic acid at different temperatures and to determine heat of solution of benzoic acid.
- 3. To construct the phase diagram of three component system (Acetic acid-chloroform-water)
- 4. To determine the critical solution temperature of two partially miscible liquids (phenol-water systems).
- 5. To study the distribution coefficient of Iodine between Water and Carbon tetrachloride/Kerosene
- 6. To determine molecular state of benzoic acid in benzene by distribution method.
- 7. To determine the rate constant of hydrolysis of methyl acetate in presence of acid.
- 8. To determine the specific reaction rate of hydrolysis of ethyl acetate catalyzed by NaOH (saponification)

(At least six experiments to be performed)

## B.Sc. –II, Semester - III

### CH – 301: Paper- I (Inorganic Chemistry) (2018-2019)

#### Unit – I:

(7.5 Hrs)

**(A) Valence Shell Electron pair repulsion (VSEPR) Theory:** Structure with respect to  $\text{H}_2\text{O}$ ,  $\text{NH}_3$ ,  $\text{NH}_4^+$   $\text{ClF}_3$ ,  $\text{SF}_4$ ,  $\text{ICl}_4^-$ .

Preparation, properties and structure of Interhalogen compounds. Polyhalides (Structure of  $\text{I}_3^-$ ,  $\text{I}_5^-$ ,  $\text{ICl}_4^-$ )

**(B) MO theory:** LCAO approximation, wave equation for molecular orbitals. Difference between bonding and anti bonding MO in terms of energy and electron density distribution curves, order of energy levels in MO. Molecular Orbital diagrams for homonuclear diatomic molecules of elements (with  $Z = 1$  to 9). Concepts of nonbonding MO in HF molecule. Coulson's MO diagram of CO and NO diatomic molecule.

#### Unit- II:

(7.5 Hrs)

##### **A) Chemistry of elements of first transition series:**

Characteristic properties of the elements of first transition series with reference to their: Electronic configuration, Atomic and ionic radii, Ionization potential, Variable oxidation states, Magnetic properties, Colour, Complex formation tendency and catalytic activity.

##### **(B) Chemistry of elements of second and third transition series:**

Electronic configuration of 4d and 5d transition series .Comparative treatment with their 3d-analogous (Group Cr-Mo-W, Co-Rh-Ir,) in respect of oxidation states and magnetic behavior.

#### Unit III:

(7.5 Hrs)

##### **A) Errors in Chemical Analysis:**

i) Random and Systematic errors, Explanation of terms: Accuracy and Precision, Uncertainty, Absolute and Relative errors, Mean , Median, Average and Standard deviations, Significant figures, numerical problems.

ii) Statistical Test of Data: Q-test, 2.5d and 4d Rules for rejection of data. Numerical problems.

##### **B) Non-aqueous solvents:**

Classification of solvents and characteristic reactions( acid base, redox & precipitation reactions) in Non-aqueous solvents with reference to i)Liquid Ammonia and ii) Liquid Sulphur dioxide.

#### Unit – IV:

(7.5 Hrs)

##### **A) Chemistry of Lanthanides:**

Position in periodic table, electronic configuration, Oxidation states, Atomic and ionic radii, Lanthanide contraction and its consequences, Complex forming tendency. Occurrence and separation of lanthanides (ion exchange and solvent extraction).

##### **B) Chemistry of Actinides:**

Position in periodic table, electronic configuration, Oxidation states, Atomic and ionic radii. Actinide contraction.

## CH-302: Paper- II (Organic Chemistry)

### Unit -I

(7.5 Hrs)

**Orientation:** Activating ( $-OH$ ,  $-NH_2$ ) & deactivating ( $-Cl$ ,  $-NO_2$   $-COOH$ ) substituent's, their orientation and directive influence on further electrophilic substitution, o/p ratio. Methods of formation and chemical reactions of alkyl benzene (Toluene) and biphenyl.

**Alkyl halides:** Nomenclature, classification, methods of formation, chemical reactions. Mechanism of nucleophilic substitution reactions of alkyl halides  $SN^1$  and  $SN^2$  with energy profile diagrams.

**Polyhalogen compounds:** Chloroform and carbon tetrachloride – formation and chemical reactions.

**Nuclear and side chain halogen derivatives of benzene (Aryl halides):** Chlorobenzene and benzyl chloride preparation and reactions. Relative reactivity of alkyl halides vs aryl halides. Synthesis and uses of DDT and BHC.

### Unit – II

(7.5 Hrs)

**A) Alcohols:** Classification and nomenclature,

**Dihydrlic alcohols:** Nomenclature, methods of formation, chemical reactions of vicinal glycols, oxidative cleavage ( $Pb(Oac)_4$  and  $HIO_4$ ) and Pinacol – pinacolone rearrangement with mechanism.

**Trihydric alcohols :** Nomenclature and methods of formation of Glycerol from (i) Propene and (ii) Hydrolysis of oils and fats, chemical reactions of glycerol - with oxalic acid at two different temperatures,  $HI$ ,  $HNO_3$ , dehydration.

**(B) Phenols:** Nomenclature, structure and bonding. Preparation of phenols from cumene, chlorobenzene ( Dows and Raschig process) and diazonium salts. Physical properties and acidic character, Resonance stabilization of phenoxide ion, Reactions of phenols, Electrophilic aromatic substitution, acetylation and carboxylation, Claisen rearrangement, Gatterman synthesis, Reaction Mechanism of i) Fries Rearrangement, ii ) Reimer-Tiemann reaction.

### Unit – III

(7.5 Hrs)

**Aldehydes and ketones:** Nomenclature, structure of the carbonyl group, synthesis of aldehydes and ketones with particular reference to the synthesis of aldehydes from acid chlorides and ketones from nitriles.

Mechanism of nucleophilic additions to carbonyl group with particular emphasis on Benzoin, aldol, Perkin and Knoevenagel condensation. Wittig reaction, Mannich reaction, oxidation of

aldehydes (by  $\text{KMnO}_4$ , Tollen's reagent and Fehlings solution), Baeyer-Villiger oxidation of Ketones, Cannizaro reaction, (with mechanism) ,MPV, Clemmensen, Wolf-Kishner,  $\text{LiAlH}_4$  and  $\text{NaBH}_4$  reductions.

## **Unit IV** **(7.5 Hrs)**

**A) Carboxylic Acids:** Nomenclature, structure & bonding. Physical properties, acidity of carboxylic acids, effect of substituent's on acid strengths , preparation of carboxylic acids (from Grignard Reagent and cyanides), Reactions of carboxylic acids, Hell-Volhard-Zelinsky reactions. Reduction of carboxylic acids, Mechanism of decarboxylation with soda lime. Methods of formation and chemical reactions of unsaturated monocarboxylic acids (crotonic acid and cinnamic acid).

**Dicarboxylic acids:** Methods of formation of succinic acid from ethylene dibromide and Phthalic acid from o-xylene. Effect of heat and dehydrating agents. ( Succinic acid, Phthalic acid).

**(B) Carboxylic acid derivatives :** Structure & nomenclature of acid chlorides, esters, amides and acid anhydrides. Interconversion of acid derivatives by nucleophilic acyl substitution. Preparation of carboxylic acid derivatives, Chemical reactions, Mechanism of esterification and hydrolysis (acidic and basic).

## **CH- 303: Laboratory Course**

### **Practical-I (Inorganic Chemistry):**

#### **Volumetric Analysis (All 5 Expts. to be performed)**

Preparation of standard solution by weighing is compulsory

- 1) Estimation of Fe(II) by dichromate using internal indicator.
- 2) Determination of acetic acid in commercial vinegar using NaOH
- 3) Determination of alkali content in antacid tablet using HCl
- 4) Determination of Zn by complexometric titration with EDTA
- 5) Determination of total Hardness of water (permanent and Temporary ) by EDTA

### **Practical- II(Organic Chemistry):**

#### **Complete analysis of simple organic compound involving following steps :-**

- (i) Preliminary examination ii) Detection of elements iii) Detection of functional group
- iv) Determination of M.P. / B.P. v) Preparation of derivative and its M.P./B.P. vi) Performance of specific test if any

## B.Sc. –II, Semester – IV

### CH – 401: Paper- I (Inorganic Chemistry)

#### **Unit-I:**

**(7.5 Hrs)**

##### **Coordination compounds:**

Distinction among simple salts, double salts and coordination compounds. Werner's Coordination theory and its experimental verification. Sidgwicks electronic interpretation, EAN rule with examples, Nomenclature of Coordination compounds. Chelates: Classification and their application, Valence Bond Theory of transition metal complexes.

#### **Unit- II:**

**(7.5 Hrs)**

##### **A) Isomerism in coordination compounds:**

Structural isomerism and Stereoisomerism in coordination compounds with respect to C.N. 4 & 6

##### **B) Oxidation and reduction:**

Concept of oxidation and reduction. Balancing of redox reactions by Electron method numericals. EMF series and its applications. Use of redox potential data: Analysis of Redox cycle, redox stability in water, Latimer diagram of Chlorine and Oxygen, Construction and explanation of Frost diagram. Frost diagram of Nitrogen and Oxygen. Pourbaix diagram of Iron.

#### **Unit- III: 7.5 Hrs**

##### **A) Colorimetry and Spectrophotometry:**

**(7.5 Hrs)**

Principles of photometry: Beer-Lambers Law, derivation and deviation(Numericals). Types of colorimeter and spectrophotometer with simple schematic diagrams. Application of colorimeter and spectrophotometer in quantitative analysis with reference to estimation of Cu(II) as Cu-ammonia complex.

##### **B) Separation Techniques:**

- a) Chromatography: Classification, Principle, Technique and Application of Paper and Column Chromatography.
- b) Ion- Exchange: Types of ion exchange resins, Equilibria and ion exchange capacity, Application in separation of binary mixtures.
- c) Solvent Extraction: Principle and Classification, Factors influencing extraction and application in chemistry.

#### **Unit- IV Inorganic Polymers:**

**(7.5 Hrs)**

**Silicones:** Introduction, Nomenclature, preparation, properties and uses, General introduction to Silicon oils, Silicone Elastomers and Silicon Resins

**Phosphonitrilic halide polymers:** Introduction, Preparation, properties and uses. Structure and bonding in  $(\text{NPCl}_2)_3$  and  $(\text{NPCl}_2)_4$

## **CH – 402: Paper- II (Physical Chemistry)**

### **Unit-I Solid State**

**(7.5Hrs)**

Solids and their classification, Difference between crystalline and amorphous solids, classification of crystalline solids. Laws of crystallography: Law of constancy of interfacial angles, Law of rationality of indices, Law of symmetry, elements of a crystal. Space lattice, Unit cell, Bravais lattices, crystal systems, identification of crystal planes, interplaner distance in cubic systems, X-ray diffraction by crystal, derivation of Braggs' equation. Determination of crystal structure of NaCl, KCl and CsCl, Laue's method and powder method.

### **UNIT –II: Electrochemistry**

**(7.5Hrs)**

A) Electrical transport : Conductance in metals (electronic) & in electrolyte solutions (ionic conductance), specific, equivalent and molar conductance, measurement of electrolytic conductance, variation of equivalent, specific & molar conductance with dilution, Kohlrausch's law, Arrhenius theory of electrolyte dissociation & its limitation, Ostwald's dilution law, validity and importance of Ostwald's dilution law.

Debye-Huckel theory (elementary treatment). Relaxation effect, Electrophoretic effect, Onsagar equation.

B) Transport number, determination of transport number by Hittorf's method & moving boundary method, factors affecting transport number of ions, relation between ionic conductance & transport number. Applications of Kohlrausch's law & conductance measurements: determination of equivalent conductance at infinite dilution for weak electrolytes, determination of degree of dissociation, determination of solubility and solubility product of sparingly soluble salts. Conductometric titrations (Acid-base & precipitation titrations). Numerical problems.

### **Unit-III: Spectroscopy**

**(7.5 Hrs)**

**A) Rotational Spectroscopy:** Rotational spectra of diatomic molecules, Energy levels of rigid rotor. Selection rule for transition between energy levels. Expression for wave number of spectral lines in terms of rotational constant (B) and rotational quantum number (J). Intensity of spectral lines. Types of molecules showing rotational spectra. Application of rotational spectra for determination of moment of inertia and bond length. Introduction to non-rigid rotor.

### **B) Vibrational Spectra:**

Vibrational energy levels of simple harmonic oscillator, selection rules. Types of molecules showing vibrational spectra. Vibrational energy level of anharmonic oscillator, selection rule, idea of overtones. Vibrational – Rotational spectra. P,Q and R branches of the vibrational – rotational spectra. Structural information from infrared spectra. Numerical problems.

## **Unit IV: Quantum Chemistry I**

**(7.5 Hrs)**

- A)** Failure of classical mechanics, Explanation of Black body radiation, Photoelectric effect, and heat capacity of solids on the basis of classical mechanics. Bohr's model of Hydrogen atom, spectrum of hydrogen atom, Plank's quantum theory. De Broglie's hypothesis (Derivation and experimental proof). Heisenberg's uncertainty principle (Explanation and experimental proof).
- B)** Introduction to wave functions ( $\Psi$ ), Schrodinger wave equation. Eigen values and Eigen functions, well behaved wave functions. Interpretation of wave function ( $\Psi$ ) and its square ( $\Psi_2$ ), Normalized and orthogonal wave functions. Postulates of quantum mechanics, Derivation of Schrodinger wave equation from postulates of quantum mechanics. Application of Schrodinger wave equation for a particle in one dimensional box and three dimensional box. Concept of degeneracy. Numerical problems.

## **CH-403: Laboratory Course**

### **Practical-I (Inorganic Chemistry):**

- A)** Preparation of following complexes and Comments on its VBT structure, magnetic properties and colors
- a)  $[\text{Cu}(\text{NH}_3)_4(\text{H}_2\text{O})_2]\text{SO}_4$     b)  $[\text{Ni}(\text{NH}_3)_6]\text{SO}_4$     c) Trans  $[\text{Co}(\text{NH}_3)_4\text{Cl}_2]\text{Cl}$
- d)  $\text{K}_3[\text{Fe}(\text{C}_2\text{O}_4)_3].\text{H}_2\text{O}$

- B)** **Chromatographic separation** of binary mixtures(at least Two) containing Cu(II), Co(II) and Ni(II) ions by paper chromatography and determination of Rf values.

### **Practical-II (Physical Chemistry):**

1. To construct various crystal lattices.
2. To determine the strength of the given acid (HCl or CH<sub>3</sub>COOH) conductometrically using standard alkali (NaOH) solution.
3. To determine the strength of strong acid and a week acid in a given mixture conductometrically against a standard alkali solution.
4. To determine the solubility and solubility product of a sparingly soluble salt conductometrically.
5. To determine the ionization constant of weak acid conductometrically.
6. To determine heat of solution of solid calcium chloride and calculate lattice energy of calcium chloride from its enthalpy change data using Born-Haber cycle.
7. To determine the molar volume of ethanol at room temperature in dilute aqueous solution
- 8 .To determine the equilibrium constant of the reaction,  $\text{KI} + \text{I}_2 \rightleftharpoons \text{KI}_3$  by distribution method.  
(At least six experiments to be performed)

**B.Sc. –III, Semester – V**  
**CH- 501:Paper- I (Organic Chemistry)**  
**(2019-2020)**

**UNIT- I****(7.5 Hrs)**

**Organic compounds of Nitrogen :** Preparation of nitroalkanes and nitrobenzene, chemical reactions of nitroalkanes. Mechanism of nucleophilic substitution in nitrobenzene and their reduction in acidic, neutral and alkaline media. Picric acid- preparation and uses,

**Amines :** Structure and nomenclature of amines, Physical properties, stereochemistry of amines, separation of mixture of 1°, 2° and 3° amines by Hoffmann's method, structural features affecting basicity of amines, preparation of alkyl & aryl amines (reduction of nitro compounds and nitriles), reductive amination of aldehydic and ketonic compounds, Gabriel phthalimide reaction, Hofmann bromamide reaction, Reactions of amines, Preparation and synthetic transformations of aryl diazonium salts.

**UNIT – II - HETEROCYCLIC COMPOUNDS:****(7.5 Hrs)**

Molecular orbital picture and aromaticity of furan, thiophene, pyrrole and pyridine. Methods of synthesis of pyridine (i) from hexamethylene diamine and (ii) Picoline. Mechanism of electrophilic and nucleophilic substitution reaction of pyridine. Chemical reaction of pyridine. Structure of pyridine. Comparison of basicity of pyrrole and pyridine. Introduction to condensed five and six membered heterocycles. Preparation and reactions of Indole, Quinoline and Isoquinoline with special reference to Fischer Indole synthesis, Skraup synthesis and Bischler Napieralski synthesis.

**UNIT-III****(7.5 Hrs)**

**A) Quantitative Analysis :** Estimation of carbon, hydrogen, nitrogen, sulphur and halogens (only principles and calculations). Calculation of Empirical and molecular formula with Numericals

**B) Organometallic compounds :**

Organomagnesium compound : Grignard reagent formation, chemical reactions and structure.

Organozinc compounds : Formation and chemical reactions. Organolithium compounds: Formation and chemical reactions.

**UNIT-IV - SPECTROSCOPY :****(7.5 Hrs)**

**A) Electromagnetic spectrum :** Absorption spectra, Ultraviolet absorption spectroscopy, Absorption laws( Beer Lambert law), molar absorptivity, Presentation and analysis of UV spectra, Types of electronic transitions, Effect of conjugation, concept of chromophores and auxochromes, Bathochromic, hypsochromic, hyperchromic and hypochromic shifts. UV spectra of conjugated dienes and enones.

**B) Infrared (IR) absorption spectroscopy :** Molecular vibrations, Hook's law, Selection rules, Intensity and position of IR bands, measurement of IR spectrum. Fingerprint region, characteristic absorptions of various functional groups and application of IR spectra.

### CH- 502: Paper- II (Physical Chemistry)

#### **Unit –I Electrochemistry** (7.5 Hrs)

**(A)** Galvanic cells, irreversible & reversible cells, emf of cell & its measurement, relation between electrical energy and chemical energy, calculation of thermodynamic quantities of a cell reactions ( $\Delta G$ ,  $\Delta H$  &  $\Delta S$  & equilibrium constant)

**(B)** Types of reversible electrodes : metal-metal ion electrode, gas electrode, metal insoluble salt-anion electrode, redox electrodes, amalgam electrode, Nernst equation, calculation of cell emf from single electrode potential, reference electrodes, standard electrode potential, concentration cells with & without transference, liquid-junction potential, salt bridge & its functions.

Applications of emf measurements in : (i) pH- determination using hydrogen electrode, quinhydrone electrode & glass electrode (ii) Potentiometric titration(Acid –Base and Redox titrations). Numericals Problems.

#### **Unit II : Quantum Chemistry and Molecular Orbital Theory:** (7.5 Hrs)

**A) Quantum Chemistry** Schrodinger wave equation for H-atom, separation in to three equations (without derivation), quantum numbers and their importance,. Hydrogen like wave functions, radial wave functions and angular wave functions. Concept of orbital, shapes of orbital. Radial probability distribution curves for 1s, 2s, 2p, 3p and 3d orbitals.

**B) Molecular orbital theory :** Born-Oppenheimer approximation, Criteria for forming M. O. from A. O., LCAO-MO method for  $H^{2+}$  ion, Physical pictures of bonding and antibonding wave functions. Calculation of energy from wave functions. Comparison of bonding and antibonding molecular orbitals. Introduction to M. O. theory for  $H_2$  molecule. Introduction to Valance bond theory for  $H_2$  molecule. Similarities and differences of valence bond and molecular orbital models.

#### **Unit III:Photochemistry and Raman Spectroscopy** (7.5 Hrs)

##### **A) Photochemistry :**

Interaction of radiation with matter, difference between thermal and photochemical reactions, Laws governing absorption of light. Laws of photochemistry. Jablonski diagram depicting various processes, quantum yield, determination of quantum yield of reactions, reasons for low and high quantum yields. Some examples of photochemical reactions (e.g. Photochemical decomposition of Hydrogen iodide, Photosynthesis of HBr from  $H_2$  and  $Br_2$  and photosynthesis of HCl from  $H_2$  and  $Cl_2$ ) Photosensitization, Photosensitized reactions. Numericals Problems.

##### **B) Raman Spectroscopy :**

Raman Effect, explanation of Rayleigh's lines, Stoke's lines and antistoke's lines, Experimental set up of Raman spectrometer. Pure rotational Raman spectra of diatomic molecules, rotational-vibration Raman spectra of diatomic molecules. Advantages of Raman spectroscopy over Infra red spectroscopy.

## **UNIT-IV: Colligative properties and Macromolecules**

**(7.5 Hrs)**

**A) Colligative properties:** Methods of expressing concentration of solutions, Raoult's law, Relative lowering of vapour pressure, determination of molecular mass from relative lowering of vapour pressure. Osmosis and osmotic pressure of solution. Measurement of osmotic pressure by Barkeley and Hartley method. Determination of molecular mass from osmotic pressure. Elevation of boiling point of solvent, determination of molecular mass from elevation of boiling point. Depression of freezing point of the solvent. Determination of molecular mass from depression of freezing point. Van't Hoff factor, degree of dissociation and association of solute.

**B) Macromolecules:** Macromolecules, classification of polymers, molar masses of polymers: number average and weight average molar masses, determination of molar masses of macromolecules: viscometry, Osmometry and light scattering method. Kinetics of polymerization, addition and condensation polymerization. Electronically conducting polymers: poly(acetylene), poly(sulphur nitride), poly(para-phenylene), poly(aniline). Numerical Problems.

## **CH-503: Laboratory Course**

### **Practical I (Organic Chemistry):**

- i) Estimation of Glucose
- ii) Estimation of Amide
- iii) Estimation of Nitro group
- iv) Estimation of Carboxylic group
- v) Saponification of oil

### **Practical II (Physical Chemistry):**

1. To determine the strength of given acid (HCl or CH<sub>3</sub>COOH) potentiometrically using standard alkali solution
2. To determine the dissociation constant of weak acid potentiometrically by titrating it against alkali.
3. To titrate potentiometrically ferrous ammonium sulphate against potassium dichromate and calculate redox potential of Fe<sup>2+</sup>/Fe<sup>3+</sup> system.
4. To verify Beer-Lambert law using calorimeter and determine the concentration of given solution.
5. To determine molecular mass of a non-volatile solute by Rast method.
6. To determine the molecular weight of polymer by Viscometric method.

7. To determine the specific rotation of a given optically active compound and the concentration of an unknown solution polarimetrically.

8. To study the rate of acid catalysed iodination of acetone.

(At least six experiments to be performed)

## B.Sc. –III, Semester – VI

### CH – 601: Paper- I (Inorganic Chemistry)

#### Unit- I

##### **A) Metal ligand bonding in Transition Metal Complexes:** (7.5 Hrs)

Limitations of Valence bond theory, Crystal field theory: Splitting of d-orbital in octahedral, tetrahedral and square planar complexes. Factors affecting the Magnitude of  $10 Dq$ . Concept of Crystal field Stabilisation Energy of octahedral and tetrahedral complexes. High spin low spin complexes on the basis of  $\Delta_o$  and pairing energy in octahedral complexes. (Numericals)

##### **B) Electronic spectra of Transition Metal Complexes:**

Jahn-Teller Effect, Conditions of distortion with respect to CFT configuration. Selection Rules (Laporte and Spin selection Rules). Hole Formalism Principle with respect to  $d^1$  and  $d^9$  ions. Electronic spectrum of  $[Ti(H_2O)_6]^{3+}$  and  $[Cu(H_2O)_6]^{2+}$  complex ions with respect to position of the band, intensity of the band, symmetry of the band and bandwidth.

#### Unit-II: (7.5 Hrs)

##### **A) Magnetic Properties of Transition Metal Complexes:**

Method of determination of Magnetic Susceptibility by Gouy's Method. Spin only formula and orbital contribution to magnetic moment. Magnetic properties of Octahedral and Tetrahedral complexes with respect to CFT. Numericals on magnetic moments.

##### **B) Thermodynamic and Kinetic aspect of metal complexes:**

Thermodynamic and Kinetic stability of metal complexes, their relation. Stepwise stability and overall stability constant and their relationship, Factors affecting the Stability of complexes. Determination of composition of Fe(III)-SSA complex by Mole Ratio and Job's Method.

#### Unit III: (7.5 Hrs)

##### **A) Organometallic Chemistry**

Definition, Nomenclature and Classification of Organometallic compounds. Preparation properties and application of Alkyl and Aryls of Li and Al. A brief account of metal ethylenic complexes (Structure only). Homogeneous Hydrogenation (Wilkinson's Catalyst reaction).

**B) Metal carbonyls:** Definition, preparation, properties. Structure and bonding in mononuclear carbonyls-  $Ni(CO)_4$ ,  $Fe(CO)_5$  and  $Cr(CO)_6$  with respect to back  $\square$ -bonding.

#### Unit –IV: (7.5 Hrs)

**A) Bioinorganic Chemistry:** Essential and Trace elements in biological processes, Metalloporphyrins with special reference to structure and role of Haemoglobin and Myoglobin in transport of Oxygen. Biological role of  $Na^+$  and  $K^+$  and  $Ca^{2+}$  metal ions. Sodium and potassium pump. Hypo and hyper calcemia. Calcium triggering and calcium pump.

**B) Hard and Soft Acids and Bases:** Classification of Acids and Bases as Hard and Soft. Pearson's HSAB Concept and its applications. Symbiosis, Antagonism.

## CH- 602: Paper- II (Organic Chemistry)

### UNIT- I : NMR Spectroscopy: (7.5 Hrs)

Nuclear Magnetic Resonance (NMR) spectroscopy. Proton Magnetic Resonance spectroscopy. Nuclear shielding and deshielding, chemical shift, Spin-spin splitting and Coupling constant. Areas of signals. Interpretation of NMR spectra of organic molecules such as ethyl bromide, ethanol, acetaldehyde, 1,2 dibromoethane, ethyl acetate, toluene, acetophenone, acetyl acetone. Problem pertaining to the structure elucidation of simple organic molecules by NMR technique.

### UNIT- II (7.5 Hrs)

#### A) ORGANIC SYNTHESIS VIA ENOLATES:

Acidity of  $\alpha$ - hydrogens, Reactivity of methylene group. Malonic ester preparation and reaction- Acetoacetic ester - synthesis by Claisen condensation reactions, Keto - enol tautomerism of acetoacetic ester, Preparation of acetic acid, succinic acid, crotonic acid and heterocyclic compounds.

**B) CARBOHYDRATES:** Definition, classification and reaction of glucose. Mechanism of osazone formation. Determination of structure of glucose. Determination of ring size of monosaccharides. Epimerisation, mutarotation, conversion of glucose into fructose and vice-versa. Chain lengthening and shortening of aldoses(Wohl's degradation).Introduction to structures of maltose, sucrose, lactose, starch , cellulose, ribose and deoxyribose without involving structure determination.

### UNIT-III (7.5 Hrs)

#### A) AMINO ACIDS, PEPTIDES, PROTEINS & NUCLEIC ACIDS:

Classification, structure and stereochemistry of amino acids. Acids base behavior, isoelectric point and electrophoresis. Structure and nomenclature of peptides and protein. Classification of proteins. Protein denaturation. Structure determination of proteins (primary and secondary).

**NUCLEIC ACIDS:** Introduction, constituents of nucleic acids. Ribonucleosides and Ribonucleotides. Double helical structure of DNA.

**B) FATS, OILS AND DETERGENTS :** Natural fats, edible and industrial oils of vegetable origin, Glycerides, hydrogenation of unsaturated oils, Definition of Saponification value, Iodine value, Acid value, Soaps, Synthetic detergents, Alkyl and aryl sulfonates.

**UNIT- IV****(7.5 Hrs)**

**A) SYNTHETIC DYES:** Colour and constitution (Witt theory, electronic concept) Classification of Dyes based on chemical constitution. Synthesis and uses of Congo red, Crystal violet, Phenolphthalein and Alizarin dye.

**B) SYNTHETIC DRUGS:** Definition, Classification, Preparation, properties and uses of: Aspirin, aracetamol, Dettol, Chloroquine, Phenobarbitone, Chloramphenicol, Chloramine T.

**C) SYNTHETIC POLYMERS:** Addition or chain growth polymerization, free radical. Vinyl polymerization, Ionic vinyl polymerization, Ziegler - Natta polymerization .Condensation or step growth polymerization. Polyesters, polyamides,

**CH-603: Laboratory Course****Practical-I (Inorganic Chemistry):****A) Gravimetric Analysis**

- i) Estimation of  $\text{Ba}^{2+}$  as  $\text{BaSO}_4$ ,
- ii) Estimation  $\text{Ni}^{2+}$  as Ni-DMG

**B) Colorimetry**

- i) Colorimetric or spectrophotometric estimation of copper (II) in commercial copper sulphate sample as ammonia complex.
- ii) Jobs method of determination of composition of Fe- SSA complex
- iii) Mole Ratio Method of determination of composition of Fe- SSA complex

**Practical-II (Organic Chemistry):**

Separation of an organic mixture containing two solid components using  $\text{NaOH}$  / $\text{NaHCO}_3$  for separation , identification of the components and preparation of suitable derivatives (minimum five mixtures)

**RTM, NAGPUR UNIVERSITY, NAGPUR.**  
**SEMESTER PATTERNSYLLABUS**  
**FOR B Sc. BOTANY**

**B.Sc. SEMESTER- I**

- |          |  |
|----------|--|
| PAPER-I  | Viruses, Prokaryotes& Algae              |
| PAPER-II | Fungi, Lichen, Plant-Pathology&Bryophyta |

**B.Sc. SEMESTER-II**

- |          |   |
|----------|---|
| PAPER-I  | Pteridophyta& Gymnosperms               |
| PAPER-II | Palaeobotany& Morphology of Angiosperms |

**B.Sc. SEMESTER-III**

- |          |   |
|----------|---|
| PAPER-I  | Angiosperm Taxonomy                     |
| PAPER-II | Cell Biology, Plant Breeding& Evolution |

**B.Sc. SEMESTER-IV**

- |          |                                |
|----------|--------------------------------|
| PAPER-I  | Angiosperm Anatomy& Embryology |
| PAPER-II | Genetics & Molecular Biology   |

**B.Sc. SEMESTER-V**

- |          |                                   |
|----------|-----------------------------------|
| PAPER-I  | Biochemistry & Plant Physiology-I |
| PAPER-II | Plant Ecology I                   |

**B.Sc. SEMESTER-VI**

- |          |  |
|----------|--|
| PAPER-I  | Plant Physiology- II& Biotechnology                    |
| PAPER-II | Plant Ecology- II, Techniques & Utilization of Plants. |

**SEMESTER – I**  
**PAPER – I**  
**VIRUSES, PROKARYOTES AND ALGAE**

**Unit I**

**Introduction to Botany.**

**Virus:** General characteristics and nature of Viruses.,

Ultra structure of TMV, Structure and Multiplication of T<sub>4</sub> - Bacteriophage. Economic importance.

**Mycoplasma :** - structure, Properties, Reproduction.

Comparison between Archaebacteria and Eubacteria.

**Unit II**

**Bacteria:**-Cell structure, Flagella. Reproduction: (Binary fission, Conjugation). Economic importance.

**Cyanobacteria:** -General account, Economic Importance, Ultra cell structure, Reproduction. eg.*Nostoc*.

**Unit III**

**Algae** – General characteristics, Classification (Fritsch 1954),

**Life history of:** - *Oedogonium, Chara*.

**Unit IV**

Algae - **Life history of** *Vaucheria, Ectocarpus*, and Economic importance of Algae.

Note:- Developmental stages not expected

**List of Practicals :**

Study of Bacterial forms from permanent micropreparation

Gram staining of Bacteria, ultrastructure of Bacteriophage from TEM photographs

Study of Cyanobacteria: *Nostoc*.

Study of Algal genera: *Oedogonium, Chara, Vaucheria, Ectocarpus*.

**SEMESTER – I**

**PAPER – II**

**FUNGI, LICHEN, PLANT PATHOLOGY, BRYOPHYTA**

**Unit I**

**Fungi**:- General characteristics, Classification( Alexopoulos 1996), Economic importance

Life history of: - *Albugo, Mucor*.

**Unit II**

**Fungi**- Life history of :- *Puccinia, Cercospora*

**Lichens** :- Types, Reproduction and Economic importance

**Unit III**

**Plant pathology**:- Host, pathogen, symptoms, Causes and Control of following diseases:-Leaf curl of Papaya, Citrus canker and Red rot of Sugarcane

**Bryophyta**:-Classification (Proskauer 1957), General characters (Hepaticopsida, Anthocerotopsida and Bryopsida), Economic importance, and alteration of generation

**Unit IV**

**Life history of**:- *Riccia, Anthoceros, Funaria*

**Note:** developmental stages not expected

**List of Practicals :**

Study of Fungal genera:- *Albugo, Mucor, Puccinia, Cercospora*

Study of Lichen: - Thallus structure, Types

Plant pathology: – Leaf curl of Papaya, Red rot of Sugarcane, Citrus canker

Study of Bryophytes :- *Riccia, Anthoceros, Funaria*

*Botanical Excursions (One short/Long excursion is compulsory).*

**Semester - I Botany Practical examination  
Question Paper**

**Time: 5 hrs**

**Marks: 30**

- Q. 1)** Gram Stain the given Bacterial strain / Stain the **Cyanobacterial** material [A], & Identify **04**
- Q. 2)** Identify & give characters of the given **Algal** material [B]and make a temporary Mount **04**
- Q. 3)** Identify & give characters of the given **Fungal** material[C] and make a temporary Mount **04**
- Q. 4)** Identify & give characters of the given **Bryophytic** material [D] and make a temporary Mount **04**
- Q. 5) Spotting :** **06**
- |                                |                    |           |
|--------------------------------|--------------------|-----------|
| E-Virus/Bacteria/Cyanobacteria | F- Algae           | G- Fungi  |
| H-Bryophyte                    | I- Plant pathology | J- Lichen |
- Q. 9)** Viva-voce **03**
- Q. 10)** Practical Record & Excursion Report **05**

**SEMESTER – II**  
**PAPER – I**  
**(PTERIDOPHYTA & GYMNOSPERMS)**

**Unit I**

**Pteridophyta** :- Classification system (Smith 1952), General characters (Psilopsida, Lycopsida, Sphenopsida and Pteropsida), Economic importance, alternation of generation

**Life history of:-** *Rhynia, Selaginella*

**Unit II**

**Life history of:-** *Equisetum*,

Apogamy, Apospory, Stelar system in pteridophytes, Concept of heterospory and seed habit.

**UNIT III**

**Gymnosperms**:- Classification (Stewart 1982), General characters, Economic importance, alternation of generation.

**Life cycle** of the following:- *Cycas*.

**UNIT IV**

**Life cycle** of the:- *Pinus*.

*Cycadeoidea* (morphology, anatomy of Stem and flower)

NOTE: Developmental stages not expected.

**List of Practicals**

Study of Pteridophytes : *Rhynia, Selaginella, Equisetum*.

Study of Gymnosperm: *Cycas, Pinus, Cycadeoidea*.

**SEMESTER – II**

**PAPER – II**

**PALAEOBOTANY & MORPHOLOGY OF ANGIOSPERMS**

**Unit I**

**Palaeobotany:** Geological time scale

**Fossilization:** Replacement theory, Infiltration theory

**Types of fossils:** Impression, Compression, Petrification

Fossil plants: Gymnosperms: *Glossopteris* (Leaf, Scutum),

**Unit II-**

**Root Morphology** - Tap root & adventitious roots, Modifications for storage, Respiration & reproduction.

**Stem Morphology**:- shape, surface, texture, nature, Branching (Monopodial, Sympodial), modifications (Runner, Rhizome, Tuber, Bulb, cladode).

**Leaf Morphology**:-Typical Leaf, Types (Simple, Compound), Phyllotaxy, Venation, and modifications of leaf (Tendril, Phyllode)

**Unit III-**

**Inflorescence:** Simple (Racemose and Cymose type).

**Flower:** Details of typical flower, Epigyny, Perigyny & Hypogyny, Androphore, Gynophore & Gynandrophore.

**Calyx & Corolla:** - Cohesion, Forms of corolla and Aestivation.

**Unit IV**

**Flower: Androecium:** - Parts, Cohesion & Adhesion, Fixation, dehiscence. **Gynoecium:** - Parts, Cohesion, Adhesion, Placentation.

**Fruit:** Classification of fruits, simple and aggregate fruits, Composite fruit.

**List of Practicals**

- i. **Fossils** : Types, *Glossopteris*, *Cycadeoidea*
- ii. Study of **Root**: Types, Modifications.
- iii. Study of **Stem**: shape, surface, texture, nature Branching, Modifications (Ex. *Hibiscus*, *Ocimum*, any grass).
- iv. Study of **Leaf**: Stipules, base, kind, shape, surface, margin, Apex, texture, Phyllotaxy, Venation & Modifications.
- v. **Inflorescence**: Types.
- vi. **Flower**: Parts, Thalamus, Calyx, Corolla, Androecium, Gynoecium.
- vii. **Fruits**: Types.

**Botanical Excursion:** (Two short or one long out of the state is compulsory).

**Semester II practical examination**

**Question Paper**

**Time : 5 hrs**

**Marks : 30**

- Q. 1)** Identify & give characters of the given **Pteridophytic** material [A] and make temporary Mount. **04**
- Q. 2)** Identify & give characters of the given **Gymnospermic** [B] material and make temporary mount **04**
- Q. 3)** Describe the given **leaf** material [C] **04**
- Q.4)** Describe (Calyx, Corolla, Androecium & Gynoecium) of given **Flower** [D]. **04**
- Q. 5) Spotted :** **06**
- E. Pteridophyte              F. Fossil  
G. Gymnosperm              H. Vegetative morphology  
I. Inflorescence/flower    K. Fruit.
- Q. 9) Viva-voce** **03**
- Q. 10) Practical Record & Excursion Report** **05**

**SEMESTER – III**

**PAPER – I**

**ANGIOSPERM TAXONOMY**

**Unit I**

Origin of Angiosperms (Benettitalean theory). Phylogeny of Angiosperm: Homology, monophyly, polyphyly, Clads.

**Fossil Angiosperms:** Flower (*Sahanianthus*).

**Angiosperm Taxonomy:** Floras, Herbarium, keys (Indented and Bracketed), Holotype, Lectotype, Neotype.

**Botanical Nomenclature:** Principles (rank and ending of taxa, principle of priority),

**Unit II**

**Classification of angiosperms:** Natural, Artificial, Phylogenetic system of classification.

**Systems of classification:** Bentham & Hooker and Engler & Prantl (along with merits and demerits),

**Modern trends in Taxonomy :** Cytotaxonomy (Karyotype), Phytochemistry (Proteins, flavonoids, Betalains) , Taximetrics to taxonomy.

**Unit III**

**Study of Families (Dicot):** Malvaceae, Brassicaceae, Fabaceae (Papilioideae, Caesalpinoideae, Mimosoideae)

**Unit IV**

**Study of Families (Dicot):** Asteraceae, Asclepiadaceae, Euphorbiaceae

**Study of Families (Monocot):** Poaceae

**List of Practicals**

Study of Families covered in the theory portion.

Study of fossil Angiosperms micropreparation and specimens: *Sahanianthus*, *Enigmocarpus*

*Botanical Excursions (Two short or One long out of the state is compulsory).*

**SEMESTER – III**

**PAPER – II**

**CELL BIOLOGY, PLANT BREEDING & GENETICS**

**Unit I**

Structure of typical plant cell, Ultrastructure and functions of: Cell wall, Cell Membrane (Fluid mosaic model), Nucleus, Endoplasmic reticulum (RER and SER)

**Unit II**

Ultrastructure & Functions of: Golgi Complex, Vacuoles, Ribosomes (70S and 80S), Mitochondria, Chloroplasts,

**Unit III**

Chromosome organization: Morphology (chromatid, chromomere, centromere, telomere, secondary constriction, satellite, karyotype), Molecular organization (Nucleosome model)

Sex Chromosome : Structure of sex chromosome in plants (XY type in *Melandrium*)

Cell division in plants: Mitosis, Meiosis and their significance.

**Unit IV**

Plant Breeding- Definition and objective, Pure line selection, Hybridization (emasculaton, bagging, crossing, labelling), Colonial selection, Heterosis (Definition and scope)

Biostatistics- Mean, Mode, Median, Standard deviation, Standard error, Student's t- test

Evolution- Origin of life (Millers theory),

**List of Practicals**

Study of Cell organelles with the help of photographs/ Slides

Study of mitosis in plant material

Study of meiosis in plant material

To calculate Mean, Mode, Median, standard error from the given data (At least 10 problems to be solved)

To calculate the student's t-value from the given data (At least 10 problems to be solved)

**Semester III practical examination**

**Question Paper**

**Time : 5 hrs**

**Marks : 30**

Q. 1) Describe in technical language the given Angiospermic material [A]. Classify & Identify the Family giving reasons **06**

Q. 2) Write floral formula and Draw Floral Diagram of the given flower [B] **03**

Q. 3) Prepare semi-permanent squash / smear of given material [C] & Identify the stage of cell division **05**

Q. 4) To solve the given problem of biostatistics **04**

Q. 5) Spotting : **04**

- |                      |                              |
|----------------------|------------------------------|
| D. Fossil angiosperm | H. Cell organell (photocopy) |
| E. Cytology          | I. Taxonomy                  |

Q. 6) Viva-voce **03**

Q. 7) Practical Record & Excursion Report **05**

**SEMESTER – IV**

**PAPER – I**

**ANATOMY AND EMBRYOLOGY OF ANGIOSPERMS**

**Unit I**

Basic body plan & Modular type of Growth.

Meristems :Classification of meristems based on origin and position.

Permanent tissue and their functions:Simple tissue (parenchyma, collenchyma, sclerenchyma), Complex tissue(xylem and phloem).

**Unit II**

Apical meristem of Root and Shoot: Apical cell theory, tunica-corpus theory, Types of root apex according to Newman.

Primary structure of root in dicot (Sunflower) and monocot (Maize)

Primary structure of stem in dicot (Sunflower) and monocot (Maize)

Types of vascular bundles- dicots and monocots

Cambium (structure, types, function)

**Unit III**

Periderm, growth ring, sap wood, heart wood

Secondary growth (Sunflower stem) and anomalous secondary growth in *Bignonia* and *Dracena* stem.

Anatomy of leaf: Dicot (*Nerium*), monocot (Maize).

Senescence and abscission of leaves.

**Unit IV**

Pollination: Types and adaptation, significance

Structure of anther, Microsporogenesis, male gametophyte

Types of ovules, structure of anatropous ovule

Megasporogenesis and female gametophyte (polygonum type)

Double fertilization and triple fusion, endosperms and its types, Structure of dicot (Onagad) and monocot embryo.

**List of practicals**

Study of simple tissue, complex tissue and secretory tissue from permanent slides

Study of types of vascular bundles

Study of internal structure of dicot and monocot root using hand section and prepare temporary mounts -Sunflower, Maize

Study of internal structure of dicot and monocot stem using hand section and prepare temporary mounts -Sunflower, Maize

Study the growth ring in woods-Teak wood

Study of internal structure of secondary growth and anomalous secondary growth using hand section and prepare permanent micropreparations - *Bignonia* stem and *Dracena* stem.

Study of internal structure of leaves- *Nerium*, Maize

Study of types of ovules, anther structure, pollen grains, adaptations for pollination

To calculate the percent pollen germination in the given specimen

*Botanical Excursions (One short tour is compulsory).*

**SEMESTER- IV**

**Paper-II**

**Genetics & Molecular Biology**

**Unit- I**

Mendelism: - Laws of inheritance (Law of segregation and independent assortment)

Interaction of genes: Allelic- Incomplete dominance (1:2:1 ratio in *Mirabilis jalapa*); Non-allelic- Complementry (9:7 ratio) and Dominant epistasis (12:3:1 ratio)

Linkage: Definition, Theory of linkage (Coupling and Repulsion theory), types (complete and incomplete), significance

**Unit- II**

Crossing over: Definition, theories (Breakage and reunion), significance

Variation in chromosome number: Polyploidy (auto- and allo-), aneuploidy (nullisomics, monosomics, trisomics and tetrasomics), significance

Structural changes in chromosome: deficiency, duplication, significance of inversion and translocation.

**Unit- III**

Structure of DNA (Watson and Crick model)

Semi conservative method of DNA replication in eukaryotes

Concept of gene; Benzor's concept, cistron, mutons and recons, jumping gene.

Mutation: Spontaneous and induced, physical and chemical mutagens, application of induced mutations in crop improvement

DNA damage and repair: Photoreactivation, excision repair

**Unit- IV**

Satellite and repetitive DNA

Genetic code: Definition and characteristics

t-RNA (Clover leaf model)

Gene expression in prokaryotes: Transcription and translation

Regulation of gene expression (Lac operon model).

## List of practicals

To prove the Mendel's law of segregation with the help of coloured beads.

To prove the Mendel's law of independent assortment with the help of coloured beads.

From the given data workout the type of gene interaction in the given cross (Atleast 10 problems of each type mentioned in theory syllabus).

## Semester IV Practical examination

## **Question Paper**

**Time : 5 hrs**

**Marks : 30**

- Q. 1) Prepare temporary mount of the given material [A](Root/Leaf)& Identify giving diagnostic character 03

Q. 2) Prepare double stained permanent mounts of the given material [Stem] [B] & Identify giving diagnostic character 06

Q. 3) Calculate percent germination in the given pollen grains [C] 02

Q. 4) To prove Mendel's Law of Inheritance through coloured beads [D] 04

Q. 5) To work out the type of gene interaction in the given cross from the given data. 03

Q. 6) Spotting: 04

E- Tissue                      F- Root anatomy

G-Stem anatomy              H-Embryology

Q. 7) Viva-voce 03

Q. 8) Practical record and excursion report 05

**SEMESTER – V**  
**PAPER – I**  
**BIOCHEMISTRY & PLANT PHYSIOLOGY-I**

**Unit I**

**Carbohydrates:** Definition, properties and role; Classification: Aldoses and ketoses; monosaccharides, disaccharides and polysaccharides; Structure of Glucose and starch

**Lipids:** Definition, properties and role; fatty acids, oils and waxes, beta oxidation.

**Aminoacids-** Chemistry of amino acids present in proteins (Classification), peptide bond

**Basics of Enzymology:** Nomenclature, Characteristics and properties of Enzymes, factors affecting enzyme activity, Holoenzyme, Apoenzyme, Co-enzymes& Co-factors, Regulation of Enzyme Activity (Enzyme-Substrate Complex Theory), Mechanism of Action (Lock & Key Model, Induced Fit Model)

**Unit II**

**Plant-water relations:** Properties of water, diffusion, diffusion pressure deficit and its significance; Osmosis: Concept, types, osmotic potential and its significance; Imbibition: concept and significance

**Water conduction through xylem:** Root pressure theory, cohesion-adhesion theory; transpiration; stomatal opening mechanism with reference to K<sup>+</sup>-malate hypothesis

**Phloem transport:** Munch hypothesis

**Unit III**

**Mineral nutrition:** Role and deficiency symptoms of macro- and micro- nutrients (N, P, Fe, Mn, B, Ca); Solute transport: passive (Donnan's equilibrium), active (carrier concept)

Lipid metabolism:

**Respiration:** Types (aerobic and anaerobic respiration), respiratory substrates and Respiration quotient, glycolysis, Kreb's cycle, oxidative phosphorylation (ETS); fermentation (alcohol and lactic acid), photorespiration. Glyoxylate cycle .

**Unit IV**

**Photosynthesis:** concept, definition, significance, photosynthetic pigments and their role, action spectra, Emerson's enhancement effect, red drop mechanism; photolysis of water (Hill's reaction), cyclic and non-cyclic photophosphorylation, Light independent reactions: C<sub>3</sub>, C<sub>4</sub> and CAM pathways and their significance; factors affecting photosynthesis

**Nitrogen metabolism:** Mechanism of biological nitrogen fixation, importance of nitrate reductase

#### **List of practicals**

To study the effect of various chemicals on permeability of membranes.

To study the ascent of sap in suitable plant material.

To separate chlorophyll pigment by paper chromatography.

To determine the RQ of given plant material.

To perform microchemical tests for determination of reducing and non-reducing sugars, starch, cellulose, oils and proteins.

To study the effect of light intensity and quality, CO<sub>2</sub> concentration and temperature on rate of photosynthesis by suitable method.

To determine osmotic potential of the cell sap by plasmolytic method.

To study the activity of enzyme amylase, catalase and peroxidase.

Miner Physiology experiments

**SEMESTER – V**

**PAPER – II**

**PLANT ECOLOGY - I**

**Unit I**

Ecology: definition, branches and significance of ecology

Climatic Factors: Atmospheric (Gaseous composition), Light & Temperature (effect on vegetation).

Edaphic Factor :Pedogenesis, Soil profile, Soil properties (physical and chemical)

**Unit II**

Physiographic factor- Biotic Factor: Interactions between plants and animals and human, Interaction between plants growing in a community, Interactions between plants and soil microorganisms. Biogeochemical Cycles: Nitrogen, phosphorous

**Unit III**

Ecosystem: Biotic and Abiotic components, Food chain, Food web, Ecological pyramids

Autecology (definition, importance), ecad, ecotype- characteristics and importance

Synecology (or community ecology)- Study of community: analytical (quantitative- frequency, density, abundance; qualitative- Life forms, Raunkier's Biological spectrum) and synthetic characters (presence, fidelity, dominance)

**Unit IV**

Principles of Phytogeography, Distribution (wides, endemics, discontinuous species), Theories (Landbridge and continental drift), Climatic regions of India, Phytogeographic regions of India (Chatterjee 1962; Name, distribution area, typical vegetation)

**List of practicals:**

To determine frequent, density, abundance of the community by quadrat method.

To determine the homogeneity of vegetation by Raunkiers frequency diagram.

To determine the water holding capacity of the given soil samples.

To determine the water rising capacity of the given soil samples.

To determine the soil moisture of the given samples.

*Botanical Excursions (One short tour is compulsory).*

**Semester V Practical examination**

**Question Paper**

**Time : 5 hrs**

**Marks : 30**

Q. 1) To perform given Physiology Experiment [A] & report the findings **06**

Q. 2) To perform the given Biochemical Experiment [B] & report the findings **04**

Q. 3) To perform the given Ecological Experiment [C] & report the findings **05**

Q. 4) To perform the given microchemical test [D] & report the findings **03**

Q. 5) Spotting : **04**

E - Plant Physiology

F -Plant Physiology

G - Ecology (Component of aquatic ecosystems)

H - Ecology(Component of terrestrial ecosystems)

Q. 6) Viva Voice **03**

Q. 7) Practical Record & Excursion Report **05**

**SEMESTER – VI**

**PAPER – I**

**PLANT PHYSIOLOGY-II & BIOTECHNOLOGY**

**Unit I**

Growth: Concept, growth curve, phases of growth

Phytochromes: Pr and Pfr forms, their role

Circadian rhythms and biological clock

Plant growth regulators: Role of auxin, cytokinins, gibberellins, ABA and ethylene

Plant movements: Tropic and nastic movements

**Unit II**

Photoperiodism: physiology of flowering, photoperiodism and vernalization, role of florigen

Senescence and abscission

Seed dormancy: Causes and role, methods to break seed dormancy

Plant defence: Definition: Hypersensitive response and Systemic acquired resistance; Role of secondary metabolites (Terpenes and phenolic compounds)

**Unit III**

Plant tissue culture: definitions of- totipotency, explant, asseptic culture, in vitro, micropropagation; methods of sterilization (autoclaving, dry heat, chemicals), culture media (MS media) hormone requirement & applications of tissue culture.

Callus and organ culture (shoot tip, anther) and its application, cybrid production and its application.

**Unit IV**

Genetic engineering: Tools- Enzymes (Restriction enzymes, ligases, DNA polymerases), Plasmid as cloning vectors.

DNA library: cDNA and genomic library.

*Agrobacterium tumefaciens* mediated gene transfer, structure of Ti -plasmids

Advantages and disadvantages of transgenic plants, example Bt cotton and golden rice.

**List of Practicals**

To determine seed viability by a convenient method

Principle and working of: oven, autoclave, laminar air flow hood

To study the structure of following vectors on the basis of photographs and diagrams: plasmid vector, Binary vector

To study the effect of various plant growth regulators on the growth and development of plants.

To study steps of genetic engineering from photograph example Bt cotton and golden rice.

**SEMESTER – VI**

**PAPER – II**

**PLANT ECOLOGY, TECHNIQUES & UTILIZATION OF PLANTS**

**Unit I**

Plant succession: Definition, Causes of succession, Hydrosere, Xerosere

Plant adaptations: Morphological, Anatomical & Physiological responses of Hydrophytes, Xerophytes, Halophytes (with one example)

**Unit II**

Environmental Pollution: Agricultural, noise and thermal pollution, Control of environmental pollution, Environmental management

Natural resources- types (renewable and non-renewable), factors for depletion; conservation of forest and water resources

**Unit III**

Principle, types and application of: microscopy (Light, fluorescent, SEM, TEM), centrifugation, electrophoresis (SDS-PAGE and Agarose), spectroscopy (UV-Vis), chromatography (Paper chromatography, Thin layer chromatography)

**Unit IV**

Utilization of **Plants**: Morphology, Utilization and Important chemical constituents of :-

Food: Wheat; Oil: Ground nut; Fibre: Cotton; Spices: Clove; Beverages: Coffee; Medicinal: Neem; and Rubber.

**Ethnobotany**: Introduction, definition, branches &importance of ethnobotany

**List of Practicals**

To study the morphological and anatomical characteristics of anyone hydrophyte and xerophyte.

To study the morphological characteristics of cladode, phylloclade, phyllode and pneumatophores.

Principle and working of: spectrophotometer, microscope etc.

To determine the DO of water samples

different sources.

To study the dust holding capacity of leaves.

To estimate transparency, pH and temperature of different water bodies

To estimate salinity (chlorides) of different water samples.

To determine the percent leaf-area injury of different leaf samples collected around polluted sites.

Utilization of **Plants**: Morphology, Utilization and Important chemical constituents of plants mentioned in theory. To study the plants of ethnobotanical importance.

Microchemical Tests: Lipid, Proteins, starch, Lignin, Carbohydrates, Cellulose.

Electrophoretic /chromate graphic separation of amino acids carbohydres

*Botanical Excursions (One short tour is compulsory).*

**Semester VI Practical examination**

**Question Paper**

**Time : 5 hrs**

**Marks : 30**

- |   |           |
|---|-----------|
| Q. 1) To determine seed viability [A] & report the findings                           | <b>05</b> |
| Q. 2) To study the given Ecological material [B] & report the findings.               | <b>05</b> |
| Q. 3) Electrophoretic/chromatographic separation of amino acid and carbohydrates [D]. | <b>04</b> |
| Q. 4) Morphology, anatomy and utilization of the given plant material [E].            | <b>04</b> |
| <b>Q. 5) Spotting:</b>  | <b>04</b> |
| E       -Ecology (morphology)   |           |
| F       - Biotechnology Instruments   |           |
| G       - Utilization of plant  |           |
| H       -Utilization of plant   |           |
| Q. 7) Viva Voice  | <b>03</b> |
| Q. 8) Practical Record & Excursion Report   | <b>05</b> |

**SEM I & II**

- Tortora, G. E. B. R. Funke, C. L Case U (1997): Microbiology, An Introduction, 6'r'Ed (Addison NeslleyLogman ,Inc.)
- Smith, K. M. : Plant Viruses [1992] 6th Ed luniversity Book Stall ,New Delhi)
- Dubey, RC. DK Maheshwari [1999] : Text Book of Microbiology (S. Chand & Co)
- Sharma, P.D. [ 1993] : Microbiology and plant pathology ( Rastogi& Co)
- Sullia, S. B. [1998] : General Microbiology (Oxford &IBH)
- Prescott el al [ 1999]: Microbiology 3"red (Wm C Brown Pub)
- Bold, H.C. C. J Alexopoulos and T Delevoryas [980] : Morphology of Plants and Fungi (Harper and Row Publishers, N.Y.)
- Ganguly, Kar [] : College Botany, Vol II (New Central Book Agency, Calcutta)
- Bierhorst, D. W. (1971) : Morphology of Vascular Plants (Macmillon& Co. N.Y.)
- Bold, H. C. and M. J. Wynne [1978] :Introduction of Algae: Structure and Reproduction (Prentice Hall Of India, Pvt. Ltd)
- Kumar, H. D. and HN Singh (1982) : A text Book of Algae (AffiliateEast - West Press, Pvt. Ltd, New Delhi)
- Sharma, O.P.11992): Text . Book OfThallophytes (McGraw Hill Publishing Co.)
- Smith, G. M. [971] :Cryptogamic Botany, Vol. I Atgae and Fungi(TMH)
- Vasishttha, B. R. [1990] : Algae (S. Chand & Co. New Delhi)
- Alexopoulos, C. J. and G. W. Min & M. Blackwell, Indroductory Mycology, CBS distributors & publishers, Delhi.
- Dube, H. C. [1990] introduction to Fungi (Vikas Publishing House Pvt. Ltd, Delhi)
- Sharma, P. D. [1991] : The Fungi (Rastogi&Co.Meerut)
- Vasishttha, B. R.[1990] : Fungi (S. Chand and Co. New Delhi)
- Mehrotra, R. S. and Aneja, K. R. 1990 An Introduction to mycology (Wiley Estern Ltd.)
- Prempruri [1980] :Bryophyta (Atma Ram & Sons Delhi)
- Ram Udar [1970] : An Introduction to Bryophyta (ShashidharMalviyaPrakashan, Lucknow)
- Smith, G. M. [1971] :Cryptogamic Botany, vol. II, Bryophytes and Pteridiphytes (THM)

Chopra, G. Land D I Yadav [1980] : A text Book of Bryophyta (Arihant Press)

Vashishtha, B. R. [1992] :Bryophyta (S. Chand & Co. New Delhi)

Vashishtha, B. R. [1992] :Pteridophyta (S. Chand & Co. New Delhi)

Parihar, N. S.[1997] : The Biology and Morphology of Bryophytes (Central Book Depot, Allahabad)

Rashid,A. [1989] : An Introduction to PteridophytaVikas Publishing House, Pvt. Ltd. New Delhi

Sharma, O. P. [990] : Text Book of Pteridophya (Mcmillan India Ltd.)

Sporne, K. R. I J : The Morphology of Bryophytes (Hutchinson Universify, London)

Bhatnagar, S. P. and Moitra A. 1996 Gymnosperms. New Age International Limited , NewDelhi

Davis, P. H. and Heywood V. H. 1963.Principals of Angiosperm Taxonomy. Oliver andBoyd London.

Sporne, K. R. 1965. The Morphology of Gymnosperms.Htchinson University Library Press,London.

Stewart, W. N. and G. W. Rothwell1993 :Paleobotany and the Evolution of Plants, 2<sup>nd</sup> Edn. Cambridge University Press.

Bierhorst, D. W. [971] : Morphology of Vascular Plants. Macmillon& Co. N. R.

Vashishtha, B. R. [1992] :Gymnosperm (S. Chand & Co. New Delhi)

### **SEM III & IV**

Bhojwani, S. S. and Bhatnagar, S. P. 2000. The Embryology of Angiosperms.Vikas Publishing House, Delhi.

Cutter, E. G. 1971. Plant Anatomy Experiment and Interpretation. Part II. Organs. Edward Arnold, London.

Esau, K. 1979 Anatomy of seed Plants , 2nd Edn. John Wiley and Sons New York Fahn, A. PlantAnatomy, 2nd Edn. Pergamon Press, Oxford.

Hartman, H. T. and KestlerD.E. 1976. PlantPropagation :Principles and Practices,3 rdEdn. Prentice- Hall Of India Pvt. Ltd. New Delhi.

- Proctor, M. and Yeo, P. 1973. The Pollination of Flowers. William Collins Son, London.
- Jeffrey, C. 1983. An Introduction of plant Taxonomy. Cambridge University Press, Cambridge, London.
- Radford, A.E. 1986 Fundamentals of plant systematic. Harper And Row, New York.
- Ugemuge, N. R. 1986. Flora of Nagpur District. Shree Prakashan, Nagpur.
- Dutta, S. C. 1989. Systematic Botany.Wiley Eastern Co.
- Naik, V. N.- Taxonomy of Angiosperm.
- Alberts, B. D. Bray, J Lewis, M. Raff K, Roberts, and J. D. Watson [1999] Molecular Biology of the Cell ( Garland Publishing Co. Inc. N.Y.)
- Gardner, E. J., M. J Simmond, and D. P. Snustadt(1991) :Principles of Genetics, 8'h ed (John Wiley and Sons, Inc N. Y.)
- Gupta, P.K.[ 1999] : A Text Book of cell and Molecular Biology (Rastogi Publications,Meerut India)
- Hawkms, J. D. [1991] : Gene Structure and Expression 2nd ed (Cambridge University PressCambridge U.K.)
- Kleinsmith, L. J and V. M. Kish [ 1995] : Principles of cell and Molecular Biology, 2"d ed. Harper Collins college pubs.
- Snustad, D. P. and M. J. Simmons [ 2000] : Principles of Genetics ( John Wiley and sons, USA)
- Freifelder, D [1990] : Essentials of Molecular Biology ( Narosa Publishing House, New Delhi, Madras)
- Watson, J. D. Hopkins, Roberts, Steitz, Weiner [ 1987] Molecular Biology of Gene. Benjamin Cummings Pub. Co. Sherman)
- Cooper, G. M. [1997] : The Cell" A Molecular Approach (Oxford Univ. Press)
- Kumar, H. D. [1991] : A text book of Cytology, Genetics and Evolution[1991] : A Text BookCytology, Genetics and Evolution (Kalyani Publisher, New Delhi)
- Lewin, G. [2000] : Gene VII (John Wiley and Sons, N. Y.)
- Lodish, H. A. Berk, S. L. Zipursky, P Matudaira , D. Baltimore and Jm Damell [ 2000] :Molecular cell Biology ( W. H. Freeman and Co. N. Y. )
- Russel, P. J. [1998] : Genetics ( The Benjamin/ Cummings publishing Con. Inc. USA
- Kumar, H. D. [1991] : A text book of Cytology, Genetics and Evolution[1991] : A Text BookCytology, Genetics and Evolution (Kalyani Publisher, New Delhi)

Karp, G |9961: Cell and Molecular Biology- Concepts and Experiments ( John Wiley and Sons Inc.)

Gupta PK (2007) Genetics: Classical to Modern. Rastogi Publications, Meerut

Vyas SP and Mehta A (2011) Cell and Molecular Biology. CBS Publ. and Dist. Pvt. Ltd., New Delhi

## **SEM V & VI**

Bhojwani, S.S. 1990. Plant Tissue Culture : Applications and Limitations. ElsevierScience Publishers , New York, U. S. A.

Hopkins, W. G. 1995. Introduction to plant physiology. John Wiley & Sons New York,USA

Old, R. W. and Primrose S.B. Principles of Gene Manipulation. Blackwell scientificpublications, Oxford U. K. [new edition could be there]

Dey, P.M. &Harborne, J. B. (eds) 1997. Plant Biochemistry. Harcourt Asia Pte Ltd/Academic Press I Printed in India 2000J

Raghavan, V. 1986 Embryogenesis in Angiosperms : A Developmental and andExperimental Study. Cambridge University Press, Cambridge.

Sharma, O. P. 1996. Hill's Economic Botany (Adapted by O.P. Sharma) Tata Mcgraw - Hill co. Ltd.New Dehli.

Simpson, B. B. and Corner - Ogorzaly, M 1986.Economic Botany- Plants in our World.McGraw - Hill Book company, New York.

Shukla RS and Chandel (2005) A Text Book of Plant Ecology. S Chand and Co. Ltd., New Delhi.

B. Sc. Semester V Suggested Laboratory Exercises

MAJOR PLANT PHYSIOLOGY EXPERIMENTS (ANY NINE ):

1. To study the permeability of plasma membrane using different concentrations of organic solvents.
2. To study the effect of temperature on permeability of membranes.
3. To determine the osmotic potential of vacuolar sap by plasmolytic method.
4. To determine the water potential of any tuber.
5. To compare the rate of transpiration from two surfaces of leaf- a) bell jar method b ) Cobalt chloride method.
6. To determine the path of water (Ascent of sap).
7. To separate chloroplast pigments a) by solvent method and preparation of their absorption spectra b) paper chromatography.
8. To separate amino acids from plant materials an paper chromatography and their identification by comparison with standards.
9. To measure rate of photosynthesis by Wilmott's bubbler under variable conditions of light, temperature and CO<sub>2</sub>.
10. To compare rates of respiration f various plant parts.
11. To demonstrate bioassay of auxin, cytokinin, GA, ABA and ethylene using appropriate plant materials.

MINOR MAJOR PLANT PHYSIOLOGY EXPERIMENTS (ANY SEVEN ):

1. To demonstrate the phenomenon of dispersion.
2. To demonstrate the phenomenon of adsorption.
3. To demonstrate the phenomenon of imbibitions.
4. To demonstrate the root pressure.
5. To demonstrate that the amount of water absorbed and the amount of water transpired is approximately equal.
6. To demonstrate that the light is necessary for photosynthesis (Ganong's light screen).
7. To demonstrate that the light, chlorophyll and CO<sub>2</sub> are necessary for photosynthesis (using Moll's half-leaf experiment).
8. To demonstrate fermentation by Kuhne's tube.
9. To demonstrate aerobic respiration.
10. To demonstrate the evolution of CO<sub>2</sub> in respiration.
11. To demonstrate that the part of energy is released in the form of heat during respiration.
12. To demonstrate the measurement of growth of germination pea seeds.
13. To demonstrate the phenomenon of gravitropism (geotropism), phototropism and hydrotropism.
14. To demonstrate seed viability test by T.T.C. ( Triphenyl-tetrazolium chloride).

15. To demonstrate the phenomenon of nastic movement in *Mimosa pudica* / *Biophytum sensitivum* plants.

Suggested Laboratory Exercises

ECOLOGY EXPERIMENTS (Any nine):

1. To determine the minimum number of quadrates required for reliable estimate of biomass in grasslands.
2. To study the frequency of herbaceous species in grassland and to compare the frequency distribution with Raunkiaer's Standard Frequency Diagram.
3. To estimate importance value index for grassland species on the basis of relative frequency relative density and relative biomass in protected and razed grassland.
4. To measure the vegetation cover of grassland through point-frame method.
5. To measure the above-ground plant biomass in a grassland.
6. To determine the Kemp's constant for dicot and monocot leaves and to estimate leaf-area-index of a grassland community.
7. To determine diversity indices (Richness, Simpson, Shannon-Wiener) un grazed and protected grasslands.
8. To estimate bulk density and porosity of grassland and woodland soil.
9. To determine moisture content and water holding capacity of grassland and woodland soil.
10. To study the vegetation structure through profile diagram.
11. To estimate transparency, pH and temperature of different water bodies.
12. To measure dissolved oxygen content in polluted and unpolluted water samples.
13. To estimate salinity of different water samples.
14. To determine the percent leaf-area-injury to different leaf samples collected around polluted sites.
15. To estimate dust-holding capacity of the leaves of different plant species.
16. To study the ecological characters (morphological and anatomical) of the following plants-
  - a. **Hydrophytes:** *Hydrilla*, *Vallisneria*, *Nymphaea*, *Potamogeton*, *Eichhornia* and *Trapa*. (Any Four).
  - b. **Xerophyte:** i. For morphological features: *Acacia auriculiformis*, *Parkinsonia*, *Muehlenbeckia*, *Ruscus*, *Asparagus*, *Kalanchoe*, *Euphorbia nerifolia*, *Opuntia*; ii. For morphological and anatomical features: *Nerium*, *Casuarina*.
  - c. **Halophytes:** for morphological features: *Rizophora*.
  - d. **Epiphytes:** for morphological and anatomical features: Orchid (*Vanda*).
  - e. **Parasite:** For morphological and anatomical features: *Cuscuta*.

Note: - 1. Experiment no. 16 is compulsory, 2. Frequent tours to the different ecological sites to study vegetation are compulsory. 3. One long excursion is

essential, 4. Excursion and study tour reports dully signed by the H.O.D. to be submitted at the time of examination.

#### Suggested Laboratory Exercises

##### BIOCHEMISTRY EXPERIMENTS (Any nine):

1. To study the ENZYME activity of **Catalase** and **Peroxidase** in suitable plant material as influenced by pH and temperature.
2. To study the ENZYME activity of **Amylase** from germination Barley/ Wheat grains.
3. Colorimetric/Spectrophotometric estimation of sugar and starchy (Carbohydrates in suitable plant materials).
4. To prepare the standard curve of protein and determine the protein content in plant samples.
5. Estimation of Anthocyanin pigments from different plant material (At least two) and preparation of absorption spectra.

#### Semester VI Practical

##### Biotechnology:

1. To get acquainted with the laboratory equipments, apparatus and instruments in biotechnology laboratory.
2. To demonstrate the technique of micropropagation by using different explants e.g. axillary buds and shoot meristem.
3. To demonstrate the technique of anther culture.
4. To demonstrate the root and shoot formation from the apical and basal portion of the stem segments in liquid medium containing different hormones.
5. To isolate protoplast from different tissues using commercially available enzymes.
6. Immobilization of embryos from suitable plant seeds using sodium alginate.

##### Utilization of plants:

1. **Food plants:** Study of morphology, structure and simple micro-chemical tests of the food storing tissues in rice, wheat, maize, potato and pulses (soybean, pea) and sugarcane.
2. **Fibres:** Study of cotton flower, section of cotton ovules developing seeds to trace the origin and development of cellulosic 'fibers' (seed epidermal hair, microscopic study of cotton and test for cellulose). Section and staining of jute stem to show the location and development of fibres, microscopic structure and test for lingo-celllose.
3. **Vegetable oils:** Study of hand sections of groundnut, mustard and coconut and staining of oil droplets by Sudan-III and Sudan black.
4. **Field visits:** Study sources of firewood (ten plants), timber-yielding trees (ten plants), and bamboos, preparation of list mentioning special features.

5. **Spices:** samples of black paper, cloves, cinnamon (had sections and open fruit of cardamom and describe them briefly) survey of spices found and use locally for practical assignment.
6. **Medicinal plants:** preparation of an illustrated inventory of ten medicinal plants used in indigenous system of medicine and allopathy- write their botanical and vernacular names, part/s used and diseases disorders for which they are prescribed.
7. **Beverages:** study section of boiled coffee beans and tea leaves to study the characteristic structural features.
8. **Rubber:** Collect illustrative materials of *Hevea Brasiliensis*, study morphology of the plant and tapping practices, history of rubber, list the many uses of rubbers.

-----\*\*\*-----

RTM NAGPUR UNIVERSITY, NAGPUR

Semester Pattern Syllabus with Skill Development

For B. Sc. Botany



B. Sc. SEMESTER-I 2020-21 onwards

- PAPER-I : Viruses, Prokaryotes, Algae and Biofertilizers  
PAPER-II : Fungi, Plant-Pathology, Lichen, Bryophyta and Mushroom Cultivation

B. Sc. SEMESTER-II 2020-21 onwards

- PAPER-I : Palaeobotany, Pteridophytes, Gymnosperms and Soil Analysis  
PAPER-II : Morphology of Angiosperms and Floriculture

B. Sc. SEMESTER-III 2021-22 onwards

- PAPER-I : Angiosperm Systematics, Embryology and Indoor Gardening  
PAPER-II : Angiosperm Anatomy and Horticulture

B. Sc. SEMESTER-IV 2021-22 & onwards

- PAPER-I : Cell Biology, Plant Breeding, Evolution and Seed Technology  
PAPER-II : Genetics, Molecular Biology and Plant Nursery

B. Sc. SEMESTER-V 2022-23 & onwards

- PAPER-I : Plant Physiology, Mineral Nutrition and Hydroponics  
PAPER-II : Plant Ecology and Organic Farming

B. Sc. SEMESTER-VI 2022-23 & onwards

- PAPER-I : Biochemistry, Biotechnology and Herbal Technology  
PAPER-II : Phytogeography, Utilization of plants, Techniques and Pharmacognosy

Blgns  
S.M.C.  
Algal  
D.P.  
J.D.  
D.D.  
27/12/2019  
27/12/2019  
1  
27/12/2019  
27/12/2019  
27/12/2019



## B. Sc. SEMESTER- I

### PAPER-I

(Viruses, Prokaryotes, Algae and Biofertilizers)

#### Unit-I: Virus and Prokaryotes:

1. **Viruses:** Nature of viruses (Non-living and living characteristics), Ultra-structure of TMV, Structure and multiplication of T-4 bacteriophage, Economic importance of viruses.
2. **Mycoplasma:** Properties, Structure and Reproduction.
3. **Bacteria:** General characteristics, Ultrastructure of bacterial cell, Reproduction (Binary Fission and Conjugation), Economic importance of bacteria (with reference to their role In Agriculture and industry).

#### Unit-II: Cyanobacteria and Algae:

1. **Cyanobacteria:** Cell ultrastructure, Structure of heterocyst, Structure and Reproduction in *Nostoc*, Economic importance of Cyanobacteria.
2. **Algae:** General characteristics, Classification (Fritsch, 1954), Economic importance of Algae.

#### Unit-III: Algae:

Life cycles in Algae: *Chara*, *Vaucheria*, *Ectocarpus* and *Batrachospermum*.

#### Unit-IV: Skill Development: Biofertilizers:

1. **Biofertilizers:** Definition, scope and importance
2. Various microbes used as Biofertilizers
3. Commercial production of Biofertilizers: *Rhizobium*, *Azotobacter*, PSB (Phosphate Solubilizing Bacteria, e.g. *Bacillus polymyxa*) and *Azolla*.

#### List of Practical: Paper-I

1. Study of viruses from models/photographs (TMV and T4 bacteriophage).
2. Gram staining of Bacteria, ultra-structure of bacteriophage from TEM photographs.
3. Study of Cyanobacteria: *Nostoc*
4. Study of vegetative and reproductive structures in *Nostoc*
5. Study of Algal genera: *Chara*, *Vaucheria*, *Ectocarpus* and *Batrachospermum*.
6. Identification and characterization of *Rhizobium*, *Azotobacter*, PSB and *Azolla*.

## B. Sc. SEMESTER- I

### PAPER-II

(Fungi, Plant-Pathology, Lichens, Bryophyta and Mushroom Cultivation)

#### Unit-I: Fungi:

1. Fungi: General characteristics, Classification (Alexopoulos, 1996), Economic importance.
2. Life history of *Albugo*, *Mucor*, *Puccinia* and *Cercospora*.

#### Unit-II: Plant Pathology and Lichens:

1. Plant-Pathology: Host, Pathogen, Symptoms, Causes and control of diseases: Leaf curl of Papaya, Citrus canker and red rot of Sugarcane
2. Lichens: Introduction, Types, Reproduction and Economic importance.

#### Unit-III: Bryophyta:

1. Bryophyta: General Characteristics, Classification (Proskauer, 1957), Economic importance.
2. Life history of *Marchantia*, *Anthoceros* and *Funaria*.

#### Unit-IV: Skill Development: Mushroom Cultivation:

1. **Introduction:** Nutritional and medicinal value of edible mushroom; Poisonous mushroom: Edible mushroom: *Volvariella volvacea*, *Pleurotus citrinopileatus*, *Agaricus bisporus*.
2. **Technology of Mushroom cultivation:** Infrastructure: Mushroom unit (Thatched house); Tools: Polythene bags, vessels, inoculation hook, inoculation loop, low cost stove, sieves, culture rack, water sprayer, tray, medium.
3. **Techniques:** Substrate, preparation of medium and spawn, sterilization, multiplication, bed preparation (Paddy-straw, sugarcane trash, banana leaves)

Note: 1. Developmental stages are not expected

2. Short excursion tour/visit to biofertilizer laboratory or Mushroom cultivation center is expected

#### List of practical: Paper-II:

1. Study of Fungal genera: *Albugo*, *Mucor*, *Puccinia*, *Cercospora*
2. Study of Lichen: Thallus structure, Types of lichens.
3. Plant pathology: Leaf curl of Papaya, Red rot of Sugarcane, Citrus canker
4. Study of Bryophytes: *Marchantia*, *Anthoceros*, *Funaria*.
5. To study different instruments/tools used in mushroom cultivation.
6. To study method of preparation of spawn.
7. To study preparation of mushroom beds

SW  
JFB

1/10/2018  
Date: 10/01/2018

# BOTANY PRACTICAL EXAMINATION

B. Sc.

SEMESTER-I

TIME: FIVE HOURS

MAX. MARKS:30

- Q. 1: Gram stain the given **bacterial** strain/stain the **Cyanobacterial** material (A) and identify giving reasons. 04 M
- Q. 2: Identify the given **Algal** material (B). Prepare temporary mount and write identifying characters. 04 M
- Q. 3: Identify the given **Fungal** material (C). Prepare temporary mount and write identifying characters. 04 M
- Q. 4: Identify the given **Bryophytic** material (D). Prepare temporary mount and write identifying characters. 04 M
- Q. 5: Spotting: 06 M  
(E) Virus/Bacteria      (F) Algae/Fungi/Bryophyte      (G) Plant pathology  
(H) Lichen                (I) Biofertilizers                (J) Mushroom cultivation
- Q. 6: Viva-voce. 03 M
- Q. 7: Practical Record and Excursion report. 05 M
- .....

## Suggested readings: B. Sc. Semester I

- Alexopoulos, C. J. and G. W. Min & M. Blackwell, Introductory Mycology, CBS distributors & publishers, Delhi.
- Alexopoulos, C.J. (1962): Introductory Mycology, John Wiley Eastern Pvt. Ltd.
- Alexopoulos, C.J. and Mims C.W. (1979): Introductory Mycology 3rd Edition, John Wiley and Sons, Inc. Wiley, New York.
- Aneja, K.R. (1993): Experimental in Microbiology, Plant Pathology & Tissue Culture, Wiswa Prakashan, New Delhi.
- Barnett, J.H. (1968): Fundamentals of Mycology. The English Language Book Society and Edward Arnold Publication, Limited.
- Bold, H. C. and M. J. Wynne [1978]: Introduction of Algae: Structure and Reproduction (Prentice Hall Of India, Pvt. Ltd)
- Bold, H.C. C. J Alexopoulos and T Delevoryas [1980]: Morphology of Plants and Fungi (Harper and Row Publishers, N.Y.)
- Cavers, E. (1910): The interrelationship of Bryophyta I-IV. New Phytologist.
- Cavers, E. (1911): The interrelationship of Bryophyta VII-IX. New Phytologist.
- Chopra, G. Land D | Yadav [1980]: A text Book of Bryophyta (Arihant Press)
- Chauhan, N. M., Gajre, N. K. and Prajapati, V. P. (2013), Scientific Cultivation of Mushroom, Boitech Books.
- Dube, H. C. [1990] Introduction to Fungi (Vikas Publishing House Pvt. Ltd, Delhi)
- Dube, R.C. and D. K. Maheshwari (1999): A Text Book of microbiology, S.Chand & Co. Ltd.
- Dube, R.C. and D. K. Maheshwari (2000): Practical Microbiology -S.Chand & Co. Ltd.
- Dubey, R. C and D. K. Maheshwari [1999]: Text Book of Microbiology (S. Chand & Co)
- Eggins, H.O.W. and Allsop (1975): The Filamentous Fungi Vol. 1 Industrial Mycology (Biodegradation and Biodegradation by Fungi) Eds. J.E. Smith and D.R. Berry Edward Arnold,London.

- Emmons, C. W., C. H. Bin ford, J.P. Utz and Know Chung (1977): Medical Mycology, Lea and Febigo, Philadelphia.
- Ganguly and Kar: College Botany, Vol II (New Central Book Agency, Calcutta)
- Kumar H.D. (1988): Introductory Phycology, Affiliated East-West Press Ltd. New Delhi
- Kumar, H. D. and H. N. Singh (1982): A text Book of Algae (Affiliate East - West Press, Pvt. Ltd, New Delhi)
- Mehrotra, R. S. and Aneja, K. R. (1990): An Introduction to Mycology (Wiley Estern Ltd.)
- Mehrotra, R.S. and K. R. Aneja (1998): An Introduction to Mycology, New Age Intermediate Press.
- Morris I (1986): Introduction to the Algae, Cambridge University Press, UK
- Parihar N. S. (1976): An introduction to Embryophyta, Bryophyta (Central Book House, Allahabad)
- Parihar, N. S. [1997]: The Biology and Morphology of Bryophytes (Central Book Depot, Allahabad)
- Pelzer, M.J. Jr.Cahn, E.C.S. and N.R.Krieg (1993): Microbiology, Tata McGraw Hill.
- Prempuri [1980]: Bryophyta (Atma Ram & Sons Delhi)
- Prescott et al [1999]: Microbiology 3<sup>rd</sup>red (Wm C Brown Pub)
- Ram Udar [1970]: An Introduction to Bryophyta (Shashidhar Malviya Prakashan, Lucknow)
- Rai, M. K. (2006), Handbook of Microbial Biofertilizers, Food Product Press, An Imprints of the Haworth Press, Inc. New York.
- Reynolds CS (1984): The ecology of phytoplankton, Cambridge Univ Press
- Reddy Shankara, R. (2012), Biofertilizer Technology, Akhand Publishing House
- Round FE (1986): The Biology of Algae. Cambridge University Press, UK
- Schlegel, H.G. (1996): General Microbiology, 7th Edition, Cambridge University Press.
- Sharma A. K. (2007) Biofertilizers for sustainable Agriculture Agrobios (India) Jodhpur
- Sharma, O.P.(1992): Text Book Of Thallophytes (McGraw Hill Publishing Co.)
- Sharma, P. D. [1991]: The Fungi (Rastogi & Co, Meerut)
- Sharma, P.D. [1993]: Microbiology and plant pathology (Rastogi & Co)
- Sharma, S. G. (2005), Mushroom: Cultivation and Uses, Agrobios (India)
- Smith G. M. (1955): Cryptogamic Botany-vol. 2 Bryophyta and Pteridophyta (McGraw Hill Book Company, New York)
- Smith, G. M. [1971]: Cryptogamic Botany, Vol. I Algae and Fungi(TMH)
- Smith,G.M.[1971]: Cryptogamic Botany, vol. II Bryophytes and Pteridophytes (THM)
- Smith, K. M. [1992]: Plant Viruses 6th Ed (university Book Stall,New Delhi)
- Sporne, K. R. IJ: The Morphology of Bryophytes (Hutchinson University, London)
- Sullia, S. B. [1998]: General Microbiology (Oxford &IBH)
- Sunder Rajan, S. (2001): Tools and Techniques of Microbiology, Anmol Publ. New Delhi.
- Tortora, G. E. B. R. Funke, C. L. Case U (1997): Microbiology, An Introduction, 6<sup>r</sup>Ed (Addison Neslley Logman,Inc.)
- Vashishtha, B. R. [1992]: Bryophyta (S. Chand & Co. New Delhi)
- Vasishtha, B. R. [1990]: Algae (S. Chand & Co. New Delhi)
- Vasishtha, B. R.{1990} : Fungi (S. Chand and Co. New Delhi)

**B. Sc. SEMESTER-II**  
**PAPER-I**  
**(Palaeobotany, Pteridophytes, Gymnosperms and Soil analysis)**

**Unit-I: Palaeobotany:**

1. **Palaeobotany:** Definition; fossil and Pseudo-fossil, Importance of fossils.
2. **Types of fossils:** Compression, Impression, Cast-Mold, Petrification and Amber.
3. **Geological time scale:** Definition, Outline and brief account of Eras.
4. **Fossil leaf:** *Glossopteris*, **Fructification:** *Scutum*.

**Unit-II: Pteridophytes:**

1. **Pteridophyta:** General characteristics, Classification (Smith, 1952).
2. **Fossil Pteridophyte:** *Rhynia*
3. **Life history of:** *Selaginella* and *Equisetum*.
4. Heterospory and seed habit.
5. Brief account of types of steles

**Unit-III: Gymnosperms:**

1. **Gymnosperms:** General characteristics, Classification (Steward, 1982), Economic Importance
2. **Fossil Gymnosperms:** *Cycadeoidea* flower
3. **Life cycle of:** *Cycas* and *Pinus*.

**Unit-IV: Skill Development: Soil analysis:**

1. **Soil:** Types of soil, method of collection of soil samples.
2. **Physical properties of soil:** Soil texture, soil colour, Water Holding Capacity (WHC), Water Rising Capacity (WRC); Bulk Density (BD) and Porosity (P).
4. **Chemical properties of soil:** pH, Carbonates as  $\text{CaCO}_3$ , Available Nitrogen, Available Phosphorous, Available Potassium.

**List of Practical: Paper-I:**

1. Fossils: Types (Compression, Impression, Cast-Mold, Petrification); *Glossopteris*, *Rhynia*, *Cycadeoidea*.
2. Study of Pteridophytes: *Selaginella* and *Equisetum*.
3. Study of Gymnosperms: *Cycas* and *Pinus*
4. Types of soil
5. To study Physical properties of soil samples
6. To study Chemical properties of soil samples

8/1/2023

7

**B. Sc. SEMESTER-II  
PAPER-II  
(Morphology of Angiosperms and Floriculture)**

**Unit-I: Vegetative Morphology:**

1. **Root:** Tap root and adventitious root, modification of root for storage and respiration
2. **Stem:** Shape, surface, and nature. Branching (Monopodial and Sympodial), Modification of stem (Runner, Rhizome, Tuber, Bulb)
3. **Leaf:** Typical leaf, Types (Simple and Compound), Types of phyllotaxy, Venation, Modification of leaf (Tendril, Phyllode)

**Unit-II: Reproductive Morphology:**

1. **Inflorescence:** Definition, Racemose, Cymose and Special types
2. **Flower:** Definition, Structure of Typical flower, Variation in thalamus (Androphore, Gynophore and Gynandrophore)
3. **Calyx and Corolla:** Cohesion, Forms of corolla and Aestivation.
4. **Androecium:** Parts, Cohesion, Adhesion and Fixation.

**Unit-III: Carpel and Fruit:**

1. **Gynoecium:** Parts, Cohesion, Adhesion and Placentation.
2. **Fruit:** Definition, Pericarp, Types of fruits: Simple (Dehiscent, Schizocarpic, Dry Indehiscent, Fleshy Indehiscent); Aggregate (Etaerio) fruits, Composite Fruits (Sorosis and Syconus).

**Unit-IV: Skill Development: Floriculture:**

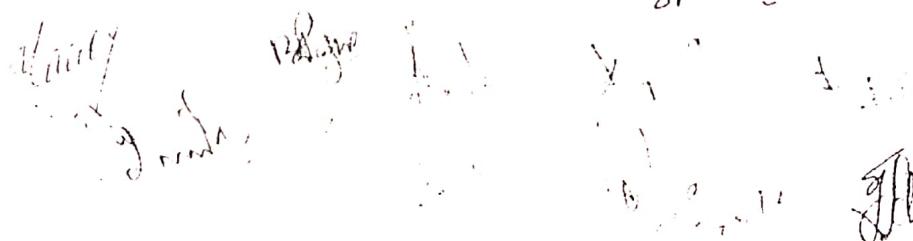
1. **Floriculture:** Definition, commercial aspects.
2. **Methods of cultivation of:** Important cut flowers such as Carnation, Asters, Gerbera, Dahlia, Marigold with reference to soil type, sowing pattern, weather condition, irrigation regime, fertilizers and harvesting.
3. Diseases and control measures.

**List of practical: Paper-II:**

1. Study of different root modifications
2. Study of nature of branching and modification of stem
3. Study of leaf: Types (Simple & Compound), Phyllotaxy, Venation and Modifications.
4. Inflorescence: Types mentioned in theory.
5. Flower: Parts, calyx, corolla, androecium, gynoecium, variation in thalamus.
6. Fruits: Study of different types of fruits
7. Identification and commercial aspect of cut flowers mentioned in theory.

**Note:** 1. Developmental stages are not expected

2 Short excursion tour/visit to soil testing laboratory or Polyhouse is expected



**BOTANY PRACTICAL EXAMINATION**  
**B. Sc.**  
**SEMESTER-II**

TIME: FIVE HOURS

MAX. MARKS: 30

- |       |  |                  |                 |      |
|-------|--|------------------|-----------------|------|
| Q. 1: | Identify the given Pteridophytic material (A). Prepare temporary mount and write identifying characters. | 04 M             |                 |      |
| Q. 2: | Identify the given Gymnospermic material (B). Prepare temporary mount and write identifying characters.  | 04 M             |                 |      |
| Q. 3: | To study the physical or chemical properties(any two) of given soil sample (C)                           | 04 M             |                 |      |
| Q. 4: | Describe the given leaf material (D).  | 03 M             |                 |      |
| Q. 5: | Describe the given flower (E).   | 03 M             |                 |      |
| Q. 6: | Spotting: -  | 03 M             |                 |      |
|       | (F) Palaeobotany   | (G) Pteridophyta | (II) Gymnosperm |      |
|       | (I) Fruit  | (I) Floriculture |                 |      |
| Q. 7: | Viva-voce.   |                  |                 | 03 M |
| Q. 8: | Practical Record and Excursion report.   |                  |                 | 05 M |

**Suggested Readings: B. Sc. Semester-II**

- Agashe, S. N. (1995): Palaeobotany, Plants of the past, their evolution, palaeo-environment and application in exploration of fossil fuels. Oxford & IBH publishing company-New Delhi.
- Arnold, C.A. (1947): Introduction to Palaeobotany, Mc-Graw Hill Book Co. Inc., New York and London.
- Beck, C.B.(1976): Current status of the Progymnospermosida, Review of Palaeobotany and Palynology
- Bhatnagar, S. P. and Moitra A. (1996): Gymnosperms. New Age International Limited, New Delhi
- Bierhorst, D. W. [971]: Morphology of Vascular Plants. Macmillon & Co. N. R.
- Biswas, T. D. and Mukherjee, S. K. (2017), Text Book of Soil Science, Tata McGraw Hill Education, New Delhi (India)
- Bold, H.C. C. J Alexopoulos and T Delevoryas [980]: Morphology of Plants and Fungi (Harper and Row Publishers, N.Y.)
- Chandra,S. and Surange, K.R.(1979): Revision of the Indian species of *Glossopteris*, Monograph, Birbal Sahni Institute of Palaeobotany.
- Davis, P. H. and Heywood V. H. (1963): Principles of Angiosperm Taxonomy. Oliver and Boyd London.
- Das, D. K. (2015), Introductory Soil Science, Kalyani Publishers, Lukhnow (India)
- Des R. (2013): Floriculture at glance. Kalyani Publ, New Delhi.
- Ganguly and Kar : College Botany, Vol II (New Central Book Agency, Calcutta)
- Hartmann HT, Kester DE, Davies ET and Geneve RL. (?002): Plant Propagation: Principles and Practices. Prentice Hall India Ltd.
- Kubitzki K. (1990): The families and genera of vascular plants Pteridophytes and Gymnosperms, Springer Verlag, New York

- Majumdar, S. P. and Singh, R. A. (2000), Analysis of soil: Physical and Chemical properties, Agrobios (India), Jodhpur
- Meyen, S.V.(1987): Fundamentals of Palaeobotany Chapman and Hill, London, New York.
- Nair, P.K.K. (1970): Pollen morphology of Angiosperms. Scholar Publ. House, Lucknow,
- Parihar,N.S.(1995): Essentials of Palaeobotany. Central Book -Allahabad.
- Parihar N.S. (1977): The biology and morphology of the Pteridophytes (Central Book Depot, Allahabad).
- Pichi-Sermolli REG (1959): Pteridophyta in vistas in botany, WB Turrill, ed. (Pergamon Press, London) pp 421-493.
- Prasad, K.N. (1999): An introduction to Palaeobotany, APH Pub.
- Randhawa GS and Mukhopadhyay A. (2004): Floriculture in India. Allied Publishers Pvt. Limited.
- Randhawa G. S. and Mukhopadhyay A (1986): Floriculture in India. Allied Publ., New Delhi.
- Rashid A. (1982): (4th edn) An introduction to pteridophyta (Vikas Publ House Pvt Ltd.)
- Rashid, A. [1989]: An Introduction to Pteridophyta Vikas Publishing House, Pvt. Ltd. New Delhi
- Rowley, J.R. (1967): Fibrils, microtubules and lamellae in Pollen grains. Rev. Palaeobotany. Palynol 3:213-226,
- Sai Prasad, S. V., Ramesh, A., Jat, J. R. and Patidar, C. P. (2016), Soil Science, New Vishal Publication,
- Sharma O.P (1996): Textbook of Pteridophyta (Mac Millan India Ltd, New Delhi)
- Sharma, O. P. [1990]: Text Book of Pteridophyta (Mcmillan India Ltd.)
- Siddiqui, K.A. (2002): Elements of Palaeobotany, Kitab Mahal, Allahabad.
- Singh, H. (1978): Embryology of Gymnosperms, Encyclopedia of Plant Anatomy X, Gebryder, Bortragear, Berlin.
- Smith G. M. (1955): Cryptogamic Botany-vol. 2 Bryophyta and Pteridophyta (McGraw Hill Book Company, New York)
- Smith, G. M. [1971]: Cryptogamic Botany, vol. II, Bryophytes and Pteridophytes (THM)
- Spicer, R.A. & Thomas, B.A. (1986): Systematic and taxonomic approaches in Palaeobotany. Systematic Association Special Volume.
- Sporne K.R. (1962): The morphology of pteridophyta (Hutchinson Univ. Library, London)
- Sporne, K. R. (1965): The Morphology of Gymnosperms. Hutchinson University Library Press, London.
- Steil W.N. (1939): Apogamy, Apospory and Parthenogenesis in the Pteridophyta, Bot. rev, 5, 433-453.
- Stewart, W. N. and G. W. Rothwell (1993): Paleobotany and the Evolution of Plants, 2<sup>nd</sup> Edn. Cambridge University Press.
- Swarup Vishnu. (2003): Garden Flowers. National Book Trust
- Vashishtha, B. R. [1992]: Gymnosperm (S. Chand & Co. New Delhi)
- Vashishtha, B. R. [1992]: Pteridophyta (S. Chand & Co. New Delhi)

**B. Sc. SEMESTER-III**  
**PAPER-I**  
**(Angiosperm Systematics, Embryology and Indoor Gardening)**

**Unit-I: Systemic botany:**

1. Origin of Angiosperms: (Benettitalean theory)
2. Fossil angiosperms: Flower (*Sahanianthus*); Fruit (*Enigmocarpon*)
3. Angiosperm Taxonomy: Floras, Herbarium, Keys ( Intended and Bracketed)
4. Botanical Nomenclature: Principles (Rank and taxon, Principle of priority)
5. Modern trends in taxonomy: Cytotaxonomy ( Karyotype), Phytochemistry (Proteins and Flavonoids)

**Unit-II: Angiosperm: Classification and Families:**

1. Systems of Classification: Bentham and Hooker; Engler and Prantl (along with merits – demerits)
2. Study of families: Dicot: *Malvaceae, Brassicaceae, Papilionaceae, Asteraceae, Asclepiadaceae*; Monocot: *Poaceae*.

**Unit-III: Embryology:**

1. Pollination: Types and Significance.
2. Anther: T. S. Anther, Microsporogenesis; Structure of pollen grain, Development of male gametophyte.
3. Ovule: Types of ovule, Structure of anatropous ovule, Megasporogenesis, Development of female gametophyte (*Polygonum* type)
4. Fertilization: Double fertilization and triple fusion, Endosperm and its types, Structure of Dicot embryo (*Onagrad*) and Monocot embryo.

**Unit-IV: Skill Development: Landscaping and Indoor gardening**

1. Landscaping: Definition, scope of landscaping (Landscaping at offices, industrial premises, educational institutes and parks)
2. Indoor gardening: Brief account of places of house plants, pots and containers; Factors required for growing house plants (Temperature, light, humidity, ventilation, watering, soil, feeding, potting)
3. Popular house plants: Foliage Plants: *Coleus blumei, Begonia sp.*, Ferns: *Adiantum sp., Nephrolepis sp.*, Palms: *Chrysanthocarpus lutescens*- Areca palm, *Howea forsteriana*- Kentia palm, Flowering plant: *Anthurium sp., Begonia sp.*, Orchids: *Vanda sp., Dendrobium sp.*

**List of practical: Paper-I**

1. Study of fossil Angiosperms from specimens/slides.
2. Study of dicot and monocot families mentioned in theory syllabus.
3. To calculate percent germination of pollen grains in the given material.
4. Study of structure of anther and pollen grain.
5. Study of different types of ovule.
6. Study of dicot and monocot embryos from permanent micro-preparation.
7. Study of different popular house plants.

**B. Sc. SEMESTER-III**  
**PAPER-II**  
**(Angiosperm Anatomy and Horticulture)**

**Unit-I: Anatomy:**

1. **Tissue:** Definition, Characteristics of Meristematic tissue; Classification of meristems (based on origin and position).
2. **Simple Permanent Tissue and their functions:** Parenchyma, Collenchyma, and Sclerenchyma
3. **Complex Permanent Tissue and their functions:** Xylem and Phloem
4. **Apical meristem of root and shoot:** Apical cell theory, Histogen theory, Tunica-Corpus theory, Newman's theory
5. **Cambium:** Structure, Types and functions.

**Unit-II: Primary and Secondary Growth in stem and root:**

1. **Types of vascular bundles:** Radial, Conjoint, Concentric.
2. **Normal Primary structure of root:** Dicot (*Sunflower*) and Monocot (*Maize*)
3. **Normal Primary structure of stem:** Dicot (*Sunflower*) and Monocot (*Maize*)
4. **Normal secondary growth in dicot stem:** *Sunflower*
5. **Anomalous Secondary growth in:** Dicot stem (*Bignonia*) and Monocot stem (*Dracaena*)

**Unit-III: Periderm, growth rings, Sap-heartwood, leaf anatomy:**

1. **Growth rings:** Spring wood and winter wood
2. **Sap wood, Heart wood, Tyloses**
3. **Periderm:** Composition, functions and Structures associated with periderm (Lenticel, Bark, Commercial cork)
4. **Anatomy of leaf:** Dicot (*Nerium*) and Monocot (*Maize*)
5. **Senescence and Abscission.**

**Unit-IV: Skill Development: Horticulture**

1. **Horticulture:** Definition and scope; importance of horticulture, water requirement and irrigation, nutrient management.
2. Methods of propagation of following horticultural crops (propagation by seeds, vegetative propagation, propagation through specialized organs): Rose, *Chrysanthemum*, *Crotons*, Mango, Citrus, Guava, *Lilium*.
3. Technique of Bonsai preparation.

**List of Practical: Paper-II:**

1. Study of simple and complex tissue from permanent micro-preparation.
2. Study of different types of vascular bundles.
3. Study of internal structure of dicot and monocot roots with the help of temporary micro-preparation.
4. Anatomy of dicot and monocot stem with the help of temporary or double stained permanent micro-preparation.
5. Anatomy of normal and anomalous secondary growth in stem with the help of double stained permanent micro-preparation.
6. Study of internal structure of dicot (*Nerium*) and monocot leaf (*Maize*) with the help of temporary micro-preparation.
7. Study of various horticultural crops mentioned in syllabus.

**Note: 1. Developmental stages are not expected**

**2. Short excursion tour is expected**

## BOTANY PRACTICAL EXAMINATION

B. Sc.

SEMESTER-III

TIME: FIVE HOURS

MAX. MARKS: 30

- Q. 1: Describe in technical language the given **Angiospermic** material (A). Classify and identify the family giving reasons. 05 M
- Q. 2: Calculate percent germination of **pollen grains** in given material (B). 03 M
- Q. 3: Prepare temporary mount of the given **root/leaf** material(C) and identify giving diagnostic characters. 04 M
- Q. 4: Prepare double stained permanent mount of the given **stem** material (D). Identify giving diagnostic characters. 05 M
- Q. 5: **Spotting:** (E) Fossil angiosperms (F) Embryology (G) Tissue  
(H) Popular house plant (I) Horticultural plant 05 M
- .....
- Q. 6: Viva-voce. 03 M
- Q. 7: Practical Record and Excursion report. 05 M

### Suggested Readings: Semester-III

- Agarwal, V. Kr., and Bhargava P. (2017), Home Gardening, Pustak Mahal, Allahabad (India)
- Baker, H.G. (1954): Aperture membranes in Studies of Pollen Morphology and Taxonomy. New Phytologist, 54(3), 8.
- Bhojwani, S. S. and Bhatnagar, S. P. (2000): The Embryology of Angiosperms, Vikas Publishing House, Delhi.
- Chadha, K. L. (2001), Handbook of Horticulture, Indian Council of Agricultural Research, New Delhi (India)
- Cutter, E. G. (1971): Plant Anatomy: Experiment and Interpretation, Part II, Organs, Edward Arnold, London.
- Devis, P.H. and Heywood, V. H. (1973): Principles of angiosperms taxonomy. Robert E. Kreiger Pub Co New York.
- Dutta, S. C. (1989): Systematic Botany. Wiley Eastern Co.
- Erdtman, G. (1966): Pollen morphology and plant taxonomy angiosperms Hafner, New York.
- Erdtman, G. (1945): Pollen Morphology and Plant Taxonomy IV Labiateae, Verbenaceae, Avicenniaceae. Svensk Botanisk Tidskrift, 39(3).
- Erdtman, G. (1952): Pollen Morphology and Plant Taxonomy (An Introduction to Palynolgy)
- Erdtman, G. (1957): Pollen and Spore morphology and plant taxonomy. (An introduction to palynology) Hafner Publishing Comp-New York.
- Esau, K. (1979): Anatomy of seed Plants, 2nd Edn. John Wiley and Sons New York Fahn, A. Plant Anatomy, 2nd Edn. Pergamon Press, Oxford.
- Fagerri, K. and Van der Pol, L. (1979): The Principles of Pollination Ecology. Pergamon Press, Oxford.
- Fahn, A. (1982): Plant Anatomy, (3rd edition). Pergamon Press, Oxford.
- Fahn, A. Plant Anatomy, 2nd Edn. Pergamon Press, Oxford.
- Grewal H. S. and Singh P. (2014): Landscape designing and ornamental plants. Kalyani Publ., New Delhi.

- Harrisson, H.J. (1971); New concept in flowering plant Taxonomy. Hickman educational books Ltd. London.
- Heslop-Harrison, J. (1971): (Editor). Pollen: Development & Physiology. Butterworths, London.
- Heslop-Harrison, Y. (1981): Stigma characteristics and Angiosperm taxonomy. Nord J. Sot. 1401-420.
- Heywood, V. H. and Moore, D. M. (1984): Current concepts in Plant Taxonomy. Academic Press, London.
- Heywood, V.H. (1967): Plant Taxonomy, Studies in Biology, No. 5 Edward Arnold (Publ.) London.
- Heslop-Harisson, J. (1967): Plant Taxonomy. English Language Book Sco. and Edward Arnold Pub.Ltd, UK.
- Jeffrey, C. (1983): An Introduction of plant Taxonomy. Cambridge University Press, Cambridge, London.
- Khalid H. and Nawaz K. (2014): Introductory plant taxonomy. Kalyani Publ., New Delhi.
- Nath, V. N. Taxonomy of Angiosperm.
- Nair, P.K.K. (1970): Pollen morphology of Angiosperms. Scholar Publ. House, Lucknow,
- Roctor, M. and Yeo, P. (1973): The Pollination of Flowers. William Collins Son, London.
- Tadford, A.E. (1986): Fundamentals of plant systematic. Harper and Row, New York
- Vaghavan, V. (1986): Embryogenesis in Angiosperms: A Developmental and Experimental study. Cambridge University Press, Cambridge.
- Royal Horticultural Society's Encyclopedia of Gardening.
- Uphar R. (2012): Horticulture at glance. Kalyani Publ., New Delhi.
- Uphar, H. (1978): Embryology of Gymnosperms, Encyclopedia of Plant Anatomy X, Gebryder, Verlagsgesellshaft, Berlin.
- Uphar, J. (2014), Basic Horticulture, Kalyani Publishers, Lukhnow (India)
- Vemuge, N. R. (1986): Flora of Nagpur District. Shree Prakashan, Nagpur.
- Venna Amarnath; Nursery and Landscaping, Agrobios (India).
- Vishnu Swarup; Indoor Gardening (1993); Publication & Information -Division ICAR New Delhi-12.



**B. Sc. SEMESTER-IV**  
**PAPER-I**  
**(Cell Biology, Plant Breeding, Evolution and Seed Technology)**

**Unit-I: Cell organization:**

1. **Cell:** Brief account of Cell theory, Comparison between Prokaryotic and Eukaryotic cell organization, Structure of typical plant cell.
2. **Structure and functions of:** Cell wall, Plasma membrane (Fluid Mosaic model), Endoplasmic reticulum, Golgi complex, Ribosomes and Vacuole.

**Unit-II: Cell biology:**

1. **Structure and functions of:** Chloroplast, Mitochondria and Nucleus
2. **Chromosome morphology:** Chromatid, chromomeres, centromere, telomere, secondary constriction, satellite.
3. **Molecular organization of chromosome:** Nucleosome model.
4. **Sex Chromosomes:** Definition, Structure of sex chromosomes (X and Y) in *Melandrium* plant.
5. **Cell division:** Mitosis and Meiosis (Mechanism and significance).

**Unit-III: Plant breeding and Evolution.**

1. **Plant Breeding:** Definition and objectives
2. **Methods of Plant breeding:** Definition; Procedure or technique of Pure line selection, Clonal selection, Hybridization, Heterosis (Definition and Scope)
3. **Biostatistics:** Mean, Median, Mode, Standard deviation and Standard error
4. **Evolution:** Neo-Darwinism and Miller's theory.

**Unit-IV: Skill Development: Seed Technology**

1. **Seed:** Structure and types
2. **Seed dormancy:** Causes of seed dormancy, methods to break seed dormancy
3. **Seed technology:** Seed storage, seed banks, factors affecting seed viability, genetic erosion, methods of seed production, seed testing and certification.
4. **Commercial types of seeds:** Farmers seed, foundation seeds, breeders seed and certified seed.

**List of Practical: Paper-I:**

1. Study of cell organelles with the help of photographs or slides.
2. Study of mitosis in suitable plant material.
3. Study of meiosis in suitable plant material.
4. To calculate mean, median, mode and standard error of the given data.
5. To study the methods of breaking seed dormancy.
6. To study the seed viability and percentage seed germination by paper slot method or tetrazolium salt.

**B. Sc. SEMESTER-IV**  
**PAPER-II**  
**(Genetics, Molecular Biology and Plant Nursery)**

**Unit-I: Genetics: (Mendelism, Linkage and crossing over).**

1. **Mendelism:** Basic terminology, Law of segregation and law of independent assortment.
2. **Interaction of genes:** Allelic: Incomplete dominance (1:2:1); Non-allelic: Complementary factors (9:7) and Dominant epistasis (12:3:1).
3. **Linkage:** Definition, Theory of linkage: Coupling and Repulsion, Types: Complete and Incomplete linkage
4. **Crossing over:** Definition, Breakage and reunion theory, significance of crossing over.

**Unit-II: Genetics: (Mutation)**

1. **Mutation:** Definition, Types: Spontaneous and induced mutation, Physical and Chemical mutagens, applications of induced mutations.
2. **Chromosomal aberrations:** Deficiency, Duplications, Inversion and Translocation
3. **Variation in chromosome number:** Aneuploidy (Nullisomics, Monosomics, Trisomics and Tetrasomics), Euploidy (Autopolyploidy, Allopolyploidy); Significance.
4. **DNA Damage and Repair:** Photoreactivation and Excision Repair

**Unit-III: Molecular biology**

1. **DNA:** Structure of DNA (Watson and Crick's model), Replication of DNA: Semiconservative method of DNA replication,
2. **RNA:** Types, Clover leaf model of t-RNA
3. **Concept of gene:** Classical: Cistron, Muton and Recon
4. **Genetic code:** Definition and characteristics
5. **Protein synthesis:** Transcription and Translation
6. **Regulation of gene action:** Lac-Operon model

**Unit-IV: Skill Development: Plant nursery**

1. **Nursery:** Definition and Role or objective; nursery infrastructure
2. **Planning and seasonal activities:** Preparation of nursery beds, Planting: direct seeding and transplant, Air layering, Budding, Grafting, cutting, rooting medium, hardening of plant
3. **Nursery management:** Routine garden operations, soil sterilization, seed sowing, pricking, planting and transplanting, shading, stopping or pinching, defoliation, wintering, mulching and topiary.

**List of Practical: Paper-II:**

1. To prove Mendel's law of segregation with the help of colored beads.
2. To prove Mendel's law of independent assortment with the help of colored beads.
3. To work out the type of gene interaction mentioned in theory from given data.
4. To study different methods of vegetative propagation ( Air layering, cutting, budding and grafting)
5. To study the method of soil sterilization for plant nursery.

**Note:** 1. Developmental stages are not expected,

2. Short excursion tour/visit to Nursery is expected

**BOTANY PRACTICAL EXAMINATION**  
**B. Sc.**  
**SEMESTER-IV**

### TIME: FIVE HOURS

MAX. MARKS: 30

- Q. 1: To prepare semi-permanent squash/smear of the given plant material (A), identify stage/s of cell division. 04 M

Q. 2: To solve given problem of Biostatistics from the given data (B). 03 M

Q. 3: To determine seed viability of the given seeds (C) and report the finding. 03 M

Q. 4: To prove Mendel's law of inheritance by using colored beads (D) and apply Chi-Square test. 04 M

Q. 5: To work out the type of gene interaction from the given data (E). 04 M

Q. 6: Spotting: 04 M

(F) Cell organelle  
(H) Tools used in nursery

(G) Cell division  
(I) Method of vegetative propagation.

Q. 7: Viva-voce. 03 M

Q. 8: Practical Record and Excursion report. 05 M

### Suggested Readings: Semester: IV

- AgriMoon.com (2014), Principles of Seed Technology, ICAR, India

Agrawal, P. K. (2015), Principles of Seed Technology, ICAR, New Delhi

Agrawal, R. L. (2015), Seed Technology, Oxford and IBH Publishing Co. Pvt. Ltd.

Alberts, B. D. Bray, J. Lewis, M. Raff K, Roberts, and J. D. Watson [1999]: Molecular Biology of the Cell (Garland Publishing Co. Inc. N.Y.)

Bewley, J.D. and Black, M. (1994): Seeds: Physiology of Development and Germination, Plenum Press, New York.

Cooper, G. M. [1997]: The Cell" A Molecular Approach (Oxford Univ. Press)

Freifelder, D. [1990]: Essentials of Molecular Biology (Narosa Publishing House, New Delhi, Madras)

Gardner, E. J., M. J Simmond, and D. P. Snustadt (1991): Principles of Genetics, 8ed (John Wiley and Sons, Inc N. Y.)

Gupta, P.K. (2007): Genetics: Classical to Modern. Rastogi Publications, Meerut

Gupta, P.K.[1999]: A Text Book of cell and Molecular Biology (Rastogi Publications, Meerut India)

Hartman, H. T. and Kestler D.E. (1976): Plant Propagation: Principles and Practices, 3rd Edn. Prentice- Hall of India Pvt. Ltd. New Delhi.

Hawkms, J. D. [1991]: Gene Structure and Expression 2<sup>nd</sup>ed (Cambridge University Press Cambridge U.K.)

Karp, G. [1996]: Cell and Molecular Biology- Concepts and Experiments (John Wiley and Sons Inc.)

Kleinsmith, L. J. and V. M. Kish [1995]: Principles of cell and Molecular Biology, 2nd ed. Harper Collins college publs.

Kumar, H. D. [1991]: A text book of Cytology, Genetics and Evolution. Kalyani Publisher, New Delhi

- Lewin, G. [2000]: Gene VII (John Wiley and Sons, N.Y.)  
Lodish, H. A. Berk, S. L. Zipursky, P. Matudaira, D. Baltimore and Jm Damell [2000]: Molecular cell Biology (W. H. Freeman and Co. N.Y.)  
Roy, P. K. (2012), Plant Nursery Management, Scientific Publishers, Jodhpur (India)  
Russel, P. J. [1998]: Genetics (The Benjamin/Cummings publishing Con. Inc. USA)  
Sharma, R. R. and Srivastav, M. (2004), Plant Propagation and Nursery Management, International Book Distributing Co.  
Singh B. (2012): Horticulture at glance. Kalyani Publ., New Delhi.  
Singh, H. (1978): Embryology of Gymnosperms, Encyclopedia of Plant Anatomy X, Gebryder, Hortragear, Berlin.  
Snustad, D. P. and M. J. Simmons [2000]: Principles of Genetics (John Wiley and sons, USA)  
Vyas S.P. and Mehta A. (2011): Cell and Molecular Biology. CBS Publ. and Dist. Pvt. Ltd., New Delhi  
Watson, J. D. Hopkins, Roberts, Steitz, Weiner [1987]: Molecular Biology of Gene. Benjamin-Cummings Pub. Co. Sherman)

**B. Sc. SEMESTER-V**  
**PAPER-I**  
**(Plant Physiology, Mineral Nutrition and Hydroponics)**

**Unit-I: Plant-Water relation:**

1. **Water relation:** Concept and significance of Imbibition, Diffusion, Osmosis, Osmotic pressure, Cell as osmotic system, DPD, Plasmolysis.
2. **Ascent of sap:** Definition, Root pressure theory, Cohesion-adhesion theory.
3. **Transpiration:** Definition, Types, Mechanism of Stomatal movements ( $K^+$  Malate Hypothesis)
4. **Phloem transport:** Munch Hypothesis
5. **Mineral uptake:** Passive (Donnan's Equilibrium), Active (Carrier Concept).

**Unit-II: Photosynthesis and Respiration:**

1. **Photosynthesis:** Definition, Significance; Photosynthetic pigments (Type and role), Photosystems.
2. **Mechanism of photosynthesis:** Light reaction: Cyclic and non-cyclic photophosphorylation, Dark Reaction: Calvin Cycle ( $C_3$ ), HSK pathway ( $C_4$ ), CAM pathway.
3. **Respiration:** Definition, Types, significance and Respiratory Quotient (RQ)
4. **Mechanism of respiration:** Glycolysis, Kreb's Cycle, Oxidative phosphorylation (ETS).
5. **Fermentation:** Definition, Types, Mechanism of fermentation: Lactic acid and Alcoholic.

**Unit-III: N-Fixation, Plant Movements, Photoperiodism:**

1. **Nitrogen Metabolism:** Definition, Mechanism of Biological N-Fixation (Symbiotic and Non-symbiotic)
2. **Plant Movements:** Definition, Outline, Tropic (Geotropic, Phototropic, Thigmotropic) and Nastic (Seismonastic).
3. **Photoperiodism:** Definition, Classification (Short Day Plant, Long Day Plant and Day Neutral Plant), photoperiodic induction, Florigen hormone.
4. Circadian rhythms and Biological clock.

**Unit-IV: Skill Development: Mineral nutrition and Hydroponics:**

1. **Mineral nutrition:** Definition, source, types (Macro and micronutrients)
2. **Role and deficiency symptoms of Macronutrients:** Nitrogen, Phosphorous, Potassium and Calcium
3. **Role and deficiency symptoms of Micronutrients:** Iron, Manganese, Boron and Zinc.
4. **Hydroponics:** Definition, advantages and disadvantages, Types of hydroponic systems (Deep water culture and Nutrient Film Technique); Nutrient composition.
5. **Methods:** Hydroponic farming of Tomato, Cucumber, Spinach and Cabbage.

**List of Practical: Sem.-V, Paper-I:**

- A. **Major Physiology Experiments:**
1. To study the effect of temperature on the permeability of cell membrane.
  2. To study the effect of various organic solvents on the permeability of cell membrane.
  3. To determine the osmotic pressure/potential of vacuolar sap by plasmolytic method.
  4. To study ascent of sap in suitable plant material.

5. To compare rate of transpiration from two surfaces of leaf by cobalt chloride method and Bell jar method.
6. To separate chlorophyll pigments by paper chromatography and calculate Rf value of different pigments.
7. To measure the rate of photosynthesis by Willmott's bubbler under variable conditions of light (quantity and quality).
8. To measure the rate of photosynthesis by Willmott's bubbler under variable conditions of temperature and  $\text{CO}_2$  concentration.
9. To determine the respiratory quotient (RQ) of the given plant material.

**B. Minor Physiology Experiments:**

1. To demonstrate the phenomenon of imbibition.
2. To demonstrate root pressure in suitable plant material.
3. To demonstrate that light is necessary for photosynthesis (Ganong's light screen).
4. To demonstrate that light, chlorophyll and  $\text{CO}_2$  is necessary for photosynthesis (Moll's half leaf experiment).
5. To demonstrate fermentation by Kuhne's tube.
6. To demonstrate the evolution of  $\text{CO}_2$  during respiration.

**C. Plant movement, Photoperiodism, mineral nutrition and hydroponics:**

1. To demonstrate the phenomenon of nastic movement in *Mimosa pudica* plant
2. To demonstrate the phenomenon of soil less growth in plants mentioned in syllabus.

**B.Sc. SEMESTER-V**  
**PAPER-II**  
**(Plant Ecology and Organic Farming)**

**Unit-I: Plant and environment:**

1. **Ecology:** Definition, branches and significance.
2. **Climatic factors:** Atmospheric (Gaseous composition); Effect of Light and Temperature on vegetation
3. **Edaphic factors:** Pedogenesis, Soil profile, Soil micro-organisms.
4. **Physiographic factors:** Biotic factors: Interaction between plants and animals and humans and interaction between plants growing in a community.

**Unit-II: Ecosystem:**

1. **Ecosystem:** Definition, types; Components: Biotic and abiotic components, Food chain, Food web, Ecological pyramids.
2. **Autecology:** Definition, Importance, Ecads, Ecotypes: Characteristics and importance, Growth curve.
3. **Synecology:** Definition, Study of community: Quantitative characteristics: Frequency, Density, Abundance; Qualitative characteristics: Life forms, Raunkier's Biological Spectrum and Synthetic characteristics: Presence, fidelity and dominance.

**Unit-III: Plant Succession and adaptations:**

1. **Plant Succession:** Definition, Causes of succession, Hydrosere, Xerosere
2. **Plant Adaptations:** Morphological and anatomical adaptations of Hydrophyte (*Hydrila, Nymphaea*), Xerophyte (*Casuarina, Nerium*), Halophyte and Epiphyte (*Vanda*).
3. **Biogeochemical cycles:** Nitrogen and Phosphorous

**Unit-IV: Skill development: Organic farming:**

1. **Organic farming:** Definition, concept, advantages and disadvantages, green manure and organic fertilizers.
2. **Methods:** Recycling of biodegradable kitchen, agricultural and industrial waste.
3. **Methods of:** Preparation of Bio-compost, preparation of vermicompost and its type, isolation and inoculum production of VAM.
4. **Organic manure:** Effect of organic manures on growth and yield productivity of various crop plants.

**List of Practical: Paper-II:**

1. To determine frequency, density and abundance of community by quadrat method.
2. To determine homogeneity of vegetation by Raunkier's frequency diagram.
3. To determine the minimum number of quadrates required for reliable estimate of biomass in grasslands.
4. To study the frequency of herbaceous species in grassland and to compare the frequency distribution with Raunkier's standard frequency diagram.
5. To measure the above ground plant biomass in a grassland.
6. To study soil profile at different locations of nearby area.
7. To estimate transparency, pH and temperature of different water bodies.
8. To estimate salinity of different water samples.

9. To study the morphological and anatomical characteristics of hydrophyte, xerophyte, halophytes and epiphyte with reference to ecological adaptations.
10. Collection and identification of various organic manures.
11. To study the methodology of preparation of vermi-compost.

**Note:** 1. Developmental stages are not expected,

2. Short excursion tour/ visit to Organic farm is expected

### BOTANY PRACTICAL EXAMINATION

#### SEMESTER-V

**TIME: FIVE HOURS**

**MAX. MARKS: 30**

Q. 1. To perform the given major physiology experiment (A) and report the findings. 05 M
Q. 2. To perform the given minor physiology experiment (B) and report the findings. 03 M
Q. 3. To perform the given ecological experiment (C) and report the finding. 05 M
Q. 4. To study morphological and anatomical characteristics of the given plant material (D), with reference to ecological adaptations. 05 M
Q. 5. Spotting: 04 M
.....
(E) Plant physiology (F) Ecology
(G) Hydroponics (H) Manures.
.....
Q. 6. Viva-voce. 03 M
Q. 7. Practical Record and Excursion report. 05 M

#### Suggested Reading: Semester-V

Ambawit R.S. (1966): Conservation Ecology, Abs Proc School on Plant Ecol (Full paper in press Oxford and IBH Calcutta).

Ambawit R.S. (1968): Freshwater ecosystem-Manual of Ecology 123-137 (See Misra KC et al., 1968)

Ambawit R.S. (1995): A text book of plant ecology Student and co. Varanasi-5 and Stoughton, London.

Anderson J. M.: Ecology for environmental sciences: biosphere ecosystems and man

Asano, R.D. and Sarin M.N. (1968): Crop Physiology in India IARI Publ.

Dash M. C. 1993 Fundamentals of Ecology WB Saunders and co. Philadelphia USA.

DeAngelis D. L. Energy flow, nutrient cycling and ecosystem resilience. Ecology 56, 23843.

Dwivedi Rama Shankar (1968): The decomposer system manual of ecology See Misra K. C. et al. 1970)

Evans, L.T. (1972): Crop physiology

Fitter, A. H. and Hay, R. K. M. S. (1987): Environmental Plant Physiology.

Grey-Smith P. 1983, Quantitative plant ecology, Univ California Press, California.

Gupta, U. S. (1972): Crop Physiology

Hale, M.C. and Oreutt, D.M. (1987): The Physiology of Plants Under Stress. ICAR handbook of Fertilizers

Hopkins, W. G. (1995): Introduction to plant physiology. John Wiley & Sons New York, USA

Hutchinson G. E. (1978): An introduction to population ecology. Yale Univ. Press.

- Kochhar P. L. (1986): Plant Ecology Ratanprakashan, Mandi, Agra.
- Krebs G. J. (1972): Ecology Harper and Row Publ, New York.
- Kumar H. D. (1994): Modern concepts of ecology. Vikas publishing house Pvt Ltd, New Delhi.
- Moore, T.C. (1989): Biochemistry and Physiology of Plant Hormones (2<sup>nd</sup>ed). Springer- Verlag, New York, USA.
- Nobel, P.S.(1999): Physicochemical and Environmental Plant Physiology (2nd ed). Academic Press, Diego, USA.
- Odum E. P. (1983): Basic Ecology, Saunders Publ Philadelphia.
- Paleg, L.G. and Aspinal, D.(1982): The Physiology and Biochemistry of Drought resistant in Plants.
- Pessarkli, M. (2004): Handbook of Plant and Crop Physiology, Marcel Dekkar Inc. NY.
- Salisbury, F.B. and Ross, C.W.(1992): Plant Physiology (4<sup>th</sup>ed). Wadsworth Publishing Co.,California, USA.
- Shukla R.S. and Chandel (2005): A Text Book of Plant Ecology. S. Chand and Co. Ltd., New Delhi.
- Silverton J. W. (1982): Introduction to plant population ecology, Longman.
- Sinha S.K., Sane P.V., Bhargava S.C. and Agarwal P.K. (1990): Proceeding of International Congress of Plant Physiology Vol. I & II.
- Stanley, R.G., Search, R.W. (1971): Pollen protein diffusates. In Heslop-Harrison-J. (Ed.) Pollen: development and physiology. Butterworths, London, pp 174-176.
- Taiz, L. and Zeiger, E. (1998): Plant Physiology. Sinauer Associates, Inc., Publishers, Massachus, USA.

**B. Sc. SEMESTER-VI**  
**PAPER-I**  
**(Biochemistry, Biotechnology and Herbal Technology)**



#### **Unit-I: Biochemistry: Lipids and Enzymology:**

1. **Lipids:** Definition, Properties and role of fatty acids, oils and waxes; Degradation of fats ( $\beta$ -Oxidation and Glyoxylic acid cycle)
2. **Enzymology:** Enzymes: Definition, Nomenclature and classification of enzymes; Characteristics (Properties) of enzymes
3. **Basic concepts of enzymology:** Holoenzyme, Apoenzyme, Prosthetic group, Co-enzyme, Co-factor, Active site, Isoenzyme
4. **Mechanism of enzyme action:** Enzyme-substrate complex theory, Lock and key model, Induced fit model
5. **Enzyme inhibitors:** Definition, Competitive and noncompetitive.

#### **Unit-II: Plant tissue culture:**

1. Brief account of: Tissue culture, Totipotency, Explant, Aseptic cultures, Micropropagation, Differentiation and Morphogenesis.
2. Methods of sterilization: Autoclaving, Dry heat and Chemical sterilization
3. Culture Media: MS media (Preparation and nutrient contents)
4. Tissue Cultures: Callus and organ culture (Shoot tip and Anther culture) and its applications
5. Protoplast culture and its applications.
6. Applications of tissue culture

#### **Unit-III: Genetic engineering:**

1. **Genetic engineering:** Definition, Tools in genetic engineering: Enzymes (Restriction enzymes, Ligases, DNA-polymerases), Host.
2. **Cloning vectors:** General Characteristics, method of Isolation of vector, Plasmid as a vector ( $pBR^{322}$ ).
3. **DNA Library:** Definition, Construction of Genomic library and C-DNA library and their significance
4. **Agrobacterium mediated gene transfer:** Structure of Ti-plasmid, mechanism of transfer.
5. Role of biotechnology in crop improvement

#### **Unit-IV: Skill Development: Herbal technology:**

1. **Herbal technology:** History and importance of herbal technology
2. **Basic concepts:** Drugs, cosmetics, Natural dyes, Difference between organized and unorganized drugs
3. **Methods:** Cultivation, harvesting, processing, storage and utilization of *Withania somnifera*, *Aloe vera*, *Ocimum sanctum*
4. **Dye yielding herbal plants:** *Lawsonia alba* (Henna), *Rivinia humilis*, *Indigofera tinctoria*
5. **Herbs used in cosmetics:** *Cocos nucifera* (Coconut oil), *Curcuma longa* (Turmeric), *Cucumis sativa* (Cucumber), *Lavandula* spp. (Lavender oil!), *Rosa* spp. (Rose), *Hibiscus rosa-sinensis* (China rose) (With reference to parts used, chemical constituents, uses and Marketed products)

### **List of Practical: Paper-I:**

1. To study the effect of temperature on the activity of enzyme Amylase in the suitable plant material.
2. To study the effect of temperature on the activity of enzyme Catalase/Peroxidase in the suitable plant material.
3. To perform micro-chemical test for oils/lipids.
4. To study principle and working of autoclave, oven, pH meter, laminar air flow.
5. To study the structure of plasmid vector and Ti-plasmid from the photograph/diagrams.
6. Extraction and preparation of *Aloe vera* juice from mature leaves of plant.
7. To study the method of preparation of Rose-water.
8. To study the method of preparation of oil from *Hibiscus* flower.
9. To study the method of extraction of natural dye from suitable dye yielding plant.

**B. Sc. SEMESTER-VI  
PAPER-II  
(Phytogeography, Utilization of Plants, Techniques and Pharmacognosy)**

**Unit-I: Phytogeography, Pollution, Natural resources:**

1. **Phytogeography:** Principles of phytogeography, Distribution (Wides, Endemics, Discontinuous species); Climatic regions of India, Phytogeographic regions of India (Chaterjee, 1962) (Name, Distribution area, Typical Vegetation)
2. **Environmental pollution:** Causes and Control measures of Agriculture pollution and Noise pollution
3. **Natural Resources:** Renewable and Non-renewable resources, factors for their depletion
4. **Conservation strategies:** Conservation of forest and water resources.

**Unit-II: Utilization of plants and Ethnobotany:**

1. **Utilization of plants:** Morphology, Utilization and important chemical constituents of the plants: Food (Wheat), Oil (Groundnut), Fiber (Cotton), Spices (Clove), Beverages (Coffee), Medicinal (*Adhatoda vassica*), and Rubber.
2. **Ethnobotany:** Definition, Brief history, branches and importance of Ethnobotany,
3. **Plants of ethnobotanical importance:** Vegetable, Fruits, Seeds, Medicinal and Narcotics (Two plants each with reference to family, parts used and tribal areas)

**Unit-III: Microscopy and Techniques:**

1. **Microscopy:** Principle, types and application of microscope (Light, Fluorescent, SEM and TEM).
2. **Techniques:** Principle, types and application of Centrifugation, Electrophoresis (SDS-PAGE and Agarose), Spectroscopy (UV-Vis), Chromatography (Paper and Thin Layer Chromatography (TLC))

**Unit-IV: Skill development: Pharmacognosy:**

1. **Pharmacognosy:** Definition and scope, Drug adulteration: Types; methods of drug evaluation: Biological testing of herbal drugs, phytochemical screening tests for secondary metabolites (Alkaloids and Flavonoids)
2. **Pharmacological plants:** Biological source, staining, diagnosis, micro-chemical tests, chemical constituents, preparation and uses of drug extracted from the plants: *Datura* leaf, *Vinca rosea*, *Plantago ovata* (Isapgol) seeds, *Linum usitatissimum* (Linseed) seeds, *Elettaria cardamomum* fruit, *Coriandrum sativum* fruit, *Eugenia caryophyllus* (Clove) flower-bud, *Rauwolfia serpentina* root, *Zingiber officinale* (Ginger) rhizome.

**Note:** 1. Developmental stages are not expected,  
2. Short excursion tour is expected

### List of Practical: Paper-II:

1. To find out the level of noise pollution of different nearby areas with the help of decimeter and compare it with tolerance limit.
2. To study the morphology, utilization and important chemical constituents of plants mentioned in theory (Utilization of plants).
3. To study ethnobotanical importance of plants under the different categories mentioned in theory.
4. To study the principle and working of microscope, spectrophotometer, centrifuge and gel-electrophoresis apparatus.
5. To study different adulterants used with reference to drug adulteration.
6. To study biological source, chemical constituents, preparation and uses of drugs obtained from plants mentioned in theory.

### BOTANY PRACTICAL EXAMINATION SEMESTER-VI

TIME: FIVE HOURS

MAX. MARKS: 30

- Q. 1: To perform the given **biochemical experiment (A)** and report the findings. 03 M
- Q. 2: To perform the given **micro-chemical test (B)** and report the findings. 03 M
- Q. 3: To extract and prepare the **herbal product (C)** from the given plant material. 04 M
- Q. 4: Write about the **morphology and utilization** of the given plant material (D). 03 M
- Q. 5: To prepare **crude drug extract** from the given plant material (E) and mention its use. 04 M
- Q. 6: Spotting: 05 M
- (F) Biotechnology (Instrument) (G) Genetic engineering (Tool) - (H) Herbal plant
- (I) Ethnobotany (J) Plant used in Pharmacognosy
- Q. 7: Viva-voce. 03 M
- Q. 8: Practical Record and Excursion report. 05 M

### Suggested Readings: Semester-VI

- Abdelhamid Elaissari, (2008): Colloidal Nanoparticles in Biotechnology, John Wiley Apps et al., (1992). Biochemistry, ELBS.
- Ambasht R.S. (1966): Conservation Ecology, Abs Proc School on Plant Ecol (Full paper in press Oxford and IBH Calcutta).
- Ambasht R.S. (1968): Freshwater ecosystem-Manual of Ecology 123-137 (See Misra K. C. et al, 1968)
- Ambasht R.S. (1995): A text book of plant ecology Student and co. Varanasi-5 and Stoughton, London.
- Anderson J. M. Ecology for environmental sciences: biosphere ecosystems and man
- Bhojwani, S.S. (1990): Plant Tissue Culture: Applications and Limitations. Elsevier Science Publishers, New York, U. S. A.
- Buchanan, B. B., Gruisse, W. and Jones, R.L. (1989): Biochemistry and Molecular Biology of plants. American Society of Plant Physiologists, Maryland, USA.
- Buchanan, B.B., Gruisse, W. and Jones, R. L. (2000): Biochemistry and Molecular Biology of Plants. American Soc. Of Plant Physiologists, Maryland, USA.
- Callow, J. A., Ford-Lloyd, B. V. and Newbury, H. J. (1997): Biotechnology and Plant Genetic Resources: Conservation and Use, CAB International, Oxon UK

- Dash M. C. (1993): Fundamentals of Ecology WB Saunders and co. Philadelphia USA.
- Daniel, M., Bhattacharya, S. D. and Arya, A. and Raole, V. M. (2006), Natural Dyes: Scope and Challenges: Scientific Publishers, Jodhpur (India)
- Deangelis D. L. Energy flow, nutrient cycling and ecosystem resilience. *Ecology* 56, 23843.
- Dey, P. M. And Harborne, J. B. (2000): Plant Biochemistry, Harcourt Asia PTE Ltd. A Harcourt Publishers International Company, 583 Orchard Road 09-01 Forum Singapore
- Dey, P.M. and Harborne, J. B. (eds) (1997): Plant Biochemistry. Harcourt Asia Pvt. Ltd/ Academic Press | Printed in India 2000|
- Dwivedi Rama Shankar (1968): The decomposer system manual of ecology See Misra K. C. et al, 1970)
- Glazer, A. N. and Nikaido, H. (1995): Microbial Biotechnology. W. H. Freeman & Company, New York, USA.
- Greig Smith P. (1983): Quantitative plant ecology, Univ. California Press, California.
- Hans-Walter Heldt (2004): Plant Biochemistry. Elsevier Academic Press, 200 Wheeler Road, Hooykass P.J.J., Hall, M. A. and Libbenga, K.R.(eds). (1999): Biochemistry and Molecular Biology of plant Horm. Elsevier, Amsterdam, The Netherlands.
- Hutchinson G. E. (1978): An introduction to population ecology. Yale Univ. Press.
- Jain J.L. et al., (2008): Fundamentals of Biochemistry, Chand ,New Delhi
- Jain, S. K. (2003), Medicinal Plants, National Book Trust, New Delhi (India)
- Khandelwal, K. R. (2000), Practical Pharmacognosy: Techniques and Experiments, Nirali Prakashan, Pune
- Kochhar P. L. (1986): Plant Ecology, Ratanprakashan, Mandi, Agra.
- Kokane, C. K., Gokhale, A. S. and Gokhale, S. B. (2006), Cultivation of Medicinal Plants, 3<sup>rd</sup> ed., Nirali Prakashan, Pune, M. S.
- Krebs G. J. (1972) Ecology Harper and Row Publ, New York.
- Kumar H. D. (1994) Modern concepts of ecology. Vikas publishing house pvt ltd, New Delhi.
- Lehninger, (2005): Principles of biochemistry-Nelson, Cox, 4th Edn. W.H.Freeman and Co.,
- Mascarenhas, J.P. (1975): The biochemistry of angiosperm pollen development, *Bot. Rev* 41(3)
- Moore, T.C. (1989): Biochemistry and Physiology of Plant Hormones (2<sup>nd</sup>ed). Springer- Verlag, New York, USA.
- Mukherjee, P. K. and Houghton, P. J. (2009), Evaluation of Herbal Medicinal Products, Published by Pharmaceutical Press, London
- Odum E. P. (1983): Basic Ecology, Saunders Publ. Philadelphia.
- Old, R. W. and Primrose S.B. Principles of Gene Manipulation. Blackwell scientific publications, Oxford U. K. [new edition could be there]
- Paleg, L.G. and Aspinall, D. (1982): The Physiology and Biochemistry of Drought resistant in Plants,
- Raghavan, V. (1986): Embryogenesis in Angiosperms: A Developmental and Experimental Study, Cambridge University Press, Cambridge.
- Rastogi, S.C. (2003): Outlines of Biochemistry, CBS Publishers & Distributors, New Delhi
- Shantharam, S. and Montgomery, J. F. (1999): Biotechnology, Biosafety, and Biodiversity, Oxford & IBH Publication Co., Pvt., Ltd., New Delhi
- Sharma, O. P. (1996): Hill's Economic Botany (Adapted by O.P. Sharma) Tata McGraw-Hill co. Ltd, New Delhi
- Shivanna, K.R. and Sawhney, V.K. (eds) (1997): Pollen Biotechnology for Crop Production and Improvement, Cambridge University Press, Cambridge.
- Shrivastava, A. K. (2006), Medicinal Plants, A P H Publishing Corporation, New Delhi
- Shukla R.S. and Chandel (2005): A Text Book of Plant Ecology. S. Chand and Co. Ltd., New Delhi.
- Silverton J. W. (1982): Introduction to plant population ecology, Longman.
- Simpson, B. B. and Corner - Ogorzaly, M. (1986): Economic Botany- Plants in our World, McGraw - Hill Book Company, New York.

- Singh B. D. (2013): Plant Biotechnology: New Horizon. Kalyani Publ., New Delhi.
- Stanley, R.G., Search, R.W. (1971): Pollen protein diffusates. In Heslop-Harrison-J. (Ed.) Pollen: development and physiology. Butterworths, London, pp 174-176.
- Wilson Keith and Walker John (2005): Principles and techniques of biochemistry and molecular biology, 6th Ed. Cambridge University Press, New York.
- Zuley G.L., (1998): Biochemistry, W. M.C.Brown Publishers USA

## **RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

### **Changes in SYLLABUS for consideration of the Faculty and Academic Council**

**Recommended by Board of Studies in ZOOLOGY Faculty of SCIENCE and TECHNOLOGY**

#### **B. Sc. ZOOLOGY SEM-I**

<b>Subject and SEMESTER</b>	<b>Paper No.</b>	<b>Matter to be DELETED</b>	<b>Matter to SUSTITUTED</b>
<b>B.Sc ZOOLOGY SEM-I</b>	<b>Paper – I : Life and Diversity of Animals- Nonchordates (Protozoa to Annelida)</b>	2.4 Obelia: structure and life cycle, corals and coral reef formation.  4.3 Trochophore larva and its significance	2.4 Obelia: structure and life cycle, Polymorphism in hydrozoa.  4.3 Copulation, fertilization and cocoon formation in leech.
	<b>Paper -II : Environment Biology</b>	3.3 Wildlife conservation acts (1972 and 1984), Introductory study of national parks and sanctuaries- Tadoba, Kanha, Bharatpur and Nagzira.  3.4 Hot spots of biodiversity in India.	3.3 Wildlife conservation act 1972, Zoological survey of India: formation and role in animal conservation.  3.4 Hot spots of biodiversity in India. Study of national parks and sanctuaries- Tadoba, Melghat and Nagzira.  4.4 Causes and effects of space pollution

	<b>Practical</b>	4. Mounting: Nereis parapodia, Jaws of Leech, Nephridia of Leech	<p>Section A</p> <ol style="list-style-type: none"> <li>1. Study of museum specimens by specimen /Charts /Model (Classification of animals up to orders).</li> <li>2. Study of permanent slides: by specimen/Charts.</li> <li>3. Dissection: Virtual dissection by using computer software/ programme.</li> <li>4. Mounting: Zooplanktons, Spicules and gemmules of sponge.</li> </ol>
--	------------------	--	--

## B. Sc. ZOOLOGY SEM-II

<b>Subject and SEMESTER</b>	<b>Paper No.</b>	<b>Matter to be DELETED</b>	<b>Matter to SUSTITUTED</b>
	<b>Paper - III : Life and Diversity of Animals- Nonchordates (Arthropoda to Hemichordata)</b>	<p>1.2 Cockroach: Mouth parts, digestive system and reproductive system.</p> <p>1.4. Study of crustacean larvae: Nauplius, Zoea and Megalopa; Social behavior in honey bees.</p> <p>2.3 Pearl formation in Mollusca</p> <p>3.3 Water vascular system and locomotion in starfish</p>	<p>1.2 Cockroach: Mouth parts, digestive system and internal male and female reproductive systems.</p> <p>1.4. Study of crustacean larvae : Nauplius, Zoea and Megalopa;</p> <p>2.2. Pila: Morphology and digestive system</p> <p>2.3. Pila: Respiratory and reproductive system</p> <p>3.3 Water vascular system in starfish</p>

<b>B.SC.</b> <b>ZOOLOGY</b> <b>SEM-II</b>	<b>Paper - IV : Cell Biology</b>	<p>3.1 Nucleus: Ultrastructure of nuclear membrane</p> <p>4.2 Somatic cell division: Cell cycle and Mitosis</p>	<p>1.2 functions- osmosis, simple diffusion, facilitated diffusion, active transport (Na K pump), endo and exocytosis.</p> <p>3.1 Nucleus: Ultrastructure of nuclear membrane- Nuclear pore complex. functions of nuclear membrane.</p> <p>4.2 Somatic cell division: Cell cycle phases and check points. Mitosis</p>
	<b>Practical</b>	<p>4. Demonstration of meiosis in Tradescantia bud/ Grasshopper testis by squash method</p> <p>5. Demonstration of salivary gland chromosome in Chironomous larva.</p>	<p>Section A</p> <p>1. Study of museum specimens by specimen /Charts /Model (Classification of animals up to orders).</p> <p>2. Study of permanent slides: by specimen/Charts.</p> <p>3. Dissection: Virtual dissection by using computer software/ programme.</p> <p>Section B: Cell Biology</p> <p>4. Study of meiosis using slides/ charts/model</p> <p>5. Virtual study of salivary gland chromosome in Chironomous larva using computer software/programme/pictures.</p>

## B. Sc. ZOOLOGY SEM-III

<b>Subject and SEMESTER</b>	<b>Paper No.</b>	<b>Matter to be DELETED</b>	<b>Matter to SUSTITUTED</b>
<b>B.Sc. ZOOLOGY SEM-III</b>	<b>Paper - V : Life and Diversity of Animals- Chordates</b>	1.3 Amphioxus: structure, digestive system, circulatory system, sense organs and Protonephridia  4.1 Frog embryology- Cleavage, Blastulation and gastrulation	1.3 Amphioxus: structure, digestive system, circulatory system, sense organs (Ocelli, Infundibular organ and Kollicker's pit), Protonephridia  4.1 Frog embryology- Cleavage, Blastulation and fate map.  4.2 Gastrulation: Morphogenetic movements in gastrula of frog.
	<b>Paper - VI : Genetics</b>	1.1 Mendelian Principles- Dominant recessive relationships, Mendelian laws  1.2 Interaction of genes- Epistasis - dominant and recessive, codominance, incomplete dominance  1.3 Quantitative genetics – Polygenic traits, inbreeding and outbreeding, hybrid vigor  1.4 Extracellular genome – Presence and functions of mitochondrial DNA, plasmids	1.1 Brief introduction to gene, Mendelism and Laws of heredity.  1.2 Interaction of genes- Epistasis: dominant epistasis (12:3:1) e.g. coat colour in dog, and recessive epistasis (9:3:4) e.g. coat colour in mice. Codominance e.g. Roan cattle, Incomplete dominance e.g. Andalusian fowl and <i>Mirabilis jalapa</i> .  1.3 Polygenic inheritance: e.g. Skin colour in human, eye colour in human, sickle-cell anaemia. Inbreeding and outbreeding, hybrid vigor.  1.4 Extracellular genome : Mitochondrial DNA-cytoplasmic and petite character inheritance, plasmids-Types and uses.

		<p>3.3 Gene mutations- Spontaneous and induced mutations, mutagenic agents</p> <p>4.2 Population genetics: Basic concepts in population genetics, Hardy Weinberg equilibrium and its significance</p>	<p>3.3 Gene mutations- Spontaneous and induced mutations. Types of point mutation- deletion, insertion, substitution, transversion, transition, frameshift mutation. Mutagenic agents, base analogs, alkylating agents.</p> <p>4.2 Basic concepts in population genetics: populations, gene pool, gene frequency, genetic drift. Hardy Weinberg equilibrium and its significance</p>
<b>Practical</b>			<p>Section A</p> <p>1. Identification, Classification, distinguishing characters and adaptive features of: study by using specimen/Charts/model.</p> <p>2. Dissection: Virtual dissection by using computer software/programme.</p> <p>3 &amp; 4. Study of permanent slides: by specimen/Charts.</p>

## **B. Sc. ZOOLOGY SEM-IV**

<b>Subject and SEMESTER</b>	<b>Paper No.</b>	<b>Matter to be DELETED</b>	<b>Matter to SUSTITUTED</b>
	<b>Paper - VII : Life and Diversity of Animals-Chordates</b>	2.4 Races in Man (Caucasoid, Negroid, Mongoloid and Australoid)	2.4 Origin and evolution of man-Ardipithecus, Australopithecus and Ramapithecus.
<b>B.Sc. ZOOLOGY SEM-IV</b>	<b>Paper - VIII: Molecular Biology and Immunology</b>	<p>1.1 DNA as a genetic material</p> <p>1.2 RNA: structure of RNA, types of RNA, RNA as a genetic material</p> <p>4.2 Complement system: Basic concepts of complement cascades, classical, alternative and MBL pathways, Implications of complement system in immune defence</p> <p>4.4 Autoimmunity and immunodeficiencies: Autoimmune diseases and their treatment, AIDS and other immunodeficiencies</p>	<p>1.2 RNA: structure of RNA, types of RNA, Non-genomic and genomic RNA</p> <p>4.2 Complement system: Basic concepts of complement cascades, classical, alternative and MBL pathways, MAC formation</p> <p>4.4 Autoimmune diseases and their treatment- Grave's disease, Rheumatoid, Arthritis, Insulin-dependent diabetes. Other immunodeficiencies (Wiskott-Aldrich Syndrome, Interferon-Gamma-Receptor Defect)</p>
		1. Staining of DNA and RNA in blood smear of fish/human by methyl green pyronin technique.	1. Identification, Classification, distinguishing characters and adaptive features of: study by using

	<b>Practical</b>		<p>specimen/Charts/model.</p> <p>2. Dissection: Virtual dissection by using computer software/ programme.</p> <p>3 &amp; 4. Study of permanent slides: by specimen/Charts.</p> <p>Section B</p> <p>Molecular Biology</p> <p>3. Quantitative estimation of DNA using colourimeter (Diphenylamine reagent)</p>
--	------------------	--	--

## **B. Sc. ZOOLOGY SEM-V**

<b>Subject and SEMESTER</b>	<b>Paper No.</b>	<b>Matter to be DELETED</b>	<b>Matter to SUSTITUTED</b>
B.Sc. <b>ZOOLOGY</b> <b>SEM-V</b>	<b>Paper - IX: General Mammalian Physiology I</b>	<p>1.1 Enzymes – Distribution and chemical nature of enzymes</p> <p>1.2 General properties of enzymes</p> <p>1.3 Classification of enzymes</p> <p>1.4 Factors affecting enzyme activity</p> <p>3.4 Respiratory disorders and effects of smoking</p> <p>4.3 Cardiac cycle</p>	<p>1.1 Nomenclature and Classification of enzymes: IUPAC system,</p> <p>1.2 Basics of enzymology: Definition, examples of Holoenzyme, apoenzyme, Co-factors. Definition, examples of metal ions, coenzymes, prosthetic group</p> <p>1.3 Enzyme Kinetics: concept of enzyme catalysis-active site, activation energy and Arrhenius concepts, specificity of enzymes-geometric and stereo specificity with example, lock and key hypothesis, induced fit hypothesis, Derivation of Michaelis-Menten equation, Concept of Km and Vmax. Lineweaver-Burk plot; Multi-substrate reactions</p> <p>1.4 Factors affecting enzyme activity: (Temperature, pH, Inhibitors, Enzyme concentration, Substrate concentration)</p> <p>3.4 Respiratory disorders: COPD, Asthma, Bronchitis, SARS with reference to coronavirus infection. Effects of smoking</p> <p>4.3 Structure of heart and Cardiac cycle</p>
	<b>Paper - X : Applied Zoology I (Aquaculture and Economic</b>	3.2 Biological control – Biological agents – predators and parasites; merits and demerits	3.2 Biological control – Biological agents – predators, parasites and pathogens with examples; merits and

	<b>Entomology)</b>	4.1 Sericulture- Types of Silkworm. Life cycle and rearing of mulberry silkworm, <i>Bombyx mori</i>	demerits  4.1 Sericulture- Types of Silkworm. Life cycle and rearing of mulberry silkworm, <i>Bombyx mori</i> , Important diseases of mulberry silkworm.
	<b>Practical</b>	Section B: Mounting- Scales of fishes ( already included in Sem-III)	Section A  8. Recording of blood pressure using sphygmomanometer  Section B Economic Entomology  Study of beekeeping equipments-Wooden frame hive/Study of mulberry sericulture equipments.

## **B. Sc. ZOOLOGY SEM-VI**

<b>Subject and SEMESTER</b>	<b>Paper No.</b>	<b>Matter to be DELETED</b>	<b>Matter to SUSTITUTED</b>
<b>B.Sc. ZOOLOGY SEM-VI</b>	<b>Paper - XI : General Mammalian Physiology II</b>	4.1 Oestrous and menstrual cycle	4.1 Oestrous and menstrual cycle: phases and hormonal regulation
	<b>Paper - XII : Applied Zoology II (Biotechniques, Microtechnique, Biotechnology, Bioinformatics and Biostatistics)</b>		3.1 Basic concepts in recombinant DNA technology.  3.2 Isolation of gene-Shotgun cloning, DNA manipulation enzymes: nucleases, ligases, polymerases  4.4 Probability-Addition and multiplication rules and their applications.
	<b>Practical</b>		

Chairman

# ***PHYSICS***

***(B. Sc. Part- I)***

**Semester I**

**(Paper-101, 102, 103)**

**Semester II**

**(Paper-201, 202, 203)**

***(2013-2014)***

**B. Sc. First Year (Semester I)**  
**Course - PHYSICS - Paper - I (101)**  
**(Properties of Matter and Mechanics)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Elasticity-** Introduction, Hooke's law, Elastic constants ( $Y$ ,  $K$ ,  $\eta$ ) and relation between them, Poisson's ratio, Elastic limit, Work done in stretching a wire, Bending of beam, Bending moment, External and internal bending moment, Cantilever supported at one end and at both end, Torsional pendulum, and Maxwell needle.

**Unit II:**

**Viscosity-** Streamline and turbulent flow, Coefficient of viscosity, Equation of continuity, Euler's equation, Bernoulli's theorem and its applications (Lift of an Airplane, Atomizer) , Poiseuilli's formula, Reynolds number, Terminal velocity, Stokes law by the method of dimension, Variation of viscosity with temperature.

**Unit III:**

**Surface tension-** Introduction, Angle of contact and wetting, Surface energy, Surface tension by Jaeger's, Quincke's and Capillary rise methods.

**Mechanics-** Newton's law of motion, motion in a plane, components of velocity and acceleration in different coordinate system, Centripetal acceleration, Coriolis force and its applications.

**Unit IV:**

**Mechanics-** System of particles, Center of mass, Equation of motion, Conservation of linear and angular momentum, Conservation of energy, Single stage and multistage rockets, Elastic and inelastic collisions, Moments of inertia and their products, Moment of inertia of cylinder and sphere, Principal moments and axes.

**References & Text books-**

1. Applied Fluid Mechanics, by- Mott Robert, Pearson Benjamin Cummir, VI Edition, Pearson Education/Prentice Hall International, New Delhi
2. Properties of Matter, by- D. S. Mathur, Shamlal Chritable Trust New Delhi
3. Properties of matter, by- Brijlal
4. Physics for Degree Students B.Sc.-Part-I, by- C. L. Arora, Dr. P. S. Hemne, S Chand & Company.
5. General Properties of matter, by- J. C. Upadhyay, Ram Prasad & Sons
6. Mechanics, by- D. S. Mathur, S Chand.
7. Mechanics, by-B. M. Roy, Das Ganu Publications.

8. Mechanics & Electrodynamics, by- Brijlal & Subramaniam.
9. A text book of properties of Matter, by- N. S. Khare& S. Kumar.
10. Mechanics & Properties of Matter, by-J. C. Upadhyaya.

**B. Sc. First Year (Semester I)**

**Course - PHYSICS - Paper-II (102)**

**(Electrostatics, Time varying fields & Electric Currents)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Electrostatics-** Coulombs law in vacuum in vector form, Force between two charges, Electric field intensity, Electric potential, Electric field intensity due to a point charge, Electric dipole, Electric dipole moment, Electric field intensity due to an electric dipole, Electric field as a negative gradient of potential, Conservative nature of the electric field.

**Unit II:**

**Dielectric-** Introduction, definition of polar and non polar molecules, Polarization of charges in a dielectric, Clausius - Mossotti equation, Three electric vectors D, E and P and relation between them, Concept of capacitance, Parallel plate capacitor without and with dielectric, application of Gauss's law to parallel plate capacitor.

**Unit III:**

**Time varying fields**-Electromagnetic induction, Faradays laws in differential and integral form, Lenz's law, self and mutual induction, Transformer, Construction, working and its parameters, Energy losses.**Electric Currents-** Current density, Equation of continuity, Kirchhoff's law, Rise and decay of current in LR and CR circuits, Decay of charge in LCR circuits.

**Unit IV:**

**Electric Currents-** Application of complex number in solving an a. c. circuit, j- operator method, A.C. applied to pure resistive, pure inductive and pure capacitive circuit, application of j- operator in LR, CR and LCR circuit, Resonance, Sharpness of resonance, Series resonance circuit (Calculate I, Z,  $\Phi$  and  $f_r$ ),Q factor, Power in an a. c. circuit, Power factor.

**References and Text books -**

1. Electricity and Magnetism, by- Brijlal , Subramanyam.
2. Fundamental of Magnetism and Electricity, by- D. N. Vasudiva.
3. Electricity and Magnetism with Electronics, by- K. K. Tiwari.
4. Electricity and Magnetism, by K.K. Tiwari.
5. Elements of Electronics, by- M. K. Bagde, S. P. Singh, K Singh S - Chand.
6. Solid State Physics and Electronics, by- R. K. Puri, and V. K. Babbar.
7. Solid state Electronic Devices II Edition, by-B. G. Strretman.
8. Introduction to Electrodynamics, by- D. J. Griffiths.

9. Electromagnetic fields, by- T. V. S. Arun Murthy.
10. Electronics Fundamental and Applications II nd Edition, by-J. D. Ryder.

**B. Sc. First Year (Semester I)**  
**Course - Physics Practical (103)**

1. A student will have to perform at least **ten** experiments per semester and **two** experiments (from different fields) at the time of university practical examination in 6 hours.
2. The distribution of practical/laboratory work of 30 marks is-
 

Two experiments (9 Marks each)	- 18 Marks
Record book	- 06 Marks
Viva Voce	- 06 Marks
<hr style="border-top: 1px dashed black;"/>	
Total	30 Marks

**List of the experiments-**

1. Range and least count of Instruments, measurements using various instruments and error analysis (vernier caliper, screw gauge, traveling microscope, spectrometer etc.)
2. Young's modulus by cantilever.
3. Young's modulus by bending of beam.
4. Young's modulus by vibrational method.
5. Modulus of rigidity by Torsional pendulum.
6. Modulus of rigidity by Maxwell's needle.
7. Determination of  $\eta$  by statical method.
8. To determine Coefficient of Viscosity of water by Poiseulle's method.
9. Surface tension of a liquid by Quincke's method.
10. Surface tension of a liquid by Jagers method.
11. Surface tension of a liquid by Capillary rise method.
12. To determine the moment of inertia of a body using torsion pendulum.
13. To determine the moment of inertia of a fly-wheel.
14. Measurement of Inductance by phasor diagram method.
15. Measurement of Capacitance by phasor diagram method.
16. To study charging and discharging of a condenser through a resistor R.
17. To study growth/decay of current in LR circuit.
18. Study of growth of current in CR Circuit using microammeter.
19. Frequency of A.C. Mains by sonometer.
20. Study of frequency response of series LCR circuit and determination of Q- factor.
21. Study of Transformer (parameters determination).
22. Verification of Kirchhoff's law, using electrical network.
23. To calculate low resistance by potentiometer.

24. Calibration of an ammeter by potentiometer.  
 25. Determination of dielectric constant of a solid.

**B. Sc. First Year (Semester II)**  
**Course – PHYSICS - Paper-I (2011)**  
**(Oscillations, Kinetic theory of gases and Thermodynamics)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Free oscillations-** Introduction to linear and angular S.H.M., Differential equation of S.H.M. and its solution, Composition of two perpendicular linear S.H.M.s for 1:1 and 1:2 (analytical method), Lissajous's figure.

**Damped oscillations-** Differential equation of damped harmonic oscillator and its solution, Energy equation of damped oscillations, Power dissipation and quality factor.

**Unit II:**

**Forced oscillations-** Forced oscillation with one degree of freedom, Differential equation of forced oscillation and its solution, Resonance (Amplitude), Sharpness of resonance, Power dissipation, Quality factor and bandwidth.

**Kinetic theory of gases** -Assumptions, Boyle's law, Equipartition of energy, Molecular collision, Mean free path and collision cross section, Estimate of molecular diameter and mean free path.

**Unit III:**

**Transport phenomenon in gases-** Transport of mass, momentum, energy and their relationship, dependence on temperature and pressure, Van der wall's gas (Real gas, Equation of state), Critical constants. **Thermodynamic** -Thermodynamic variables, Thermal equilibrium and temperature, Zeroth law of thermodynamics, Thermodynamic processes (Reversible and Irreversible), Indicator diagram, First law of thermodynamics, Carnot's cycle and it's efficiency, Carnot's theorem.

**Unit IV:**

**Thermodynamic**-Entropy, Second law of thermodynamic, Thermodynamic scales of temperature, Third law of thermodynamics, Maxwell general relationship [ $\delta(T,S)/ \delta(x, y) = \delta(P,V)/ \delta(x, y)$ ] and it's applications, Joules coefficient, Porous plug experiment, Liquefaction of gases- Boyle's temperature and inversion temperature, Liquefaction of Helium, Air conditioning (Concept only).

**References and Text books -**

1. Waves and Oscillations, by-Stephenson.
2. A Text Book of Oscillations, waves and Acoustic, by- Dr. M. Ghosh, Dr. D. Bhattacharya.
3. Oscillation, waves and sound, by- Sharma and Saxena.
4. Waves and oscillation, by- N. Subrahmanuam and Brijlal.
5. The Physics of waves and oscillation, by- N. K. Bajaj, Tata McGraw-Hill, publishing co. ltd.
6. Heat, Thermodynamics and Statistical Physics, by- Pragati Prakashan , Singhal, Agrawal.
7. Heat and Thermodynamics, by- Brijlal, Subramanyam.
8. A Text Book of Heat, by- J. B. Rajam.

9. Heat, thermodynamics and statistical physics, by- Brijjal, Subramayam and Hemne.
10. Heat and thermodynamics, by- C. L. Arora.
11. Treatise on heat, by- Shah, Srivastava.

**B. Sc. First Year (Semester II)**  
**Course-PHYSICS - Paper-II (202)**  
**(Gravitation, Astrophysics, Magnetism and Magneto statics)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Gravitation-** Kepler's laws of Planetary motion (statement only), Newton's law of gravitation, Relation between G and g, Gravitational field, Gravitational potential, Gauss's theorem, Gravitational potential and intensity due to uniform solid sphere at a point inside and outside the sphere, Gravitational self energy of a galaxy.

**Unit II:**

**Astrophysics-** The constituents of universe (Solar system, Stars, Galaxies), Introductory study of solar systems, To measure size of a planet ( $d=D.\alpha$ ), To measure distance of a planet by parallax method ( $D=b/\theta$ ), Mass of the sun and the planets(  $M=4\pi^2r^3/GT^2$ ), Structure of sun, Solar interior, surface temperature of sun ( $T=[R/r]^{1/2} \cdot [S/\sigma]^{1/4}$ ), Solar luminosity, Stellar spectra, The Milky way (shape, size, clusters), Cosmological theories of the universe (Concept only).

**Unit III:**

**Magnetism-** Introduction, Magnetic materials, Langevin's theory of diamagnetism, its application as superconductor, Critical magnetic field and Meissner effect, Langevin's theory of paramagnetism, Ferromagnetism, Ferromagnetic domain, Curie temperature, Ferrimagnetisms, Ferrites and its applications, Antiferromagnetism, Neel temperature.

**Unit IV:**

**Magneto statics-** Concept of magnetic field, Lorentz force equation, Magnetic dipole moment, angular momentum and gyro magnetic ratio, Biot- Saverts law, It's applications ( B due to steady current in a long straight wire, B along the axis of circular coil), Ampere's law, It's applications(B for a solenoid, A Toroid), Magnetization current, Magnetic vectors, Gauss law of magnetization.

**References and Text books -**

1. Modern's abc of physics, Vol. II, by- Satish K. Gupta. (For Astro Physics, Unit 13).
2. The Great Universe, by- G. K. Sasidharan, S Chand publications.
3. University physics, by- H. D. Young, R. A. Freedman.
4. Astronomy structure of the universe, by- A. E. Roy, D. Clarke, Adam Hilger Pub.
5. Electricity and Magnetism, by- D. C. Tayal
6. Electricity and Magnetism, by- Rakshit, Chottopadhyay

7. Electricity and Magnetism, by- S. S. Atwood.
8. Electricity and Magnetism, by- K. K. Tiwari.
9. University physics, by-I. J. C. Upadhyay, Himalaya publications.
10. Foundation of Electrodynamics, by- Theory, Rietz and Millford.

**B. Sc. First Year (Semester II)**

**Course - Physics Practical (203)**

1. A student will have to perform at least **ten** experiments per semester and **two** experiments (from different fields) at the time of university practical examination in 6 hours.
2. The distribution of practical/laboratory work of 30 marks is-

Two experiments (9 Marks each) -	18 Marks
Record book	- 06 Marks
Viva Voce	- 06 Marks
<hr style="border-top: 1px dashed black;"/>	
Total	30 Marks

List of the experiments-

1. Acceleration due to gravity by compound pendulum.
2. To study damping of a bar pendulum.
3. To study oscillations of a rubber band and to draw potential energy curve for it.
4. To study the oscillation in a bifilar suspension arrangement.
5. To determine acceleration due to gravity by Kater's reversible pendulum.
6. Study of Lissajous's figure
7. To determine the pressure coefficient of air by constant volume air thermometer.
8. To verify the Stefan's law of radiation by using an incandescent lamp.
9. Thermal conductivity of a metal rod using Forbes method.
10. Thermal conductivity of a bad conductor by Lee's disc method.
11. To determine the critical temperature and critical pressure of a gas.
12. To determine the coefficient of thermal conductivity of glass in the form of a tube.
13. To determine specific heat of a given liquid by method of cooling.
14. To find Y ratio of specific heat of gas by Clamert and Desormi's method.
15. Mechanical equivalent of heat by Calender- Barne's constant flow method.
16. To determine the mechanical equivalent of heat (J) with the help of Joule's calorimeter.
17. To determine temperature coefficient of resistance of platinum using platinum resistance thermometer
18. Study of heating efficiency of electrical kettle with varying voltages.
19. To study the variation of total thermal radiation with temperature using the torch bulb filament.
20. To determine height of a building, altitude of sun and angular diameter of sun with the help of a sextant.
21. To determine the horizontal component of Earth's magnetic field and magnetic moment of the magnet.
22. To study the variation of magnetic field along the axis of a current carrying circular coil.

23. Study of magnetic field by vibration magnetometer.
24. To determine the dipole moment of a given liquid.
25. To determine magnetic susceptibility of  $\text{FeCl}_3$ .

## ***PHYSICS***

***(B. Sc. Part- II)***

**Semester III**  
**(Paper-301, 302, 303)**

**Semester IV**  
**(Paper-401, 402, 403)**

***(2014-2015)***

**B. Sc. Second Year (Semester III)**  
**Course-PHYSICS - Paper-I (301)**  
**(Sound waves, Applied acoustic, Ultrasonic and Power supply)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Waves in media-** Speed of transverse wave on a string, Group velocity and phase velocity and their relation and measurement, Standing waves, Harmonics, Quality of sound, Human ear and its response (Diagrammatic introduction only), Limit of human audibility, Intensity and loudness, bel and decibel, the musical scale, Temperaments and musical instruments.

**Unit II:**

**Applied acoustic-** Transducers and their characteristics (Crystal microphone, Moving coil loud speaker), Recording and reproduction of sound (Magnetic tape, Cine film, Compact disc), Acoustic of building, Reverberation and reverberation period, Sabine's formula, Factors affecting the acoustics of building, Requirements for good acoustics.

**Unit III:**

**Ultrasonic-** Introduction, Properties and production of ultrasonic waves, piezoelectric effect, piezoelectric generator, Magnetostriction effect and oscillators, Frequency of ultrasonic waves, Application of ultrasonic waves (measurement of depth of sea, SONAR system and Medical science).

**Unit IV:**

**Power supply-**Introduction, rectification using half wave and full wave rectifiers (Find  $I_{d.c.}$ ,  $V_{d.c.}$ ,  $I_{rms}$ ,  $\eta$  and ripple factor), Working of Full wave bridge rectifier, Filters, Difference between regulated and unregulated power supply, line and load regulation, voltage stabilization, Zener diode as voltage regulator, IC voltage regulation.

**References and Text books -**

1. A Text Book of sound, by- Khanna , Bedi
2. A Text Book of sound, by- L. P. Sharma, Saxena (S. Chand)
3. Properties of Matter and Acoustics, by- R. Murugesan, Kiruthign Sivaprakash.
4. Fundamental of Acoustics 4<sup>th</sup> Edition, by- Kinsler , John Wiley and Sons.
5. Basic Acoustics, by- D. E. Hall, Oxford University Press.
6. A Text Book of Oscillations, Waves and Acoustics, by- Dr. M. Ghosh, Dr. D. Bhattacharya (S. Chand)

7. Oscillation, Waves and Sound, by- Sharma and Saxena.
8. Science and Technology of Ultrasonics, by- Baldevraj, Narosa.
9. Elements of Electronics, by- M. K. Bagde, S. P. Singh, K Singh S- Chand.
10. Solid State Physics and Electronics, by- R. K. Puri, and V. K. Babbar.
11. Solid State Electronic Devices II Edition, by- B. G. Strretman

**B. Sc. Second Year (Semester III)**

**Course-PHYSICS - Paper-II (302)**

**(Physical optics and Electromagnetic waves)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Interference of light-** Introduction, Interference in equal thickness thin film, Phase change on reflection, refraction and transmitted system. Newton's ring and its application to determine the wavelength and refractive index, Michelson Interferometer and its application to wavelength determination and wavelength difference, Fabry- Parrot Interferometer and its application.

**Unit II:**

**Diffraction of light-** Introduction, Fresnel's diffraction- Half period zones, Zone plates, Diffraction due to straight edge and due to narrow slit.

Fraunhofer diffraction- Fraunhofer diffraction at a single slit, at circular aperture, Plane diffraction grating and its application, Resolving power of grating, Rayleigh's criterion for resolution.

**Unit III:**

**Polarization-** Introduction, Brewster's law, Polarization by scattering (concept only), Blue color of the sky(only idea), Uniaxial and biaxial crystal , positive and negative crystal, ordinary and extraordinary rays, Nicol prism, its application as an analyzer and polarizer, Double refraction in uniaxial crystal, phase retardation plate ( Half and Quarter wave), Double prism.

**Unit IV:**

**EM Waves-** Introduction to EM spectrum related to wavelength, origin and characteristics of EM waves, Physical significance of Maxwell's equations, EM wave equations (in conducting medium and in free space), It's transverse nature, Plane polarized EM wave ( $E_0/H_0 = \sqrt{\mu/\epsilon}$  ), Characteristics impedance of dielectric, Poynting vector, Poynting theorem.

**References and Text books -**

1. Physics for Degree students for B. Sc. Second year, by- C. L. Arora, Dr. P. S. Hemne.
2. Optics and Spectroscopy, by- R. Murugesan , Kiruthign Sivaprakash.
3. Optics, by- Brijlal and Subramayam.
4. Optics, by- Ajay Agatak.
5. A text book of optics, by- Dr. Subrahmanyam, Brijlal and M. N. Avadhanulu.
6. Optics, by- J. K. Sharma, K. K. Sarkar.
7. Fundamentals of optics, by-Jenkins and white.

8. Optics, by- D. P. Khandelwal.
9. Electromagnetic field and waves, by- Paul Lorrain and Dale R. Corson.
10. Foundation of Electromagnetic theory, by- John R. Retitz, Fredrick, J. Milford.
11. Electromagnetic, by- B. B. Laud.
12. Electrodynamics, by- Jordon

**B. Sc. Second Year (Semester III)**  
**Course - Physics Practical (303)**

1. A student will have to perform at least **ten** experiments per semester and **two** experiments (from different fields) at the time of university practical examination in 6 hours.
2. The distribution of practical/laboratory work of 30 marks is-

Two experiments (9 Marks each)	- 18 Marks
Record book	- 06 Marks
Viva Voce	- 06 Marks
<hr style="border-top: 1px dashed black;"/>	
Total	30 Marks

List of the experiments-

1. Study the speed of waves on stretched string.
2. Determination of velocity of sound using volume resonator.
3. To determine frequency of A. C. Mains with a Sonometer using single/two magnetic wire.
4. To determine unknown frequency and to verify the law of inverse variation of frequency and volume of air by Helmholtz resonator.
5. To determine the velocity of sound wave in air (gas) with Kundt's tube.
6. To determine the radius of curvature of the lower surface of a plano-convex lens by using Newton's ring apparatus.
7. Study of wavelength of light using Newton's ring.
8. To study the variation of the fine width with color of light.
9. To study the characteristics of micro phone.
10. Study of loudspeaker (woofer, squawker, tweeter) as a transducer.
11. Study of Piezoelectric effect.
12. To Study the current regulation and ripple factor of half wave / full wave rectifier using semiconductor diodes with L and  $\Pi$  type filter.
13. To study the characteristics of zener diode.
14. To study the zener diode voltage regulating characteristics.
15. To study the regulation characteristics of zener regulated and IC 741 regulated power supply.
16. To determine the velocity of ultrasonic waves in a given liquid.
17. To produce interference pattern using Lloyd's mirror and to determine the wavelength of sodium light.
18. To determine the dispersive power of a prism.
19. Study of polarization of light by reflection (Brewster's law).
20. To find R.I. of glass by using Brewster's law.

21. To determine the resolving power of a grating.
22. To study diffraction at straight edge and to determine the wavelength of monochromatic light.
23. To determine the resolving power of a telescope.
24. Study of wavelength of light using plane diffraction grating.
25. To determine the wavelength of prominent lines of mercury by plane transmission grating.

**B. Sc. Second Year (Semester IV)**  
**Course-PHYSICS - Paper-I (401)**  
**(Solid state physics, X-ray and Laser)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Solid state physics-** Introduction, Crystal structure, periodicity, lattices and basis, fundamental translation vector, unit cell and primitive cell, Miller indices, allowed rotations, lattice types, lattice planes, Bravais lattices, packing fraction, coordination number, Inter-planer distances, Crystal structures-Na Cl, diamond, CsCl, ZnS etc.

**Unit II:**

**X-ray**-Introduction, discrete and continuous X-ray spectra, Main feature of continuous X-ray spectra, Characteristics X-ray spectra, Duane-Hunt law, X- ray emission spectra, Moseley law its importance and applications, Auger effect, X-ray absorption spectra, applications of X-rays in various fields.

**Unit III:**

**Solid state physics-** Reciprocal lattice, Wigner Seitz cell, Geometrical relation between direct and reciprocal lattice, Laue's theory of X-ray diffraction, Bragg's law and Bragg's diffraction conditions in direct and reciprocal lattice, Laue's pattern, Bragg's spectrometer and its applications (wavelength determination and simple cubic structure determination).

**Unit IV:**

**Laser**- Introduction to Laser (purity of spectral line, spatial and temporal coherence), Einstein's relation, absorption, spontaneous and stimulated emission, Population inversion, Optical pumping, characteristics of laser beam, three level and four level laser system, Ruby laser, He-Ne laser, Semiconductor laser, Application of lasers.

**References and Text books -**

1. Solid State Physics, by- S. U. Pillai.
2. Cryptography Applied to SSP, by- O. N. Shrivastave
3. Solid State Physics, by- Gupta Kumar.
4. Introduction to Solid State Physics, by- C. Kittel.
5. Modern Physics, by- R. Mugadesham
6. Modern Physics, by- J. B. Rajam

7. Modern Physics, by- Kumar , Krishane, Nandeem
8. A Text Book of Modern Physics, by- K. C. Lal, S. T. Ahmad.
9. Modern Physics, by- Aurther Biser.
10. Lasers and Non linear optics. By- B. B. Laud
11. LASERS- Theory and Applications, by- Thyagarajan and A. K. Ghatak
12. Optics and LASER, by- V. K. Sewane
13. Introduction to Lasers, by- Dr. Avadhanulu, Dr. P. S. Hemne.

**B. Sc. Second Year (Semester IV)**

**Course - PHYSICS - Paper-II (402)**

**(Solid state electronics, and Molecular physics)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Solid state electronics-** Light emitting diode, Solar Cell, Photovoltaic cell, **Bipolar transistor**- Construction and working, transistor characteristics in CE and CB Mode, Graphical analysis of CE configuration. Hybrid parameters, Equivalent circuit at low frequency in CE mode, Thermal Runaway, Stabilization, Heat sink, Stability factor, Bias stabilizing circuits.

**Unit II:**

**Field Effect Transistor-** Construction, and working principal of JFET, Difference between BJT and JFET, Characteristics of JFET, Parameters , JFET as an amplifier (input and output impedance, voltage gain), Advantage of JFET over BJT. **MOSFET-** Types of MOSFET, Construction and working of MOSFET, Characteristics of MOSFET, Special features of MOSFET.

**Unit III:**

**Molecular physics-** Quantization of vibrational and rotational energies, types of molecules based on moment of inertia, rigid diatomic molecules, Intensity distribution in rotational levels, Diatomic molecules as harmonic and anharmonic oscillator, Rotational-vibrational spectra, Born Oppenheimer approximation.

**Unit IV:**

**Raman spectroscopy-** Raman effect, Classical and quantum explanation, Experimental set up, Raman spectra and molecular structure, Applications of Raman effect, Electronic spectra, Dissociation energy, Frank-Condon principle, Elementary ideas of NMR and ESR and their applications in spectroscopy.

**References and Text books -**

1. Elements of Electronics, by- M. K. Bagde, S. P. Singh, K Singh S- Chand.
2. Solid State Electronic Devices II Edition, by- B. G. Strretman
3. Electronics Fundamentals and Applications II Edition, by- J. D. Ryder
4. Principles of Electronics, by- V. K. Mehta, Rohit Mehta.

5. Basic Electronics (Solid State) by- B. C. Theraja.
6. Atomic and Molecular Physics, by- ULP publications, Prof. C. Mande.
7. Elements of Spectroscopy, by- Pragati prakashan, Gupts kumar Sharma.
8. Optics and Spectroscopy, by- R. Murugesan and Kiruthiga Sivaprakash, S Chand publication.
9. Advanced Molecular Physics, by- Shriram and Sharma.

**B. Sc. Second Year (Semester IV)**

**Course - Physics Practical (403)**

1. A student will have to perform at least **ten** experiments per semester and **two** experiments (from different fields) at the time of university practical examination in 6 hours.
2. The distribution of practical/laboratory work of 30 marks is-

Two experiments (9 Marks each) - 18 Marks	
Record book	- 06 Marks
Viva Voce	- 06 Marks
-----	
Total	30 Marks

List of the experiments-

1. To determine wavelength of LASER beam using plane diffraction grating or cylindrical obstacle.
2. To study the divergence of a LASER beam.
3. To study LASER as a monochromatic coherent source.
4. Study of total internal reflection using LASER.
5. Measurement of the focal length of a given convex lens using LASER.
6. Goniometric study of crystal faces using models.
7. To construct SC, BCC, FCC and to find packing fraction, coordination number.
8. To determine lattice parameter 'a' of a unit cell of a cubic crystal using X-ray diffraction film.
9. To determine the energy gap of a semiconductor using four probe method.
10. To determine energy gap of a semiconductor using PN junction diode in reverse bias mode.
11. To determine the dielectric constant of a solid and its polarisability by resonance method.
12. Study of IR Spectra of HCl molecule.
13. Identification of unknown element from line emission spectra.
14. To determine the Rydberg constant for Hydrogen.
15. Study of characteristics of LED.
16. To study the characteristics of photo diode and use as light sensor (LDR).
17. Study of Solar cell as a Photo voltaic cell.
18. Study of characteristics of transistor in common base mode.
19. Study of characteristics of transistor in common emitter mode.
20. To study the variation of gain with frequency of single stage common emitter amplifier.

21. To study the frequency response of a single stage transformer coupled transistor amplifier.
22. To study variation of gain of CE amplifier with load at fixed frequency.
23. Study of characteristics of field effect transistor.
24. Study of FET as an amplifier.
25. To determine the Hybrid parameters of a transistor.

## ***PHYSICS***

***(B. Sc. Part- III)***

**Semester V**

**(Paper-501, 502, 503)**

**Semester VI**

**(Paper-601, 602, 603)**

***(2015-2016)***

**B. Sc. Final Year (Semester V)**  
**Course-PHYSICS - Paper-I (501)**  
**(Atomic physics, free electron theory and Statistical physics)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Atomic physics-** Introduction (Revision of Bohr's model, Somerfield and Chadwick), Vector atom model, Stern-Gerlach experiment, Spinning of electron, Space quantization, Selection rules, Quantum numbers, L-S and J-J Coupling, Pauli's exclusion principle, Hunds rule, Zeeman effect, Normal Zeeman effect, Anomalous Zeeman effect, Stark effect.

**Unit II:**

**Free electron theory-** Drude Lorentz model, Mean free path, Electrical and thermal conductivity, Wiedemann Franz law (Derivation), Density of states, Fermi energy, Fermi temperature. **Band theory of solids-** Bloch theorem (statement only), Kroning Penny model, Concept of hole, Hall effect, Energy bands in solid, distinction between metal, semiconductor and insulator.

**Unit III:**

**Statistical physics-**  $\mu$ - space, Gamma space, probability distribution, thermodynamic probability, Principle of a priori probability, Boltzmann's entropy relation, accessible and inaccessible estates, macro and micro states, Maxwell- Boltzmann distribution law, its application to molecular speed, distinction between mean, r. m. s. and most probable speed values.

**Unit IV:**

**Statistical physics-** Bose-Einstein statistics, its application to black body radiation, Planck's radiation law, Estimation of temperature of sun, Bose- Einstein condensation. Fermi-Dirac distribution and its application to free electrons in a metal, concept of negative temperature, Fermi level and Fermi temperature, comparison between M-B, B-E and F-D statistics.

**References and Text books -**

1. Atomic and Molecular Physics, by- ULP publications, Prof. C. Mande.
2. Introduction of Atomic Physics, by- White
3. Atomic and Nuclear Physics, by- T. A. Littlefield, N. Thorley
4. Atomic and Nuclear Physics, by- S. N. Ghoshal.
5. Atomic Physics (Modern Physics), by- S. N. Ghoshal.
6. Atomic Physics, by- J. B. Rajam.

7. Solid state physics, by-R. K. Puri, V. K. Babbar, S Chand.
8. Atomic and Nuclear Physics, by- N. Subramanyam, Brijlal.
9. Statistical Mechanics, by- Kamal Singh
10. Quantum Mechanics ,Statistical Mechanics and Solid state physics, by- Chattopadhyay and P. C. Rakshit
11. Heat, Thermodynamics and Statistical Physics, by- Pragati Prakashan , Singhal, Agrawal.
12. Fundamental of Statistical Mechanics, by- B. B. Laud, New Age International publications.

**B. Sc. Final Year (Semester V)**

**Course-PHYSICS - Paper-II (502)**

**(Quantum mechanics, Nanomaterials and Nanotechnology)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Quantum mechanics-** Failure of classical physics to explain black body spectra, Planck's radiation law, Compton Effect, Wave particle duality, de Broglie's hypothesis, Concept of wave and group velocity, Experimental demonstration of matter waves, Davisson and Germer experiment, Heisenberg's uncertainty principle and Thought experiment.

**Unit II:**

**Quantum mechanics-** Schrodinger's equation (Time dependent and time independent equations), Physical significance of wave function  $\Psi$ , Operators, Expectation values of a dynamical quantities, Ehrenfest's theorem, Eigen value and Eigen functions, Particle in a box, Application to free particle in a one and three dimension.

**Unit III:**

**Nanomaterials-**Introduction to Nanoscience and Nanotechnology, Difference between nanomaterials and bulk materials, Reduction of dimensions 3D, 2D, 1D, 0D materials, various morphologies of nanomaterials, Bottom up and top down approaches, size dependent physical properties, Nano cluster.

**Unit IV:**

**Nanotechnology-** Different methods of synthesis of nanomaterials (Wet chemical, Sol-gel, and HCR Technique), Determination of size of nanoparticles by particle analyzer(BET) and Debye- Scherer's formula, Characterization technique of SEM and TEM , application of nanomaterials in various fields (General).

**References and Text books -**

1. Quantum Mechanics, Statistical Mechanics and SSP, by- D. Chattopadhyay, P. C. Rakshit.
2. Fundamentals of Quantum Mechanics, by- P. R. Waghmare
3. Quantum Mechanics, by- John L. Powel, Bernd Crasemann.
4. Quantum Mechanics, by- Mathews and Venketesan.
5. Quantum Mechanics, by- A. K. Ghatak, S. lokanathan.

6. Quantum Mechanics, by- S. P. Singh, M. K. Bagde and Kamal Singh.
7. Quantum Mechanics, by- Chatwal, Anand, Himalaya publications.
8. Advanced Quantum Mechanics, by- Satya Prakash, Pragati Publications.
9. Introduction to Nano Technology, by- C. P. Poole, Jr. F. J. Owens.
10. Nano Technology, by- T. J. Daming.
11. Nano Structure and Nano Materials, by- M. Balkrishnarao, K. Krishana Reddy.
12. Nano Technology, by- Rakesh Rathi.

**B. Sc. Final Year (Semester V)**  
**Course - Physics Practical (503)**

1. A student will have to perform at least **ten** experiments per semester and **two** experiments (from different fields) at the time of university practical examination in 6 hours.
2. The distribution of practical/laboratory work of 30 marks is-

Two experiments (9 Marks each)	- 18 Marks
Record book	- 06 Marks
Viva Voce	- 06 Marks
-----	
Total	30 Marks

**List of the experiments-**

1. To study the absorption spectra of iodine vapour and to determine its dissociation energy and force constant.
2. To estimate the temperature of sodium flame by studying the reversal of the spectral lines (D-line).
3. To determine the electric charge of an electron by Millikan's oil drop method.
4. To determine the value of  $e/m$  of an electron by Busch's helical beam method.
5. To determine the value of  $e/m$  of an electron by Thomson method.
6. To determine electronic charge and work function of the cathode material using photocell.
7. To determine the plank's constant 'h' by vacuum type photocell using DPMS.
8. To determine Planck's constant by photo cell.
9. To determine Planck's constant by solar cell.
10. To determine Hall coefficient and mobility of charge carriers in a semiconductor.
11. To verify the laws of probability distribution throwing one coin, two coins and ten coins.
12. Study of statistical distribution from the given data and to find most probable, average value and RMS value.
13. Study of random decay of nuclear disintegration and determination of decay constant using one colored face dices.
14. To show that deviation of probability of an event from theoretical value decreases with increase in number of events.
15. Determination of average grain size of a particle from X-Ray diffraction spectra using Debye-Scherrer Formula.
16. Study of particle size of nano particles by SEM /TEM method.
17. Determination of size of nano particles by particle analyzer (BET).
18. To determine the transmission coefficient of a transmitting plate using photometer.
19. To determine the electro-chemical equivalent of hydrogen using Hoffman's tube.

20. To measure A. C. / D. C. voltage using a C. R. O. and to calculate it's deflection sensitivity.
21. To determine the unknown frequency /to compare the frequency of two unknown signals using C. R. O.
22. To study and trace different wave forms of oscillator using C. R. O.
23. Measurement of thermo emf.
24. To determine the concentration of sugar solution by half shade polarimeter.
25. Measurement of global and diffuse radiation using pyranometer.

**B. Sc. Final Year (Semester VI)**  
**Course-PHYSICS - Paper-I (601)**  
**(Relativity, Nuclear physics and Bio Physics)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Relativity-** Frame of reference, Inertial and non inertial frames, Galilean transformation equations, Galilean invariance, Michelson-Morley experiment, Postulates of the special theory of relativity, Lorentz transformations, Length contraction, Time dilation, Velocity addition theorem, , Variation of mass with velocity, Mass energy equivalence.

**Unit II:**

**Nuclear physics-** G. M. counter, Wilson cloud chamber, Cyclotron, Linear accelerator, Nuclear reaction, Discovery of neutron, Packing fraction, Mass defect and binding energy, Nuclear fission, Liquid drop model, Chain reaction, Nuclear reactors, Nuclear fusion, Cosmic ray, Elementary particles, Shell model of the nucleus.

**Unit III:**

**Nuclear physics-** Alpha decay, Range of  $\alpha$  particle, Geiger Nuttal law, Magnetic spectrometer for energy of  $\alpha$  particle, Tunneling, Gamow's theory of  $\alpha$  decay,  $\beta$ - decay, Measurement of energy of  $\beta$  particle and end point energy, Neutrino theory of  $\beta$ - decay,  $\gamma$ - decay, Energy of  $\gamma$  photon.

**Unit IV:**

**Bio physics-**History of bio physics, Bio Potential- compound action Potentials of the human body, Electrocardiogram for heart (ECG), Electroencephalogram for brain (EEG), Electroretinogram for eye retina (ERG), Electromyogram for muscle (EMG) and Sonography (Working mechanism).

**Bioinstruments-** Basic principle, construction and working of colorimeters, Spectrophotometer, PH-Meter and centrifuge measurement.

**Reference and Text books -**

01. Nuclear Physics, by- S. N. Ghoshal.
02. Atomic and Nuclear physics, by- N. Subramanyam, Brijlal.
03. Introduction to Nuclear physics, by-H. A. Enge.
04. Atomic and Nuclear physics, by- T. A. Littlefield, N. Thorley.
05. Introduction to special theory of Relativity, by- Shrivastava

06. Elements of special theory of Relativity, by- S. P. Singh and M. K. Bagde.
07. Introduction to theory of Relativity, by- P. G. Bergmann
08. Introduction to Bio Physics, by- P. Narayanan, New Age Publications.
09. Medical Instrumentation, by- Khandpur TMH.
10. Text Book of Bio Physics, by- R. N. Roy
11. Laboratory manuals of Bio Physics Instruments, by- P. B. Vidyasagar.
12. Bio physics, by- Vatsala Piramal, Dominant Publications and Distributions, New Delhi.

**B. Sc. Final Year (Semester VI)**

**Course-PHYSICS - Paper-II (602)**

**(Electronics, Fiber optics, Communication and Digital electronics)**

**Marks- 50**

**Time- 30 hours**

**Unit I:**

**Amplifiers-** Classification of amplifiers, multistage amplifiers, **Operational amplifier-** parameters, Basic idea of IC-741, Application of Op. Amp. as inverting, Non inverting, Adder, Subtractor, Integrator and Differentiator, **Oscillators-** Concept of feedback, Physical consideration of tuned circuits, Phase shift oscillator, Hartley oscillator, Colpitts oscillator.

**Unit II:**

**Fiber optics-** Importance of optical fiber, Propagation of light waves in optical fiber, Basic structure, Stepped index monomode fiber, Graded index fiber, Acceptance angle and acceptance cone, Numerical aperture, Fiber losses and their units (basic concept), Electrical and optical band width, bandwidth length product, Dispersion in optical fiber.

**Unit III:**

**Communication-** Introduction, amplitude modulation - Frequency spectrum, Modulation factor, over modulation, Percentage modulation, Expression for Power and Currents in AM wave, disadvantages, **Frequency modulation** - Frequency deviation, Carrier swing, Modulation index, Deviation ratio, Expression for FM wave, Frequency spectrum, significant side band terms, FM band width, Merits and demerits.

**UNIT IV:**

**Number Systems-** Unitary systems, Binary, decimal, octal, hexadecimal and their interconversions, Binary coded decimal (BCD), Addition and subtraction of binary numbers, 1S, 2S and 10S compliment, basic logic gates, NOR, NAND, Ex-OR, Ex-NOR and their truth table, Half adder, Full adder, Half subtractor and full subtractor, Boolean equations, De Morgan's theorem and its verification.

**References and Text books -**

1. Op. Amps and Linear Integrated circuits 2<sup>nd</sup> Edition, by- Ramakant Gaikwad, PHI Publications.
2. Digital and Analog Technique 1<sup>st</sup> Edition, by- Navneet, Gokhale, Kale, Kitab Mahal Nagpur.
3. Basic Electronics (Solid State), by- B. C. Therja.
4. Optoelectronics and fiber optics communication, by- C. K. Sarkar, D.C. Sarkar.

5. Laser and Optical fiber communication, by- P.Sarah.
6. An introduction to fiber optics, by-R. Allen Shotwell.
7. Optical fiber communication, by-John M. Senior.
8. Communication Electronics, by- A. Kumar
9. Digital Electronics, by- V. K. Jain
10. Digital Principle and Application, by- Malvino and Leach
11. Digital Electronics and It's Application, by- R. P. Jain
12. Digital computer Electronics, II nd Edition, by- Malvino, TMH Edition.

**B. Sc. Final Year (Semester VI)**

**Course - Physics Practical (603)**

1. A student will have to perform at least **ten** experiments per semester and **two** experiments (from different fields) at the time of university practical examination in 6 hours.
2. The distribution of practical/laboratory work of 30 marks is-

Two experiments (9 Marks each) - 18 Marks
Record book - 06 Marks
Viva Voce - 06 Marks
-----
Total 30 Marks

List of the experiments-

1. To draw the histogram of theoretical Gaussian curve.
2. Recording and analysis of ECG Signals.
3. Verification of Beer's- Lambert's law.
4. To determine pH value of Amino acids.
5. Measurement of BP and recording of Kortov sound.
6. Measurement of body temperature using GSR and thermister probe.
7. Measurement of skin resistance using GSR.
8. To draw the plateau curve of a given Geiger Mueller counter
9. Study of Op. Amp. as an Inverting and Non Inverting amplifier.
10. Study of Op. Amp. as an Adder and Subtractor.
11. Study of Op. Amp. as an Integrator and differentiator.
12. To construct and study the working of a phase shift oscillator.
13. Study of Hartley Oscillators.
14. Study of Colpitts Oscillators.
15. Study of Amplitude modulation.
16. Study of diode as an AM detector.
17. Study of diode as clipper, clamper and voltage doublers.
18. Study of Frequency modulation using IC.

19. Study of F M detector using IC.
20. Study of basic gates (AND, OR, NOT)
21. Study of logic gates (using IC) and verification of De Morgan's theorem.
22. To study the characteristics of NAND/NOR gate and its use as a universal gate.
23. Verification of laws of Boolean algebra using NAND gate.
24. Study of Ex- OR gate as a half adder and full adder.
25. Study of Ex- OR gate as a half subtractor and full subtractor.

**Books for Experimental Physics –**

1. B. Sc. practical physics, by- Harnam Singh, DR. P.S. Hemne , S Chand Publications
2. Practical Physics, Volume-I, II by- Gupta and Kumar.
3. Advanced practical physics, Volume I, II by- DR. S. P. Singh.
4. Advanced Viva- Voce in physics, Volume I, II by- Gupta and Narain.
5. Laboratory Physics, Part A and B, by- Berkeley Physics Laboratory.
6. Laboratory Physics (Laser Exp.), by- Berkeley Physics Laboratory.
7. University Practical Physics with Viva Voce, by-C. K. Bhattacharya (C. B. S. Publications, Delhi).
8. A Textbook of Practical Physics, by- Brijlal and Subramanyam.
9. Introduction to Experimentation, by- B. J. Brinkwork (The English University Press Ltd.).
10. Advanced Practical Physics, Vol. I and II, by- M. S. Chauhan, S. P. Sinha.
11. Experimental Physics, by-C. Daish ( Hodder and Sons, 1970).
12. Practical Physics for B. Sc., by- A. Dhanalaxmi , A Williams .
13. Experiments in Electronics, by-Paunik S. Jabbar.
14. Digital Electronics Practice, by- Jain, Anand Integrated Circuits, (Tata Mc Graw Hill).
15. A Laboratory Manual of Physics for Undergraduate Classes, by- D. P. Khandelwal (Vani Publishing House, New Delhi).
16. Experiments in Modern Physics, by-Olon.
17. B. Sc. Practical Physics, by-K. Hanumantha Rao, D. P. Siva Ramrah, V. Krishna Murthy.
18. Advanced Practical Physics, by S. S. Sharma (Business Promotion Bureau, Delhi).
19. B. Sc. Practical Physics by- Harnam Singh (S Chand).
20. Advanced Practical Physics, by- S. P. Singh ( Pragati Prakashan).
21. Experiments in Electronics, by-S. V. Subramanyam ( Macmillan India Ltd.).
22. Experimental Crystal Physics, by-W. A. Wooster, A. Breton.
23. Introduction to Biomedical Electronics, by-Joseph Bovy (Mc Graw Hill).

24. Handbook of Biomedical Instrumentation, by-R. S. Khandpur.
25. Acoustic Measurement, by-L. Beranek.
26. Fundamentals of Acoustics, by-Kinsler, Frey.
27. Solar Cells, by-M. A. Green.
28. Electronic Communication, by- Roddy Coolen.

**Electronic Components, Network Theorems****Unit 1**

Definition, types, identification and uses of electronic components: Resistors, Capacitors, Inductors, Switches, Transformers and Relays

Block diagram of C. R. O.

**Unit 2**

Ideal Voltage and Current sources (Internal impedance of battery and its effect on its performance), Kirchoff's current and voltage laws, Voltage and current divider circuits, Superposition, Thevenin, Norton, Maximum power transfer theorems (Statement and simple numerical)

(DC circuits only)

**Unit 3**

Introduction to semiconductors: Concept of energy band diagram (Conductor, Semiconductor, Insulator), Intrinsic and extrinsic semiconductor (P type, N type), diffusion junction, depletion layer, Barrier potential, PN Junction diode, forward and reverse bias characteristics of diode, Avalanche and Zener effect; Zener diode, L.E.D.

**Unit 4**

The bipolar junction transistor, construction of B. J. T., modes of B.J.T. (CE, CC, CB), transistor equation;  $\alpha$ ,  $\beta$  and their relationship, junction biasing, Input, output and transfer characteristics of BJT in CE mode, Transistor Biasing (Voltage divider and emitter biasing only), DC load line, Q point, transistor as switch

- 1** Study of laws of series resistor and application as voltage divider.
- 2** Study of laws of parallel resistor and application as current divider.
- 3** Study of laws of series capacitor and application as voltage divider.
- 4** Study of laws of parallel capacitor and application as current divider.
- 5** Verification of Terman's equation for inductance. Reactance characteristics of inductor
- 6** Study of transformer.
- 7** Study of battery as practical (i) voltage source (ii) current source.
- 8** Study of maximum power transfer.
- 9** Study of Forward Bias characteristics of diode. (PN & LED)
- 10** Study of Reverse Bias characteristics of ZENER diode.
- 11** Study of Characteristics of BJT. (Input, Output, Transfer)
- 12** Study of voltage divider biasing of transistor.
- 13** Verification of Norton's Theorem.
- 14** Verification of Thevenins Theorem.

## Reference Books

<b>1</b>	Basic Electronics solid state physics	B.L.Theraja S.Chand and company
<b>2</b>	Electronic Devices and circuits	Allen Mottershed Prentice hall of India pvt.ltd.
<b>3</b>	An Introduction to Electronics	R.G.Kale,U.K.Puranik,V.N.Pendse,A .A.Sakale Kitab mahal
<b>4</b>	Basic Electronics	Grob Tata McGraw Hill
<b>5</b>	Electronic Devices	T.L.Floyd Pearson Education Asia
<b>6</b>	Electronic Principles	Malvino Tata McGraw Hill
<b>7</b>	Electronic components and materials	Madhuri Joshi Schroff pub. And distributors
<b>8</b>	Electronic components and materials	S.M.Dhir TMH
<b>9</b>	Network analysis	Van valkenburg PHI

**Fundamentals of Digital Electronics****Unit 1**

Number Systems and Codes: Decimal, Binary, Octal, Hexadecimal, representation of integer, fraction, mixed numbers and their mutual conversion, Complement of numbers-1's, 2's, complements, addition and subtraction using 1's and 2's complement method sign and magnitude of numbers. Codes- BCD, 8421, Excess 3, Parity and gray code

**Unit 2**

Logic gates- OR, AND, NOT, NAND, NOR, XOR and XNOR gates and their truth table, Boolean Laws, double inversion, De Morgans and Duality theorems, use of NAND and NOR as universal building blocks

**Unit 3**

Karnaugh Maps: pair, quads, octets , minterm, max term in K Map, K-map for 2,3,4 variables, concept of SOP and POS, simplification of SOP and POS logic expressions using K-map, Design of binary to gray code converter, gray to binary code converter using K-map

**Unit 4**

Combinational Logic Circuits- Half Adder, full adder, half subtracter and full subtracter, Concept of Encoder , Concept of Decoder: BCD to gray converter, BCD to seven segment converter, parity generator checker, 4-bit Full Adder/ subtracter, Concept of multiplexer, 4:1 mux using gate , Concept of demultiplexer, 1:4 demux using gate

- 1** Study of basic logic gates.
- 2** Study of NAND as universal gate.
- 3** Study of NOR as universal gate.
- 4** Verification of Demorgan's Theorem.
- 5** Simplification of logic expressions using Boolean algebra.
- 6** Study of binary to gray code converter using K map.
- 7** Study of gray to binary code converter using K map.
- 8** Study of Multiplexer using gates.
- 9** Study of De Multiplexer using gates.
- 10** Study of Multiplexer using IC.
- 11** Study of De- Multiplexer using IC
- 12** Study of BCD to 7 segment decoder.
- 13** Construction and study of half adder and full adder.
- 14** Construction and study of half subtractor and full subtractor.
- 15** Verification of Boolean laws & Verification of duality theorem.

## Reference Books

- |          |   |  |
|----------|---|--|
| <b>1</b> | Digital principles and applications                   | A.P.Malvino,D.P.Leach<br>McGraw Hill Book Co.    |
| <b>2</b> | Principles of digital Electronics                     | M.B.Matsagar,V.S.Kale<br>Vision publication      |
| <b>3</b> | Modern digital Electronics                            | R.P.Jain<br>Tata McGraw Hill publishing co.ltd   |
| <b>4</b> | Digital fundamentals                                  | Floyd,Jain<br>Pearson                            |
| <b>5</b> | 2000 solved problems in digital<br>Electronics        | S.P.Bali<br>Tata McGraw Hill publishing co.ltd.  |
| <b>6</b> | Electronic circuits and systems<br>Analog and digital | Y.N.Bapat<br>Tata McGraw Hill publishing co.ltd. |
| <b>7</b> | Digital electronics and logic design                  | B.S.Nair Prentice hall                           |
| <b>8</b> | digital computer electronics                          | Malvino,Brown Tata McGraw Hill                   |
| <b>9</b> | Fundamentals of Digital Electronics                   | C.V.Dhuley and V.M. Ghodki                       |

## Semiconductor Devices

**Unit 1**

Construction, working, characteristics and applications of JFET, MOSFET (depletion and enhancement type), parameters of JFET and their relationship parameters of MOSFET and their relationship

**Unit 2**

Construction, working, characteristics and applications of Silicon Controlled Rectifier, DIAC, TRIAC and UJT, UJT as relaxation oscillator

**Unit 3**

Amplifier parameters, notations, concept and definition of h-parameters, open circuit and short circuit tests, Introduction to input impedance, output impedance, current, voltage and power gains using h parameters, classification of amplifiers (Descriptive ideas only)

**Unit 4**

Introduction to power transistor, difference between Voltage and power amplifiers, transformer coupled class A power amplifier and its efficiency, class B Push-pull amplifier, derivation for efficiency, complementary symmetry power amplifier with two power supplies

- 1** Study of JFET characteristics.
- 2** Study of MOSFET characteristics.
- 3** Study of SCR characteristics.
- 4** Study of DIAC characteristics.
- 5** Study of UJT characteristics.
- 6** Study of UJT as relaxation oscillator.
- 7** Study of Transistor as a switch.
- 8** Study of transistor as voltage amplifier using CRO.
- 9** Study of class A power amplifier.
- 10** Study of TRIAC characteristics.
- 11** Study of Band width in single stage amplifier.
- 12** Study of complementary symmetry power amplifier.

## Reference Books

- |          |  |   |
|----------|--|---|
| <b>1</b> | Principles of Electronics                    | V.K.Mehta,Rohit Mehta                                     |
| <b>2</b> | Functional circuits in Electronics           | S.G.Pimpale,Sushama Pimpale<br>Mcmillan India ltd.        |
| <b>3</b> | Electronics,Fundamental and<br>applications  | Ryder PHI   |
| <b>4</b> | Elements of electronics                      | M.K.Bagde,S.P.Singh,Kamal singh<br>S.Chand and co.        |
| <b>5</b> | Op-Amp and linear circuits                   | Gaikwad PHI   |
| <b>6</b> | Electronic Instrumentation                   | Khedkar   |
| <b>7</b> | Monograph on electronic design<br>principles | Goel, Khaitan Khanna publisher                            |
| <b>8</b> | Basic electronics and linear cincuits        | Bhargava,KUlshreshtha,Gupta<br>Technical education series |
| <b>9</b> | EDC I, EDC II                                | A.P. Godse, U.P.Bakshi Technical<br>Publishers pune       |

## Advanced Digital Electronics

**Unit 1**

Logic Families: Characteristics of digital ICs, construction and working of TTL NAND and NOR gates, construction and working of CMOS NAND and NOR gates, Tristate logic, comparison of TTL and CMOS logic families with respect to propagation delay, power consumption, noise immunity, noise margin, fan in and fan out.

**Unit 2**

Sequential Logic Circuits- Concepts of Edge and Level Triggering, Propagation Delay, set up time, hold time, R-S Flip Flop, Clocked R-S Flip Flop, Limitations of R-S FF, D FF, JK FF, preset and clear , Limitations of JK FF: Race around Condition, JKMS FF

**Unit 3**

Counters: Asynchronous, up/down, Decade, Synchronous, Modified counter, Ring Counter, Johnson counter (Truth tables and timing diagrams ) ( 4 bit)

**Unit 4**

Registers: Buffer , left shift, right shift, SISO, SIPO, PISO, PIPO Registers , introduction to memories, classification, Memory expansion (word size and word capacity)

- 1** Switching characteristics of NOR.
- 2** Switching characteristics of NAND.
- 3** Study of RS Flip Flop using NAND/NOR gate.
- 4** Study of clocked RS Flip Flop using NAND/NOR gate.
- 5** Study of D Flip Flop using NAND/NOR gate.
- 6** Study of JK MS FF.
- 7** Construction and study of decade counter.
- 8** Study of mod-counter.
- 9** Study of ring counter.
- 10** Study of Johnson counter.
- 11** Study of SISO register.
- 12** Study of SIPO register.
- 13** Study of PISO register.
- 14** Study of PIPO register.
- 15** Construction and study of synchronous counter.

**Reference Books**

<b>1</b>	Digital principles and applications	A.P.Malvino,D.P.Leach McGraw Hill Book Co.
<b>2</b>	Principles of digital Electronics	M.B.Matsagar,V.S.Kale Vision publication
<b>3</b>	Modern digital Electronics	R.P.Jain Tata McGraw Hill publishing co.ltd
<b>4</b>	Digital fundamentals	Floyd,Jain Pearson
<b>5</b>	2000 solved problems in digital Electronics	S.P.Bali Tata McGraw Hill publishing co.ltd.
<b>6</b>	Electronic circuits and systems Analog and digital	Y.N.Bapat Tata McGraw Hill publishing co.ltd.
<b>7</b>	Digital electronics and logic design	B.S.Nair Prentice hall
<b>8</b>	digital computer electronics	Malvino,Brown Tata McGraw Hill
<b>9</b>	Fundamentals of Digital Electronics	C.V.Dhuley and V.M. Ghodki

**OP AMP And Power Supply****Unit 1**

Introduction to DC amplifier, difference amplifier, Need of two power supplies, working of difference amplifier, differential mode gain, common mode gain, C.M.R.R., IC OP-AMP (block diagram), parameters of OP AMP and characteristics of an ideal OP AMP.

**Unit 2**

OP AMP as an inverting amplifier, concept of virtual ground, non-inverting amplifier, unity gain amplifier, adder, subtractor, integrator, differentiator, comparator, zero crossing detector, Schmitt trigger

**Unit 3**

Half wave rectifier, full wave rectifier, bridge rectifier; concept of filter (capacitive). Unregulated, regulated PS, power supply parameters – ripple factor, efficiency, line regulation, load regulation, Zener regulator, Regulated power supply design using series pass transistor, short circuit protection

**Unit 4**

General features of IC regulators, design of fixed and variable power supply, 78xx,79xx , LM 317, design of dual power supply, LM 317 as variable regulator, Limitations of linear regulator, Switching regulator- (SMPS), Concept of Low Drop Out regulator (LDO)

**B.Sc. ELECTRONICS PRACTICAL  
II**

*Semester 3 Section A*

- 1** Study of Op-amp as inverting and sign changer amplifier.
- 2** Study of Op-amp as Non-inverting and unity gain amplifier.
- 3** Op-amp as adder and averaging amplifier.
- 4** Op-amp as difference amplifier. ( Subtractor)
- 5** Op-amp as integrator.
- 6** Op-amp as Differentiator
- 7** Op-amp as comparator and zero crossing detector.
- 8** Op-amp as Schmitt trigger.
- 9** Study of Half wave rectifier.
- 10** Study of Full wave rectifier.
- 11** Study of Full wave Bridge rectifier.
- 12** Study of Zener regulator.
- 13** Regulated P.S. using series pass transistor.
- 14** Study of LM-317 (variable regulator)
- 15** Study of 78XX
- 16** Study of 79XX
- 17** Study of difference using transistors.

**Reference Books**

- |          |   |   |
|----------|---|---|
| <b>1</b> | Principles of Electronics                 | V.K.Mehta,Rohit Mehta                                     |
| <b>2</b> | Functional circuits in Electronics        | S.G.Pimpale,Sushama Pimpale<br>Mcmillan India ltd.        |
| <b>3</b> | Electronics,Fundamental and applications  | Ryder PHI   |
| <b>4</b> | Elements of electronics                   | M.K.Bagde,S.P.Singh,Kamal singh<br>S.Chand and co.        |
| <b>5</b> | Op-Amp and linear circuits                | Gaikwad PHI   |
| <b>6</b> | Electronic Instrumentation                | Khedkar   |
| <b>7</b> | Monograph on electronic design principles | Goel, Khaitan<br>Khanna publisher                         |
| <b>8</b> | Basic electronics and linear cincuits     | Bhargava,KUlshreshtha,Gupta<br>Technical education series |
| <b>9</b> | EDC I, EDC II                             | A.P. Godse, U.P.Bakshi<br>Technical Publishers pune       |

**Unit 1**

Concept development: defining inputs, process and output, generating ideas, screening ideas, developing and testing ideas, Simulation, Prototyping or Trial Production, Design Review, techno-commercial feasibility, product development, Ergonomic & aesthetic design, quality assurance and compliance.

**Unit 2**

Introduction to circuit maker, basics, accessing tools& features, saving schematic options, file management, drawing a schematic, creating simple RC circuit, setting up the analysis, running the simulation, mix signal simulation example.

**Unit 3**

Digital logic simulation, setting of parameters, analysis of simple circuits, Analog / mixed signal simulation setting of parameters, analysis of simple circuits.

**Unit 4**

Introduction to Virtual Instrumentation,  
Virtual Instrumentation System: Interface Bus, Input devices, Output devices, Software, Advantages of Virtual Instrumentation, Applications of Virtual Instrumentation, Virtual Instruments beyond the Personal Computer:

- 1** Study transient & AC analysis of RC circuit
- 2** Study transient & AC analysis of different OP-Amp as comparator
- 3** Study transient & AC analysis of different OP-Amp as inverting amplifier
- 4** Study transient & AC analysis of different OP-Amp as IA
- 5** Study CE amplifier parameters
- 6** Study CB amplifier parameters
- 7** Study CD FET amplifier parameters
- 8** Study of MOSFET Characteristics
- 9** Study of Low Pass Filter
- 10** Study of VI for Function Generator
- 11** Study of VI for Display(CRO)
- 12** Study of Average / Running average VI

**Reference Books**

- 1 Measurements of high frequency acoustic characteristics** Vilas Ghodki, Satish Sharma and S Rajagopalan
- 2 Circuit maker manual**

**Analogue And Digital Techniques****Unit 1**

Feedback: type, positive and negative feedback, Barkhausen criterion, Oscillators, types (AF and RF), basic oscillator action, L-C oscillator :Colpitts oscillator, RC oscillator using OP Amp ,phase shift oscillator, Wein bridge oscillator, oscillator stability, crystal oscillator, NOT gate based crystal oscillator.

**Unit 2**

Study of OP AMP as: astable multivibrator (asymmetric and symmetric), monostable multivibrator (simple circuit) , concept and working of sample and hold circuit, concept of Instrumentation Amplifier (three OP Amp circuit) and working

**Unit 3**

D/A converter, parameter: range, resolution, linearity and speed, weighted type D/A, limitations of weighted type D/A, R-2R D/A using Op Amp, limitations, types of D/A output (voltage , current, differential), dual bias D/A

**Unit 4**

Need for A/D conversion, parameters: range, resolution and speed, single slope A/D converters, dual slope A/D converter, Counter type, successive approximation type, Flash type, sampling theorem, Reference voltage and ADC stability

**B.Sc. ELECTRONICS PRACTICAL  
II**

*Semester 4 Section A*

- 1** Study of OP-amp based Wein bridge oscillator.
- 2** Study of OP-amp based Phase shift oscillator.
- 3** Study of Colpitt's oscillator.
- 4** Study of Op-amp as astable multi vibrator.
- 5** Study of Op-amp as Mono stable multi vibrator.
- 6** Study of Instrumentation amplifier.
- 7** Study of successive approximation ADC.
- 8** Study of Flash type ADC.
- 9** Study of Single slope ADC.
- 10** Study of Dual slope ADC.
- 11** Study of Binary weighted DAC.
- 12** Study of ladder type DAC
- 13** Study of NOT gate based crystal oscillator.
- 14** Study of Sample and hold circuit.

**Reference Books**

<b>1</b>	Digital and analogue Techniques	G.N.Navaneeth,V.M.Gokhale,R.G.Kale Kitab mahal
<b>2</b>	Digital principles and applications	A.P.Malvino,D.P.Leach McGraw Hill Book Co.
<b>3</b>	Op-Amp and linear circuits	Gaikwad PHI
<b>4</b>	Principles of digital Electronics	M.B.Matsagar,V.S.Kale Vision publication
<b>5</b>	Modern digital Electronics	R.P.Jain Tata McGraw Hill publishing co.ltd.
<b>6</b>	Digital fundamentals	Floyd,Jain Pearson
<b>7</b>	2000 solved problems in digital Electronics	S.P.Bali Tata McGraw Hill publishing co.ltd.
<b>8</b>	Electronic circuits and systems Analog and digital	Y.N.Bapat Tata McGraw Hill publishing co.ltd.
<b>9</b>	Digital electronics and logic design	B.S.Nair Prentice hall
<b>10</b>	Digital computer electronics	Malvino,Brown Tata McGraw Hill
<b>11</b>	Fundamentals of Digital Electronics	C.V.Dhuley and V.M. Ghodki

**Unit 1**

Block diagram for electronic system, Defining the system, characteristics, Analog, digital, real, virtual, dedicated, versatile, stand alone, PC based instruments.

Concept of calibration, standards for calibration

**Unit 2**

Sensors, actuators, transducers, active & passive transducers, characteristics,

Passive : Thermister (NTC & PTC), LM35, L.D.R. photo-transistor

Active : Piezo-electric transducer

Digital: pressure sensor (MPXV4006DP)

**Unit 3**

Block diagram of :

temperature measurement using thermister,

temperature measurement using LM35, advantage over thermister

lux meter using LDR,

colorimeter using LDR

insect repellent using piezo buzzer

**Unit 4**

Man-Instrument system, components, introduction to physiological system,

generation of bio potential, Block diagram and working of EEG, ECG & EMG,

electrical shock hazards, precautions, safety codes biomedical

**B.Sc. ELECTRONICS PRACTICAL  
II**

*Semester 4 Section B*

- 1 Study transfer characteristics of NTC type thermister
- 2 Study resolution in characteristics of NTC type thermister
- 3 Study transfer characteristics of LM 35
- 4 Study transfer characteristics of Water heater (around 300W)
- 5 Study of ON/ OFF type thermo-state using LM 35
- 6 Study transfer characteristics of LDR
- 7 Study transfer characteristics of Piezo-electric transducer
- 8 Comparative study of accuracy in 3 ½ digit, 4 ½ digit  
5 ½ digit Multimeters
- 9 Directivity study of carbon Mic.
- 10 “Look up table” based o/p using microcontroller

**Reference Books**

- |          |   |          |                  |
|----------|---|----------|------------------|
| <b>1</b> | Applied electronics and Instrumentation                           | C.M.Dhir | Tata McGraw Hill |
| <b>2</b> | Digital Instrumentation   | Bouwens  | Tata McGraw Hill |
| <b>3</b> | Electronic Instrumentation  | Khedkar  |                  |
| <b>4</b> | Modern . electronic Instrumentation and<br>measurement techniques | Cooper   | Prentice hall    |

## Electronics Communication

**Unit 1**

Introduction to Electronics communication, block diagram of communication system, Types of communication: analog, digital; simplex, duplex; baseband, modulated, concept of modulation, need for modulation, types of modulation (AM, FM, PM)

**Unit 2**

Propagation modes of signals: ground waves, sky waves, Ionosphere and satellite; antenna fundamentals, basic principles and types.

**Unit 3**

Digital communication: Introduction, synchronous, asynchronous transmission, Shannon theorem, ASK, FSK, and PSK modulation.

**Unit 4**

Fiber optic communication system, Advantages of FOC, concept of Fax, concept of cellular telephone, block diagram of cellular telephone, advantages

**B.Sc. ELECTRONICS PRACTICAL  
III**

*Semester 5 Section A*

- 1** Study of Half duplex communication system using PC/ $\mu$ C (2 wire interface)
- 2** Study of Full duplex communication system using PC/ $\mu$ C (3 wire interface)
- 3** ASK using op-Amp
- 4** FSK using op-Amp
- 5** Study of AM detector
- 6** Study of narrow band amplifier using op-amp/ Transistor
- 7** Study of intensity characteristics of LASER diode
- 8** X-bee interface using PC/  $\mu$ C / field strength study
- 9** IR Link study
- 10** Wire impedance measurement

**Reference Books**

- |          |   |                               |
|----------|---|-------------------------------|
| <b>1</b> | Electronic communication system                         | John kennedy Tata McGraw Hill |
| <b>2</b> | Communication electronics<br>principles and application | Frenzel Tata McGraw Hill      |
| <b>3</b> |   |                               |
| <b>4</b> |   |                               |

## Fundamentals of Microprocessor

**Unit 1**

Block diagram of Intel 8085, ALU, Timing and control unit, General purpose registers, Accumulator, PC, SP, IR, ID, Interrupt, Address and Data bus multiplexing, Flags. Instruction Cycle: T-states, Fetch operation, Execute operation, Machine cycle

**Unit 2**

Addressing mode, instruction Set- Data transfer group, arithmetic group, logic group, simple programs

**Unit 3**

Instruction set: branch control group, I/O and machine control group, simple programs, stack and subroutines

**Unit 4**

Need for interfacing, modes of data transfer, synchronous and asynchronous, interrupt driven, DMA, PPI 8255- Block diagram, modes, control word format

**B.Sc. ELECTRONICS PRACTICAL  
III**

*Semester 5      Section B*

- 1** Program based on Data transfer instructions.
- 2** Program based on Arithmetic instructions.
- 3** Program based on Logical instructions.
- 4** Program based on Branch instructions.
- 5** Program based on Control instructions.
- 6** Study of PPI 8255.

**Reference Books**

- |          |  |   |
|----------|--|---|
| <b>1</b> | Fundamentals of Microprocessor and Microcomputers                          | B.Ram Dhanpat Rai publications          |
| <b>2</b> | Microprocessor Architecture, programming and applications with 8085/8080 A | Ramesh S. Gaonkar<br>Wiley eastern ltd. |
| <b>3</b> | Introduction to microprocessor   | A.P. Mathur Tata McGraw Hill            |
| <b>4</b> | Microprocessor and interfacing   | D.V.Hall Tata McGraw Hill               |
| <b>5</b> | Introduction to Microprocessors  | Vilas Ghodki and Satish Sharma          |

**Programming in “C”****Unit 1**

Constant, Variables and Operators: Character set, C tokens, constant, Keyword, identifiers, variables, data types, declaration of variables, Arithmetic, relational logical, assignment, increment, conditional, bitwise, operators, Arithmetic expression, evaluation of expression, precedence of operators, input/output functions

**Unit 2**

Control Structures & Arrays: if- statements, if-else statement, switch statement, go-to statement, while statement, do-while statement, for statement, one dimensional array

**Unit 3**

User Defined Functions, Types of functions, return values and their types, scope and lifetime of variables in function; basic concept of structure and unions, difference between structure and union

**Unit 4**

Pointers: Basic concept, expression, variables Defining and opening file, closing a file, I/O operations on file, command line arguments, port interfacing.

**B.Sc.      ELECTRONICS PRACTICAL  
III**

*Semester 6    Section A*

- 1** Programs based on use of Variables, Operators, Input Output function
- 2** Programs based on Control Structure using if, if-else, switch, goto, while & do while
- 3** Programs based on use of one dimensional Array , Operations on array
- 4** Programs based on function writing, Use of structure and Union
- 5** Programs based on pointer operation, file operation
- 6** Programs based on communication with external data source like Printer & serial port

**Reference Books**

- |          |                         |  |
|----------|-------------------------|--|
| <b>1</b> | Let us C                | Y.Kanetkar   |
| <b>2</b> | Gate to C programming   | Kishor S B, Vilas Ghodki and Madhavi                       |
| <b>3</b> | C in depth              | Shrivastava BPB publication                                |
| <b>4</b> | Programming in ANSI C-E | Balgurusamy Tata McGraw Hill                               |
| <b>5</b> | Programming with C      | Byron Gottfried Schaums outline series<br>Tata McGraw Hill |
| <b>6</b> |                         |  |

**Microcontroller 8051****Unit 1**

Architecture and features, Internal and External memory, Flags, SFR Map, SFR Function, Accumulator, Register B, Port registers (P0, P1, P2 and P3), Power Management (PCON)

**Unit 2**

Instruction set: Data transfer, logical, arithmetic, interrupt handler, Addressing Modes

**Unit 3**

Subroutine and Stack, Need for Subroutine LCALL and RETURN Instructions, ACALL Instructions, Nesting of subroutine, Stack Operation and Stack Instruction, Branching (Jump Instruction), simple programs

**Unit 4**

Interfacing with Keyboard, display - LCD (16 x 2), ADC and DAC, LED Matrix and Serial communication with personal computer

**B.Sc. ELECTRONICS PRACTICAL  
III**

*Semester 6 Section B*

- 1** LED Blink
- 2** Relay interface
- 3** Stepper Motor Interface
- 4** 16x2 Interface
- 5** Study of bit operation on port(A,B,C,D)
- 6** LED Blink using timer
- 7** Frequency Generator using timer
- 8** External frequency counting timer
- 9** Interrupt driven operation
- 10** Single blink on key I/P
- 11** Opto- triac interface
- 12** Key to clk/CC
- 13** Serial interface with PC
- 14** ADC 0808 interface
- 15** DAC 0808 interface
- 16** IIC interface using R.T.C.

**Reference Books**

- |          |  |  |
|----------|--|--|
| <b>1</b> | 8051 microcontroller                       | V.Udayshankara, Mallikarjuna swamy<br>Tata McGraw Hill |
| <b>2</b> | Microcontroller theory and<br>applications | A.V.Deshmukh Tata McGraw Hill                          |
| <b>3</b> | Microcontroller                            | Rajkamal Pearsons                                      |
| <b>4</b> | Microcontroller                            | Mazidi and Mazidi                                      |

## **PROPOSED SYLLABUS**

# **ELECTRONICS**

**BOARD OF STUDIES  
ELECTRONICS, FACULTY OF  
SCIENCE AND  
TECHNOLOGY**

**SYLLABUS FOR B. SC.**  
**SUBJECT: ELECTRONICS**

**Program Outcome (POC) Framework:**

The following program outcomes have been identified for ELECTRONICS

<b>PO1</b>	Ability to design and conduct electronics experiments, as well as to analyze and interpret data
<b>PO2</b>	Utilize the basic knowledge of science Electronics and Communication
<b>PO3</b>	To provide opportunity to students to learn the latest trends in Electronics
<b>PO4</b>	To provide opportunities to the students for becoming researchers and developers
<b>PO5</b>	To satisfy the needs of the core Electronics Industry useful for the society in all walks of life.
<b>PO6</b>	To provide opportunities to the students to formulate, analyze and resolve the problems in Electronics Industry
<b>PO7</b>	To prepare students to share the teams working on recent multi-disciplinary projects for entrepreneurship.

**After studying the course contents given Semester wise and Paper wise the students shall able to achieve the Program Outcomes:**

**Proposed Flow chart ( revised)**

Work load 36 period /paper

<b>Sr. No.</b>	<b>Name of Semester</b>	<b>Name of Paper 1</b>	<b>Name of Paper 2</b>
1.	Semester 1	BASIC CIRCUIT COMPONENTS AND NETWORK ANALYSIS	Fundamentals of Digital Electronics
2.	Semester 2	Semiconductor Devices	Advanced Digital Electronics
3.	Semester 3	Analog Circuits	Linear Integrated Circuits
4.	Semester 4	Basic Communication Electronics	Analogue and Digital Circuits
5.	Semester 5	Modern Communication Systems	Introduction to Microprocessor 8085
6.	Semester 6	Programming in “C”	Microcontroller 8051 and its Applications

## B. SC. SEMESTER 1

### PAPER 1: BASIC CIRCUIT COMPONENTS AND NETWORK ANALYSIS

#### Course Outcome (COC) Framework:

<b>CO1</b>	To enrich the students with the basic requirement of electronic circuits.
<b>CO2</b>	To describe the theorems useful for circuit operation.
<b>CO3</b>	To explore the use of energy sources for circuit operations.
<b>CO4</b>	To familiarize about the use of transducers in instrumentation systems

#### UNIT 1

**Passive Elements:** Resistors, capacitors and inductors; their symbol, unit, types, construction and characteristics, Colour code system, Series and parallel combination. Voltage and Current divider circuits.

**Transformer:** classification, construction, working and applications.

Relays and Switches, Introduction to Surface mounting devices.

#### .UNIT 2:

**Circuit Analysis:** Energy sources AC & DC, Kirchhoff's Current & Voltage Laws, Node and loop analysis method

**Network Theorems:** Statements with explanation and problems (Dc only): Principal of Duality, Superposition Theorem, Thevenin's Theorem, Norton's Theorem, Millman's Theorem and Maximum Power Transfer Theorem.

## **UNIT 3:**

Transient Behavior of circuit elements under initial and final conditions in RL, RC and RLC circuits for AC and DC excitations

**AC Circuit Analysis:** Sinusoidal Voltage and Current, Definition of Instantaneous, Peak, Peak to Peak, Root Mean Square and Average Values

**Resonant Circuits:** Series and parallel resonance, frequency-response of series and Parallel circuits, Q-Factor, Bandwidth

## **UNIT 4:**

**Transducer:** Definition, Classification, characteristics of transducers, Construction and working of Resistive transducer- Potentiometer, Capacitive transducer-by changing dielectrics & changing distance between the plates, piezoelectric transducer, LVDT,strain gauges, temperature transducers- thermistors, RTDS and thermocouples.

## **INSTRUCTIONS FOR PRACTICALS:**

1. Every student has to perform minimum 10 Experiments- 5 from section A & 5 from section B amongst the list.
2. At the time of Examination every student has to perform Total 2 Experiments compulsorily 1 from section A & 1 from section B

### **Section A: Perform any 05 from the followings list**

1. To study components used in electronics circuits.
2. To study Transformer.
3. To Study & verify Thevenin's theorem.
4. To Study & verify Norton's theorem.
5. To Study & verify Maximum Power Transfer theorem.
6. To Study & verify Millman's theorem.

7. To study Potentiometer transducer for the measurement of displacement.
8. Study of RC and RL circuit
9. To study LVDT transducer for the measurement of displacement.
10. To study Thermistor & its properties.

**Books recommended:**

1. Basic Electronics (Solid State): B. L. Theraja S. Chand & Company, 2000.
2. Electronics Instrumentation: A. K. Sawney, Dhanpat Rai Publications.
3. A Textbook of Applied Electronics: R. S. Sedha, S. Chand Publications.
4. Basic Electronics and linear circuits: Bhargava and Gupta, TMH.
5. Electric Circuits: S. A. Nasar, Schaum's outline series, Tata McGraw Hill (2004).
6. Electrical Circuit Analysis: Mahadevan and Chitra, PHI.
7. Electronic instruments and measurement techniques: W. D. Cooper and A. D. Helfrick (PHI).
8. Network analysis by G. K. Mittal

## **B. SC. SEMESTER 1**

### **PAPER 2: FUNDAMENTALS OF DIGITAL ELECTRONICS**

#### **Course Outcome (COC) Framework:**

<b>CO1</b>	To enrich the students with the basic requirement of digital electronics.
<b>CO2</b>	To describe the use of Boolean Algebra for circuit operations.
<b>CO3</b>	To elaborate the use of flip flops as memory in data processing system.
<b>CO4</b>	To explore the use of binary circuits in digital system.
<b>CO5</b>	To familiarize about the basic building blocks required for digital system.

#### **UNIT 1:**

**Number Systems:** Decimal, Binary, Octal and Hexadecimal number systems, inter conversions. Representation of signed and unsigned numbers. Binary, octal and hexadecimal arithmetic; addition, subtraction by 1's and 2's complement method.

**Binary Codes:** BCD, Grey, XS3, parity and Alphanumeric codes.

#### **UNIT 2:**

**Logic Gates:** Study of OR, AND, NOT, NOR, NAND, XOR, XNOR, Universal Gates.

**Boolean algebra:** Boolean laws, simplification of equation, De'Morgan's Theorems, logic structures.

#### **UNIT 3:**

**Logic functions:** Standard logic functions, SOP and POS forms, minterms and maxterms, Minimization Techniques; Karnaugh's map minimization up to 4 variables for SOP only.

Combinational circuit: Adder, Subtractor, 4- bit Adder/ Subtractor, Decoder, Encoder, Multiplexers De-multiplexer (Basic circuits).

#### **UNIT 4:**

**Sequential Circuits:** Bi-stable multivibrator, SR, CKSR, D Flip-Flops and JK Flip-Flop; Race-around condition, Construction using Universal gates, Properties of FFS, Preset and Clear operations, Clocked FFS (Level and Edge Triggered), JK Master-Slave Flip-Flop, and T Flip-Flop.

#### **Section B: Perform any 05 from the followings list**

1. To study identification of Logic gates and verification of its truth table.
2. To realize and verify the operation of basic gates from Universal gates.
3. To Study De'Morgan's Theorems.
4. To construct & verify logic structure for given Boolean expression.
5. To Study construction of Half adder And Full adder.
6. To Study 4 bit parallel binary adder operation.
7. To Study decoder and encoder circuit.
8. To study multiplexer and de-multiplexer circuit.
9. To study SR, CKRS and D FFS.
10. To study JK and JKMS Flip-Flop.

#### **Books recommended:**

1. Analogue and Digital Techniques: G. N. Navneet.

2. Digital Principles and Applications: A. P. Malvino, D. P. Leach and Saha, 7th Ed., 2011, Tata McGraw Hill.
3. Fundamentals of Digital Circuits: Anand Kumar, 2nd Edn, 2009, PHI Learning Pvt. Ltd.
4. Digital Circuits and systems: Venugopal, 2011, Tata McGraw Hill.
5. Digital Systems: Principles & Applications, R. J. Tocci, N. S. Widmer, 2001, PHI.
6. Digital Fundamentals: Thomas L. Flyod, Pearson Education Asia (1994).
7. Digital Principles: R. L. Tokheim, Schaum's Outline Series, Tata McGraw- Hill (1994).

## **B. SC. SEMESTER 2**

### **PAPER 1: SEMICONDUCTOR DEVICES**

#### **Course Outcome (COC) Framework:**

CO1	To explain about semiconductors used for the fabrication of semiconductor devices.
CO2	To acquire the knowledge of transistor used in many electronic circuits.
CO3	To familiarize about the field effect transistor and its operation.
CO4	To explore the use of power devices required in electronics circuits.
CO5	To familiarize about the applications of diode, transistor and power devices.

#### **UNIT 1:**

**Semiconductors:** Classification and types, PN junction; Formation, depletion region, barrier potential, symbol, biasing modes, V-I characteristics, , diode current

equation, effect of temperature on diode current, ideal diode, basic diode ratings, Zener diode, LED construction, working, characteristics & uses.

## **UNIT 2:**

**Transistor Basics:** Formation of transistor; PNP and NPN, symbols, working principle, transistor current equation. Modes of operation; CB, CE and CC, input output and transfer characteristics in CB and CE configuration, definition of  $\alpha$ ,  $\beta$  and relation between them, simple problems, comparison of CB, CE and CC mode Regions of operation (active, cut off and saturation), Leakage currents, load line and Q point, Transistor as an amplifier and switch in CE configuration,.

## **UNIT 3:**

**Field Effect Transistors:** Construction, working and characteristics of JFET, FET Parameters  $r_d$ ,  $g_m$ ,  $\mu$  and their relation.

**MOS Field Effect Transistors:** Types of MOSFETs, Circuit symbols, Construction, Working and Characteristic curves of Depletion type MOSFET (both N channel and P Channel) and Enhancement type MOSFET (both N channel and P channel). Comparison between JFET and MOSFET.

## **UNIT 4:**

**Switching Devices:** Construction, Working principle, characteristic curves, symbol and Applications of UJT, SCR, DIAC and TRIAC.

## **INSTRUCTIONS FOR PRACTICALS:**

1. Every student has to perform Total 10 Experiments 5 from section A & 5 from section B amongst the list.
2. At the time of Examination every student has to perform Total 2 Experiments compulsorily 1 from section A & 1 from section B

### **Section A: Perform any 05 from the followings list**

1. To study V-I characteristics of diode, Zener diode and LED.
2. To study characteristics of transistor in CB mode and calculate  $\alpha$
3. To study characteristics of transistor in CE mode and calculate  $\beta$ .
4. To study the operation of transistor as an amplifier and switch.
5. To study output characteristics of FET and calculate  $r_d$ ,  $g_m$  and  $\mu$ .
6. To study output characteristics of MOSFET.
7. To study V-I characteristics of SCR.
8. To study V-I characteristics of DIAC.
9. To study V-I characteristics of UJT.
10. To study V-I characteristics of TRIAC.

**Books recommended:**

1. Basic Electronics (Solid State): B. L. Theraja S. Chand & Company, 2000.
2. A Textbook of Applied Electronics: R. S. Sedha, S. Chand Publications.
3. Electronic Devices and Circuits: Allen Mottershed.
4. Basic Electronics and linear circuits: Bhargava- Gupta, TMH.
5. Electric Circuits, S. A. Nasar, Schaum's outline series, Tata McGraw Hill (2004).
6. Electronic Devices and Circuits: David A. Bell, 5th Edition 2015, Oxford University Press.
7. Electronic Circuits: Discrete and Integrated, D.L. Schilling and C. Belove, TMH.
8. Electrical Circuit Analysis: Mahadevan and Chitra, PHI Learning.
9. Integrated Electronics: J. Millman and C. C. Halkias, Tata McGraw Hill (2001).
10. Learning Microelectronic circuits: A.S. Sedra, K.C. Smith, A.N. Chandorkar, 2014, 6th Edn, Oxford University Press.

## **B. SC. SEMESTER 2**

### **PAPER 2: ADVANCED DIGITAL ELECTRONICS**

#### **Course Outcome (COC) Framework:**

<b>CO1</b>	To enrich the students with the digital ICS used in electronics circuits.
<b>CO2</b>	To enhance the use of Flip-Flops in the construction of counters.
<b>CO3</b>	To familiarize the use of Counters & Registers in data processing system.
<b>CO4</b>	To explore the use of binary memory in digital system.
<b>CO5</b>	To disseminate about the building blocks required for digital system.

#### **UNIT 1:**

**Logic Families:** Introduction to IC's Scale of Integration, Classification digital ICs, Construction and Working of TTL, NAND and NOR gates, Construction and Working of CMOS NAND and NOR gates, Tristate logic, Comparison of TTL and CMOS

#### **UNIT 2:**

**Binary Counters:** Types, Asynchronous; up/down, Decade, Modified and Synchronous counter, Ring Counter, Johnson counter; Construction, working, Truth tables and timing diagrams (4 bits), Uses.

#### **UNIT 3:**

**Shift Registers:** Introduction, Buffer Register, Controlled Buffer Register, Data Transmission in shift registers; Construction and Working of Serial-in serial-out,

serial-in parallel-out, Parallel-in serial-out, Parallel-in Parallel-out, Right Shift and Left Shift, Uses.

#### **UNIT 4:**

**Memory Organization:** Types of RAM and ROM, Characteristics of Memory Systems, Memory Hierarchy, Main Memory, Organization; Address & data bus, Static and dynamic RAM, Memory expansion; address and data size using address table method.

#### **Section B: Perform any 05 from the followings list**

To study CMOS NAND gate and verify its operation.

1. To study CMOS NOR gate and verify its operation.
2. To Study the working of 4-bit Asynchronous counter.
3. To Study 4-bit Asynchronous counter as UP/Down counter.
4. To Study the working of Asynchronous modified counter.
5. To Study the working of Jonson's counter.
6. To Study the working of ring counter.
7. To Study Serial-in register as serial-out and parallel-out.
8. To Study Parallel-in register as serial-out and parallel-out.
9. To study RAM and ROM Structure.

#### **Books recommended:**

1. Basic Electronics (Solid State): B. L. Theraja S. Chand & Company, 2000.
2. Digital Principles and Applications: A. P. Malvino, D. P. Leach and Saha, 7th Ed., 2011, Tata McGraw Hills.
3. Fundamentals of Digital Circuits: Anand Kumar, 2nd Edn, 2009, PHI Learning Pvt. Ltd.

4. Digital Circuits and systems: Venugopal, 2011, Tata McGraw Hill.
5. Digital Systems: Principles & Applications, R. J. Tocci, N. S. Widmer, 2001, PHI.
6. Digital Fundamentals: Thomas L. Flyod, Pearson Education Asia (1994).
7. Digital Principles: R. L. Tokheim, Schaum's Outline Series, Tata McGraw-Hill (1994).

**B. SC. SEMESTER 3**  
**PAPER 1: ANALOG CIRCUITS**

**Course Outcome (COC) Framework:**

<b>CO1</b>	To illustrate applications of diode as clippers, clamper and rectifier.
<b>CO2</b>	To describe the role of transistor in amplification, signal analysis and two port hybrid circuit for testing amplifier parameters.
<b>CO3</b>	To elaborate the concept of feedback and construction of feedback amplifier and oscillators.
<b>CO4</b>	To explore the use of power amplifier in electronics circuits.
<b>CO5</b>	To familiarize about the applications of diode and transistor.

**UNIT 1:**

**Diode Circuits:** Clipping, two level clipping and clamping circuits.

**Rectifiers:** HWR, FWR (center tapped and bridge). Circuit diagrams, construction and working, AC and DC voltages, PIV rating, Form factor, Ripple factor & Efficiency, comparison.

**Filters:** types, circuit diagram and explanation of shunt capacitor filter with waveforms.

**UNIT 2:**

**Transistor biasing and Stability:** Factors affecting stability & Thermal runaway, Stability factor, Fixed Bias, collector to base bias and Voltage Divider bias circuits. Transistor as a two port network, Short circuit and open circuit tests, h-parameter equivalent circuit. Small signal analysis of single stage CE amplifier. Current and Voltage gains, Input and Output impedance, Simple problems.

### **UNIT 3:**

**Power Amplifiers:** Difference between voltage and power amplifier, classification of power amplifiers, Class A, Class B, Class AB, Class C and their comparisons. Construction and Operation of Transformer coupled Class A power amplifier, its overall efficiency. Complementary symmetry Class B push pull power amplifier construction, Circuit operation and calculation of efficiency, crossover distortion.

### **UNIT 4:**

**Feedback Amplifiers:** Negative and Positive feedback, Theory of feedback using block diagram, advantages and disadvantages of negative feedback.

**Oscillators:** Principle of operation, Analysis and derivation of frequency of oscillation of phase shift oscillator, Wien bridge oscillator, crystal oscillator and frequency stability.

### **INSTRUCTIONS FOR PRACTICALS:**

1. Every student has to perform Total 10 Experiments 5 from section A & 5 from section B amongst the list.
2. At the time of Examination every student has to perform Total 2 Experiments compulsorily 1 from section A & 1 from section B

#### **Section A: Perform any 05 from the followings list**

1. To study diode clipper circuits.
2. To study diode clamper circuits.
3. To Study half wave & Full wave rectifier.
4. To Study the effect of C- filter on the output of Full wave rectifier.
5. To study h-parameters of CE transistor amplifier.
6. To study Single Stage CE amplifier and its gain-frequency response.
7. To study transformer coupled class A power amplifier & calculation of its efficiency.
8. To study push-pull class B power amplifier & calculation of its efficiency.
9. To study RC Phase shift Oscillator & calculation of its frequency.
10. To study Wien bridge Oscillator & calculation of its frequency.

**Books Recommended:**

1. Basic Electronics (Solid State): B. L. Theraja S. Chand & Company, 2000
2. A Textbook of Applied Electronics: R. S. Sedha , S. Chand Publications
3. Electronic Devices and Circuits: Allen Mottershed
4. Basic Electronics and linear circuits: Bhargava- Gupta , TMH
5. Electric Circuits: S. A. Nasar, Schaum's outline series, Tata McGraw Hill (2004)
6. Electronic Devices and Circuits: David A. Bell, 5th Edition 2015, Oxford University Press.
7. Electronic Circuits: Discrete and Integrated, D.L. Schilling and C. Belove, TMH
8. Integrated Electronics: J. Millman and C. C. Halkias, Tata McGraw Hill (2001)

**B. SC. SEMESTER 3**

**PAPER 2: LINEAR INTEGRATED CIRCUITS**

## **Course Outcome (COC) Framework:**

<b>CO1</b>	To study DC & AC characteristics of operational amplifier
<b>CO2</b>	To elucidate and design linear and nonlinear circuits of OP-AMP.
<b>CO3</b>	To study timer IC and its applications.
<b>CO4</b>	To elaborate the role of filters in electronics circuits.
<b>CO5</b>	To explore the knowledge of linear integrated circuits and its uses.

### **UNIT 1**

**Basic Operational Amplifier:** Concept of differential amplifiers (Dual input balanced and unbalanced output), construction and working, Block diagram of an operational amplifier (IC 741) Op-Amp parameters: input offset voltage, input offset current, input bias current, differential input resistance, input capacitance, offset balancing, input voltage range, common mode rejection ratio, slew rate, supply voltage rejection ratio, Open and closed loop configuration, Frequency response of an op-amp in open loop and closed loop configurations.

### **UNIT 2**

**Op-Amp Circuits:** concept of virtual ground, Inverting and Non-inverting amplifier, sign changer, voltage follower, Summing and difference amplifier, Integrator and Differentiator, simple problems.

### **UNIT 3**

**Comparator:** Basic types of comparator and Schmitt Trigger using OP-AMP.

**IC 555:** Pin diagram, Block diagram, Applications as Monostable, Astable multivibrator, PAM and PWM.

### **UNIT 4**

**Signal conditioning circuits:** Necessity, Sample and hold circuit systems.

Active filters: First order low pass and high pass butterworth filter, Second order filters, Band pass filter, Band reject filter.

### **Section B: Perform any 05 from the followings list**

1. To Design inverting amplifier using OP-AMP & calculation of its gain.
2. To Design Non-inverting amplifier using OP-AMP & calculation of its gain.
3. To Design and study Op-Amp as adder.
4. To Design and study Op-Amp as Difference amplifier
5. To investigate the use of an op-amp as an Integrator.
6. To investigate the use of an op-amp as Differentiator
7. To design an Astable Multivibrator using IC 555 Timer & calculation of its frequency.
8. To design a Monostable Multivibrator using IC 555 Timer& calculation of its pulse width.
9. To study the zero-crossing detector and comparator.
10. To study Schmitt trigger circuit using OP-AMP.

### **Books recommended:**

1. Digital Principles and Applications: A.P. Malvino, D. P. Leach and Saha, 7th Ed., 2011, Tata McGraw Hill.
2. Fundamentals of Digital Circuits: Anand Kumar, 2nd Edn, 2009, PHI Learning Pvt. Ltd.
3. Digital Circuits and systems: Venugopal, 2011, Tata McGraw Hill.
4. Digital Systems: Principles & Applications: R. J. Tocci, N.S.Widmer, 2001, PHI.

5. Digital Fundamentals: Thomas L. Flyod, Pearson Education Asia (1994).
6. Digital Principles: R. L. Tokheim, Schaum's Outline Series, Tata McGraw Hill (1994).
7. A monograph on Electronics Design Principle:
8. Integrated Circuits: K. R. Botkar

## B. SC. SEMESTER 4

### PAPER 1: BASIC COMMUNICATION ELECTRONICS

#### **Course Outcome (COC) Framework:**

<b>CO1</b>	To understand functioning of basic processes in communication systems.
<b>CO2</b>	To understand analogue modulation & demodulation techniques.
<b>CO3</b>	To Understand transmission and reception systems.
<b>CO4</b>	To understand propagation of radio waves in communication systems.
<b>CO5</b>	To understand the process of analogue signal communication system.

#### **UNIT 1**

**Communication systems:** Introduction, Elements of communication system, Need of modulation, types of modulation, Frequency spectrum, TDM, FDM, Noise, signal to noise ratio, noise figure, and noise temperature, noise calculation in single and cascaded stages.

#### **UNIT 2**

**Modulation techniques:** Time domain equation of AM wave, Modulation index, effects of over modulation, frequency spectrum and bandwidth, power and voltage calculations of AM signal, Suppressed carrier and single side band techniques, Time domain equation of FM wave, Modulation index, frequency spectrum and

bandwidth, side bands, power of side bands, frequency deviation, merits and demerits of FM over AM.

## **UNIT 3**

**Transmitters and Receivers:** Specifications of transmitters, low level modulation, high level modulation, heterodyne type transmitters, SSB transmitter, FM transmitter, Armstrong method of FM generation, sensitivity, selectivity, fidelity of receiver, TRF receiver, super heterodyne AM receiver, selection of IF, IF amplifier circuits, AVC, FM receiver, Comparison of AM receiver and FM receiver

## **UNIT 4**

**Transmission Lines and Wave Propagation:** Electrical equivalent of transmission lines, characteristic impedance, reflection coefficient, SWR, transmission line losses, impedance matching, Electromagnetic waves, wave polarization and its types, ground wave propagation, space wave propagation; LOS, sky wave propagation, ionosphere layers, critical frequency, MUF, virtual height.

### **INSTRUCTIONS FOR PRACTICALS:**

1. Every student has to perform Total 10 Experiments 5 from section A & 5 from section B amongst the list.
2. At the time of Examination every student has to perform Total 2 Experiments compulsorily 1 from section A & 1 from section B

#### **Section A: Any 05 from the followings list**

1. To study Amplitude Modulator using Transistor/ Op-amp.
2. To study Frequency Modulator using Transistor/ Op-amp.

3. To study envelope of AM signal and calculation of  $m_a$ .
4. To study AM Transmitter and Receiver.
5. To study FM Transmitter and Receiver.
6. To study TRF receiver.
7. To study super heterodyne receiver.
8. To study Time Division Multiplexing (TDM).
9. To study Frequency Division Multiplexing (FDM).
10. Study of transmission line and impedance matching.

**Books recommended:**

1. Communication Electronics: A. Kumar
2. Electronic Communications: D. Roddy and J. Coolen, Pearson Education India.
3. Advanced Electronics Communication Systems: Tomasi, 6th edition, Prentice Hall.
4. Electronic Communication systems: G. Kennedy, 3rd Edn., 1999, Tata McGraw Hill.
5. Principles of Electronic communication systems: Frenzel, 3rd edition, McGraw Hill
6. Wireless communications: Andrea Goldsmith, 2015, Cambridge University Press
7. Electromagnetic waves and radiating systems: Jordan and Balmian, PHI.
8. Antenna and Wave propagation: K. D. Prasad, Pragati Prakashan, 2009
9. Microwave Devices and Circuits: Liao Y., Prentice Hall of India.
10. Microwave Engineering: S. Kulkarni, Umesh Publication, 2009.
11. Microwave principles: Reich, CBS, 1996.
12. Foundation of Microwave Engineering: Collin, 2nd cd. McGraw Hill, 1992.

13. Microwave Semiconductor Devices and Their Circuit Applications: Watson,  
McGraw Hill.

14. Antennas: J. D. Krauss, TMH.

## B. SC. SEMESTER 4

### PAPER 2: ANALOGUE AND DIGITAL CIRCUITS

#### Course Objectives with Outcome Framework (COCF):

<b>CO1</b>	To study DAC and ADC used for data conversions in electronics system.
<b>CO2</b>	To elucidate and design regulated DC power supply for operating electronic devices.
<b>CO3</b>	To study PLL IC 565 and its applications.
<b>CO4</b>	To elaborate the role of transducers in Bioelectronics circuits.
<b>CO5</b>	To explore the knowledge of Analogue and Digital circuits and its uses.

#### UNIT 1

**D/A Converters:** Need of converters, D/A converter parameters; range, resolution, linearity and speed, weighted and R-2R ladder type D/A using OP-AMP, its limitations.

**A/D Converters:** Single and dual slope, Counter type, successive approximation and flash type A/D converters, sampling theorem.

#### UNIT 2

**DC Power Supply:** Concept of regulation, regulated PS, Zener regulator, feedback type regulated power supply, Series pass transistor, short circuit protection,

General features of IC regulators, advantages, Design of fixed and variable power supply, 78xx and 79xx series of ICS, LM 317, design of dual power supply, LM 317 as variable regulator, Limitations of linear regulator, Switching regulator; SMPS, Concept of Low Drop Out regulator; LDO.

## **UNIT 3**

**PLL and its Applications:** Operation of basic PLL circuit, Closed loop analysis, Voltage controlled oscillator, Monolithic PLL IC 565, application of PLL for AM detection, FM detection, FSK modulation, demodulation, Frequency synthesizing and Clock synchronization.

## **UNIT 4**

**Applications of Transducer:** Tachometer types and principle of operation, Lux meter and Colorimeter using LDR, Insect Repellent using Piezobuzzer.

**Biomedical Instrumentation:** Introduction, electrodes, Man Instrument system, Block diagram and working of ECG, EEG and EMG, Shock hazards.

### **Section B: Perform any 05 from the followings list**

1. To study weighted resistor ADC using OP-AMP.
2. To study R-2R ladder ADC using OP-AMP.
3. To study counter DAC.
4. To study flash type DAC.
5. To design power supply using LM317.
6. To design power supply using 78xx and 79xx.
7. To study PLL AM detector.
8. To study FSK modulator.
9. To study characteristics of LDR.

10. To Study Insect Repellent using Piezobuzzer.

11. Study of VCO

**Books recommended:**

1. Instrumentation, Measurements and Analysis: B.S. Nakara and K K Chaudhry ( TMH)
2. Analog and Digital Techniques: G. N. Navneet
3. Electronic instruments and measurement techniques: W. D. Cooper and A.D.Helfrick (PHI)
4. Electronic Instruments: K.S. Kalsi ( Tata Mc-Graw Hill)
5. Op-Amps and Linear circuits: Ramakant Gaikwad (PHI)
6. Operational Amplifiers and Linear ICs: Caughlin and Driscoll (PHI)
7. Operational Amplifier with Linear Integrated Circuit:W. D. Stanley (CBS Publications)
8. Integrated Electronics: K. R. Boatkar

**B. SC. SEMESTER 5**

**SEMESTER V**

**PAPER 1 Modern Communication Systems**

**Course Outcome:**

<b>CO1</b>	To understand the concept optical communication and its operation
<b>CO2</b>	To understand various digital modulation and demodulation techniques.
<b>CO3</b>	To analyze the performance of digital communication system in terms of error rate and spectral efficiency
<b>CO4</b>	To understand the telecommunication traffic, channel and cellular capacity
<b>CO5</b>	To understand various application of cellular technology

**UNIT-1**

**Optical Sources and detector:** Working principle and characteristics of LASER and Photo-detector

The evolution of fiber optic systems, block diagram, advantages of optical fiber communication and its applications

**Transmission characteristics of optical fiber :** Attenuation, absorption, scattering losses, bending loss, dispersion, Intra modal dispersion, Inter modal dispersion

## UNIT-2

Digital Communication and Digital Modulation. Introduction to digital communication, Sampling theorem, pulse modulation, pulse code modulation, delta modulation, Data coding, asynchronous transmission, synchronous transmission, error detection and correction, Amplitude shift keying(ASK), frequency shift keying (FSK), phase shift keying (PSK),

## UNIT-3

Satellite Communication: Introduction, Satellite orbits, geostationary satellites, Application of geostationary satellites, Satellite in Low & medium earth orbits, Satellite Telephone systems using LEO & MEO Satellites.

## UNIT-4

Mobile Communication : Evolution of Mobile Radio Communication - Cellular concepts – Cellular systems operation – AMPS operation – Digital cellular mobile system – GSM standard and service aspects – GSM architecture, CDMA systems

List of the experiments

1. To Study of characteristics of LASER diode
2. To Study of characteristics of Photo detector
3. To Study of ASK
4. To Study of FSK
5. To Study of PSK
6. To perform time division multiplexing of four signals
7. To perform the characteristics of frequency synthesizer using PLL
8. To study the DTMF based load control system
9. To study the DTMF based dialed telephone number on seven segment display

## Books Recommended

1. Communication Electronics: A. Kumar
2. Electronic Communications: D. Roddy and J. Coolen, Pearson Education India.
3. Advanced Electronics Communication Systems: Tomasi, 6th edition, Prentice Hall.
4. Electronic Communication systems: G. Kennedy, 3rd Edn., 1999, Tata McGraw Hill.
5. Principles of Electronic communication systems: Frenzel, 3rd edition, McGraw Hill
6. Optical fibre communication by V S Bagad
7. Mobile Communication by John Schiller
8. Satellite communication by Gerard Maral and Michel Bousquet

s

## B. SC. SEMESTER 5

### PAPER 2: INTRODUCTION TO MICROPROCESSOR

#### Course Outcome (COC) Framework:

<b>CO1</b>	To understand importance of Microprocessors as a programmable digital system element in computer system.
<b>CO2</b>	To understand architecture and features of 8085 Microprocessor.
<b>CO3</b>	To explore some basic concepts of microprocessors through assembly language programming.
<b>CO4</b>	To grown-up the in-depth understanding of the operation of microprocessors and machine language programming & interfacing techniques.
<b>CO5</b>	To augmented the knowledge of interfacing the peripheral to increase the flexibility of microprocessor

## **UNIT 1**

### **8085 Microprocessor Architecture:**

Introduction, Main features of 8085, Pin diagram and Architecture of 8085 Microprocessor, Internal registers Organization, Address and Data bus multiplexing, Flags, Instruction fetch and execution cycles.

## **UNIT 2**

### **Instruction Set:**

Instruction Format 1 byte, 2 byte and 3 byte, Data transfer group, arithmetic group, logic group, branch control group, I/O and machine control group, Addressing modes.

## **UNIT 3**

**Stack and Subroutines:** Stack and its PUSH, POP operations, Need of subroutine, Subroutine calls and return operations, Delay loops.

**Interfacing:** Need of Interfacing, Address space portioning; memory mapped I/O and I/O mapped I/O, IN and OUT instruction.

## **UNIT 4**

**Interrupts:** Hardware interrupts, software interrupts, priority structure of 8085 interrupts.

**Modes of data transfer:** Programme data transfer -synchronous and asynchronous, interrupt driven, DMA- cycle stealing and burst mode

**PPI 8255 :**Block diagram of 8255 PPI, modes of operation, control word formats.

## **Section B:INSTRUCTIONS FOR PRACTICALS**

- 1) Assembly Language Programming could be done using 8085 Microprocessor Kit **OR** on standard IDE simulator.
- 2) At least any 05 from the followings list.

List of experiment:-

1. Program based on data transfer group
2. Program based on arithmetic group
3. Program based on logical group
4. Program based on branch instruction group
5. Program based on stack operation.
6. Program based on subroutine.
7. Program based on machine control group
8. Study of PPI- 8255

**Books recommended:**

1. Microprocessor Architecture Programming & applications with 8085: Ramesh S. Goankar, Prentice Hall.
2. Introduction to Microprocessor: Aditya. P. Mathur. Tata McGraw, New Delhi
3. Fundamentals of Microprocessor: Bedari Ram. Dhanpat Rai Publications, New Delhi
4. 8085 Microprocessor Architecture Programming And Interfacing by Kumar and B S Umashankar, PEARSON INDIA
5. Microprocessor Organisation and Architecture, Leventhal L.A, Prentice Hall India.

B.Sc. Sem. VI  
Paper I  
Programming in ‘C’  
Course outcome (COC) framework

<b>CO1</b>	After completion of course, Students are able to
<b>CO2</b>	Develop their programming skills
<b>CO3</b>	Familiar with elements of C language
<b>CO4</b>	Understand operators, Expression and Preprocessors
<b>CO5</b>	Understand different decision making and concept of looping in C
<b>CO6</b>	Understand Array, Structure, Function and Pointers, their declaration and use

**Unit I:**

History of C, Character set, C tokens, Constant, Variables, Keyword, Identifiers, C-operators, C-expressions, formatted input, formatted output instruction ( simple program based on C)

**Unit II:**

**Decision making and branching statement:** simple if statement, if-else statement, else-if ladder statement, nested if-else statement, switch statement, break statement

**Decision making and looping:** while loop, do-while loop, for loop, continue statement

(Simple program based on above topic)

**Unit III:**

**array, strings, structure and union**

**array:** declaration and initialization of one dimensional and two dimensional arrays, Character array, accessing array element,

**Standard string handling functions:** strlen(), strcpy(), strcat(), strcmp()

**Structure:** defining, declaring and accessing, initialization of structure, array of structure

**Union:** defining, declaring and accessing, initialization of union

## **Unit IV:**

### **Functions and Pointers**

**Function:** Need of function, scope and lifetime of variable, delay function, function call, call by value, call by reference, return values, category of function, recursion

**Pointers:** defining pointer, declaring pointer variable, initialization of pointer variable, accessing address of variable, pointer expression, pointer arithmetic.

**FileHandling:** concept of file Handling.

## **List of Practical**

### **Section A: Any 05 from the following list**

1. Program related to use of scanf(), printf(), variable, initialization and declaration
2. Program related to use of arithmetic, relational, conditional and logical operators
3. Program related to use of if, if-else, nested if, switch statement
4. Program related to use of for loop, while loop, do-while loop, continue, goto, break statement
5. Program related to use of one dimensional array
6. Program related to use of two dimensional array
7. Program related to use of function
8. Program related to use of recursion function
9. Program related to use of standard string function
10. Program related to structure in C
11. Program related to pointer in C

### **Books recommended:**

- |                          |  |
|--------------------------|--|
| 1. Let us C              | Y.Kanetkar                             |
| 2. Gate to C programming | Kishor S B, Vilas Ghodki and Madhavi   |
| 3. C in depth            | Shrivastava BPB publication            |
| 4. Programming in ANSI C | Balgurusamy Tata McGraw Hill           |
| 5. Programming with C    | Byron Gottfried Schaums outline series |

## B. SC. SEMESTER 6

### PAPER 2: MICROCONTROLLER 8051 AND ITS APPLICATIONS

#### Course Outcome (COC) Framework:

CO1	To understand architecture and features of 8051 Microcontroller.
CO2	To learn Programming of 8051 microcontroller.
CO3	To learn interfacing of 8051 Microcontroller with real world input and output devices.
CO4	To understand the coding and interfacing of 8051 with various IO devices.
CO5	To understand importance of Microcontrollers in atomization and control system

#### UNIT 1

**8051 Microcontroller:** Introduction, Difference between microprocessor and Microcontroller, Salient features of microcontroller 8051, Pin description, Block diagram, General purpose RAM, Bit addressable RAM and Register bank, Special function registers, Flags and PSW, A, B registers, Stack and Stack Pointer, Data Pointer, port registers, timer registers, serial port registers, interrupt registers, Oscillator & Clock, Program Counter, , Reset operation. I/O port structure,

#### UNIT 2

**Memory organization in 8051:** Internal RAM /ROM and External RAM /ROM

**Instruction Set of 8051:** Data Transfer Instructions, Logical Operation, Arithmetic Operations, Boolean instructions, conditional and unconditional branching instructions, Various addressing modes,

## **UNIT 3**

**Stack:** stack operation and stack instruction

**Subroutine;** Concept and related instructions-**ACALL, LCALL RET, RETI,** Delay subroutine and calculations for delay generation

**Interrupts in 8051:** Sources of interrupts, vector table, enabling and disabling, TCON and IE registers, interrupt priority, IP register, handling external interrupts;;

**Timmers in 8051:** use of timers, programming concept of timers.

## **UNIT 4**

**Interfacing with 8051:** Key bouncing, hardware and software debouncing techniques, interfacing of 4x 4 key matrix, LED, Seven segment display, 16x2 LCD, ADC (0804), DAC (0808), Relay, interfacing of switch and LED, serial communication using 8051 microcontroller, programming concept for receiving and transmitting data serially

### **Section B: At least any five from the followings list**

1. Arithmetic operations using 8051.
2. Logical operations using 8051.
3. Study of timers of 8051 in mode 1 and mode 2.
4. Use one of the four ports of 8051 for O/P interfaced to eight LED's.
5. LED blink.
6. Single blink on key I/P
7. 16x2 LCD interface

8. Simulate binary counter (8 bit) on LED's.
9. DAC 0808 interfacing to 8051.
10. ADC 0804 interfacing to 8051.
11. Relay interfacing to 8051
12. Stepper Motor Interface

**Books recommended:**

1. Microcontroller, Architecture, Programming and Applications: Kenneth J. Ayala
2. The 8051 Microcontroller, Architecture, Programming and Application: Myke Predko.
3. The 8051 Microcontroller and Embedded Systems: M. A. Mazadi, J. G. Mazadi, Pearson Education, Asia.
4. The 8051 Microcontroller And Embedded Systems, Using Assembly and C: Kenneth J. Ayala, Dhanjay V. Gadre.
5. PIC microcontroller and Embedded Systems using assembly and C for PIC 18: Muhammad Ali Mazadi et al. Pearson Education publication, 1st Edition, Fourth Impression 2011(Indian Edition).
6. C and the 8051: Programming and Multitasking: Schultz, P T R Prentice-Hall, Inc. Embedded C, Michael J. Pont.

**RASHTRASANT TUKDOJI MAHARAJ NAGPUR UNIVERSITY,  
NAGPUR**

**BOARD OF STUDIES IN MATHEMATICS**

**B. Sc. Three Years (SIX SEMESTER) DEGREE COURSE**

**B.Sc. Part I (Semester I & II)**

**B. Sc. Part II and Final (Semester III, IV, V & VI)**

## **B. Sc. Part I (Semester I)**

### **M-1      Algebra and Trigonometry**

#### **Unit I**

Rank of matrix , Normal form , Some theorems on rank(without proof) , Linear equation, Solution of non- homogeneous linear equations , Homogeneous linear equations.

Eigen values, Eigen vectors , Characteristic value problem , Cayley-Hamilton theorem (without proof) and it's use in finding Inverse of a matrix.

#### **Unit II**

Relation between the roots and coefficients of general polynomial equation in one variable , Transformation of equations , Reciprocal equations , Descartes rules of signs , Solution of cubic equations (Cardon method) , Biquadratic equations (Ferrari's method).

#### **Unit III**

De Moivre's theorem & its applications , Inverse circular and hyperbolic functions , Logarithm of a complex quantity , Expansion of trigonometrical functions , Gregory's series.

#### **Unit IV**

Definition of a group with examples and properties , Subgroups , Cosets , Langrange's theorem , Permutation groups , Even and odd permutations.

**Text Books:**

**Mathematics For Degree Students (B.Sc. First Year)**

Dr. P. K. Mittal , S. Chand and Co. Ltd, New Delhi , 2010.

**For Unit -I: Scope:** Chapters 6, 7, 8 of Algebra with articles 6.2, 6.3, 6.3.1 (without proofs), Examples, Exercise, 7.1, 7.3, 7.4 (without proofs), 7.5, Examples, Exercise, 8.1, Examples, Exercise, 8.3(without proof), 8.3.1, Examples, Exercise.

**For Unit-II: Scope:** Chapter 9 of Algebra with articles 9.1, 9.2( without proofs) 9.3, 9.4, Example, Exercise, 9.5, Examples, Exercise, 9.6, Example, Exercise, 9.7,9.8, 9.8.1, Example, Exercise, 9.11, 9.12, Examples, Exercise, 9.13.1, Example, Exercise.

**For Unit-III: Scope:** Chapters 1,2,3,4,5 of Trigonometry with articles 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, 2.9, 3.1, 3.2, 3.3, 3.4, 4.1, 4.1.1, 4.12, 5.1, 5.2, 5.3

**For Unit-IV: Scope:** Chapters 10, 11 of Algebra with articles 10.1, 10.1.1, 10.3, 10.3.1, 10.4 (theorems 1-6) 10.7, 10.10, 10.10.1, 10.10.2, 10.12, 10.13, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6.

**Reference Books:**

1. I. N. Herstein: Topics in Algebra, Wiley Eastern Ltd., New Delhi, 1975
2. K. B. Datta: Matrix and Linear Algebra, Prentice Hall of India Pvt. Ltd., New Delhi- 2000.
3. P. B. Bhattacharya, S. K. Jain and S. R. Nagpaul: First course in linear algebra, Willey western New Delhi, 1983.
4. P. B. Bhattacharya, S. K. Jain and S. R. Nagpaul: Basic Abstract Algebra (2<sup>nd</sup> edition) Cambridge University Press, Indian Edition, 1997.
5. S. K. Jain, A. Gunawardena and P. B. Bhattacharya: Basic Linear Algebra with Matlab, Key College Publishing (Springer-Verlag), 2001.
6. H. S. Hall and S. R. Knight: Higher Algebra, S.Chand & Co. Ltd.,New Delhi,2008.

7. R. S. Verma & K. S. Shukla: Text Book on Trigonometry, Pothishala Pvt. Ltd. Allahabad.
8. Ayres Jr. Frank: Matrices, Schaum's Outline Series, Mcgraw Hill Book Company, Singapre, 1983.
9. Hohn Franz E: Elementary Matrix Algebra, Amerind Publishing Co. Ltd., 1964.
10. McCoyNeal H: Introduction to Modern Algebra, Allyn & Bacon inc., 1965.
11. Spiegel M. R.: Complex Variables, Scaum's Outline Series, McGraw- Hill, 1981.
12. Shanti Narayan: A Text Book of Matrices, S. Chand & Co. Ltd., New Delhi.
13. S.L.Loney:Plane Trigonometry(Part II),S. Chand & Co. Ltd.,New Delhi,
14. Chandrika Prasad:Text Book on Algebra and Theory of Equations, Pothishala Private Ltd., Allahabad.

## **B. Sc. Part I (Semester I)**

### **M-2 Calculus**

#### **Unit I**

Definition of the limit of the function of one variable and basic properties of limit , Continuous function of one variable and classification of discontinuities (only definitions with examples) , Differentiation , Successive differentiation , Lebinitz's theorem.

#### **Unit II**

Maclaurin and Taylor series expansions , Curvature , Asymptotes , Indeterminate forms and L'Hospital's rule.

#### **Unit III**

Partial differentiation ,Differential and Chain rules (Definitions and Theorems without Proof) , Euler's theorem on homogeneous functions and its applications , Jacobians

#### **Unit IV**

Integrations of irrational algebraic functions, Reduction formulae , Definite integrals (Examples on properties of definite integral).

#### **Text Books:**

##### **1. Differential Calculus**

Shanti Narayan & P. K. Mittal , S.Chand and Co. Ltd, 2005.

Scope : Chapters 3, 4 (articles 4.1 to 4.1.4 ), 5,6,10,11,12,14 (articles 14.1 to 14.3.2), 15(articles 15.1 to 15.3.2).

##### **2. Integral Calculus**

Gorakh Prasad, Pothishala Private Ltd. 1999,

Scope : Chapters 3,4,5 (Art 3.1,3.2,3.3,3.4,3.5,3.7,4.11,4.13,4.15,4.2,4.21,5.1,5.2 (without proof), 5.3).

**Reference Books:**

1. Gabriel Klamballel: Mathematical Analysis, Marcel Dekkar Inc., New York, 1975
2. N. Piskunov: Differential and Integral Calculus, Peace Publishers, Moscow.
3. P. K. Jain and S. K. Kaushik: An Introduction to Real Analysis, S. Chand and Co.Ltd., New Delhi, 2002.
4. Gorakh Prasad: Differential Calculus, Pothishala Private Ltd., Allahabad.
5. Ayres F. Jr.: Calculus, Schaum's Outline Series, McGraw- Hill, 1981
6. Edward J.: Differential Calculus for Beginners, MacMillan and Co. Ltd., 1963
7. Edward J.: Integral Calculus for Beginners, AITBS Publishers and Distributors, 1994
8. Greenspan D: Introduction to Calculus, Harper and Row, 1968
9. Erwin, Kreyszig: Advanced Engineering Mathematics, John Wiley and Sons, 1999.
10. Dr. P. K. Mittal: Mathematics for Degree Students (B. Sc. First Year), S. Chand and Co. Ltd., New Delhi, 2010.
11. Murray R. Spiegel: Theory and Problems of Advanced Calculus, Schaum's Outline Series, Schaum Publishing Co; New York.

## **B. Sc. Part I (Semester II)**

### **M-3 Geometry, Differential and Difference Equations**

#### **Unit I**

Sphere ,Plane section of sphere ,Intersection of two spheres ,Sphere through a given circle ,Tangent line ,Tangent plane , Right circular cone , Right circular cylinder.

#### **Unit II**

First order exact differential equation, Integrating factor, First order linear differential equation and Bernoulli's differential equation, First order higher degree equations (solvable for  $x$  ,  $y$ ,  $p$ ) , Clairaut's form.

#### **Unit III**

Higher order linear differential equation with constant coefficients , Operator method to find particular integral , Euler's equidimensional equation , To find unknown solution by using known solution , Method of variation of parameters

#### **Unit IV**

Difference equation , Formation of difference equation , Order of difference equation, Linear difference equation , Homogeneous linear equation with constant coefficients, Non-homogeneous linear equation ,Particular integrals.

#### **Text Books:**

##### **1. Analytical Solid Geometry**

Shanti Narayan, S.Chand & Co. Ltd, New Delhi, 1997.

Scope: Chapters 6,7 (Art 6.11, 6.12, 6.13, 6.2, 6.31, 6.32, 6.33, 6.4, 6.41, 6.5, 6.6, 6.7, 6.71, 7.61, 7.62, 7.81, 7.82).

##### **2. Ordinary and Partial Differential Equations (Theory and Applications)**

Nita H. Shah, PHI, 2010,

Scope: Chapters 2, 3,4,5,7

3. **Calculus of Finite Differences and Numerical Analysis,**  
H.C. Saxena, S. Chand and Co. Ltd, New Delhi, 1976,  
Scope: Chapter 8

**Reference Books:**

1. D. A. Murray: Introducing Course on Differential Equations, Orient Longman (India), 1967
2. E.A. Codington: An Introduction to Ordinary Differential Equations and their Applications, CBS Publisher and Distribution, New Delhi, 1985
3. H. T. H. Piaggio: Elementary Treatise on Differential Equations and Their Applications, CBS Publisher and Distribution, New Delhi, 1985
4. W. E. Boyee and P. C. Diprima: Elementary Treatise on Differential Equations and Boundary Value Problems, John Willey, 1986
5. Erwin Kreyszig: Advanced Engineering Mathematics, John Wiley and sons, 1999
6. Gorakh Prasad and H. C. Gupta: Text Book on Coordinate Geometry, Pothishala Pvt. Ltd., Allahbad.
7. R.J.T. Bell: Elementary Treatise on Coordinate Geometry of Three Dimensions, Wiley Eastern Ltd., 1994
8. P. K. Jain and Khalil Ahmad: A Text Book of Analytical Geometry of Three Dimensions, Wiley Eastern Ltd., 1994
9. N. Saran and R. S. Gupta: Analytical Geometry of Three Dimensions, Pothishala Pvt. Ltd., Allahbad.
10. Dr. P. K. Mittal: Mathematics for Degree Students (B. Sc. First Year), S. Chand and Co. Ltd., New Delhi, 2010.
11. G. F. Simmions: Differential Equations with Historical Notes (Second Edition) McGraw- Hill International Edition, 1991.
12. S. L .Loney: The Elements of Coordinate Geometry, MacMilan & Co., London.

## **B. Sc. Part I (Semester II)**

### **M-4 Vector Calculus and Improper Integrals**

#### **Unit I**

Vector differentiation, Gradient, Divergence and Curl, Solenoidal and Irrotational vector fields, Line integral , Workdone

#### **Unit II**

Double integration and its evaluation, Area by double integration, Change of order of integration, Transformation of double integral in polar form, Evaluation of triple Integral.

\

#### **Unit III**

Surface integral, Volume integral, Green's theorem in a plane, Stoke's theorem (statement only), Gauss divergence theorem (statement only)

#### **Unit IV**

Improper integrals and their convergence, Comparision tests, Beta and Gamma functions.

#### **Text Books**

##### **1. Vector Analysis (Second Edition)**

Murray R Spiegel, Schaum's outlines, 2009

Scope: Chapters 3,4,5,6.

##### **2. Theory and Problems of Advanced Calculus**

Murray R Spiegel, Schaum Publishing Company, New York, 1974.

Scope: Chapters 12,13.

### **3. Integral Calculus**

Gorakh Prasad, Pothishala Pvt. Ltd; Allahabad, 1999,  
Scope: Chapter 10.

#### **Reference Books:**

1. N. Saran and S. N. Nigam: Introduction to Vector Analysis, Pothishala Pvt. Ltd., Allahabad.
2. Erwin Kreyszig: Advanced Engineering Mathematics, John Wiley and Sons, 1999
3. N. Piskunov: Differential and Integral Calculus, Peace Publishers, Moscow.
4. Shanti Narayan: A course of Mathematical analysis, S. Chand & Co. Ltd., New Delhi
5. D. Somasundaram and B. Choudhary: A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1977.
6. Dr. P. K. Mittal: Mathematics for Degree Students (B. Sc. First Year), S. Chand and Co. Ltd., New Delhi, 2010.

**B. Sc. Part II (Semester III)**  
**M-5 Advanced Calculus , Sequence and Series**

**Unit I**

Mean value theorems, Limit and Continuity of function of two variables, Taylor's theorem for function of two variables.

**Unit II**

Envelopes, Maxima, Minima and Saddle Points of functions of two variables, Langrange's Multiplier Method.

**Unit III**

Sequences and theorems on limit of sequence, Bounded and Monotonic sequences , Cauchy's sequence, Cauchy's Convergence Criterion.

**Unit IV**

Series of non-negative terms ,Comparision test ,Cauchy's integral test ,Ratio test , Root test , Alternating series ,Absolute and Conditional convergence.

**Text Books:**

**1. Mathematics for Degree Students (B. Sc. Second Year)**

Dr. P. K. Mittal , S. Chand & Co. Ltd, New Delhi, 2011.

Scope: Chapters 3,6,8,9,14,15,16 of Advanced Calculus.

**2. Differential Calculus**

Shanti Narayan & P. K. Mittal , S.Chand & Co Ltd,New Delhi, 2012.

Scope: Chapter 8.

**Reference Books:**

1. Earl D. Rainville: Infinite Series, Inc MacMillan Co., New York.
2. Gabriel Klambauer: Mathematical Analysis, Marcel Dekkar, Inc., New York, 1975
3. I.M. Apostol: Mathematical Analysis, Narosa Publishing House, New Delhi, 1985.
4. R.R. Goldberg: Real Analysis, Oxford & I.B.M Publishing Co., New Delhi, 1970.
5. D.Somasundarren And B. Choudhary: A First Course in Mathematical Analysis, Narosa Publishing House, New Delhi, 1977.
6. P.K. Jain & Kaushik: An Introduction to Real Analysis, S. Chand & Co.Ltd., New Delhi, 2000.
7. Murray R. Spiegel: Theory and Problems of Advanced Calculus, Schaum Publishing Co., New York, 1974.

**B. Sc. Part II (Semester III)**  
**M-6 Differential Equations & Group Homomorphism**

**Unit I**

Bessel's and Legendre's equations, Bessel's and Legendre's functions with their properties, Recurrence relations and generating functions, Orthogonality of functions.

**Unit II**

Laplace transform of some elementary functions, Linearity of Laplace transform, Laplace transforms of derivatives and integrals, Shifting theorem, Differentiation and integral of transform, Convolution theorem.

**Unit III**

Solutions of Ordinary differential equations with constant and variable coefficients, Solutions of simultaneous ordinary and partial differential equations, Fourier transform, Sine and Cosine transforms.

**Unit IV**

Normal subgroup ,Quotient Group ,Cyclic Group ,Group Homomorphism and Isomorphism ,The fundamental theorem of homomorphism.

**Text Books:****1. Ordinary and Partial Differential Equations (Theory and Applications)**

Nita H Shah, PHI, New Delhi, 2010.

Scope: Chapter 14 (Articles 14.2, 14.5, 14.6, 14.7, 14.8), Chapter 15(articles 15.2, 15.4, 15.7, 15.9, 15.10, 15.11) and Chapters 16, 18.

**2. Mathematics for Degree Students (B. Sc. First Year)**

Dr. P. K. Mittal S. Chand & Co. Ltd., New Delhi, 2010.

Scope: Chapters 10, 12, 13 of Algebra (Articles 10.9, 12.1, 12.2, 12.3, 12.4, 12.7, 13.1, 13.3)

**Reference Books:**

1. Erwin kreyzig: Advanced Engineering Mathematics , John Willey and Son's , Inc. New York,1999.
2. A.R. Forsyth: A Treatise on Differential Equations, McGraw-Hill Book Company,1972.
3. B. Courant and D. Hilbert: Methods of Mathematical Physics( Vol I and II),Willey-interscience,1953.
4. I.N. Sneddon: Fourier Transforms, Mc Graw -Hill Book Co.
5. P.B. Bhattachaya, S.K. Jain and S.R. Nagpaul: First Course in Linear Algebra ,Willey Eastern, New Delhi,1983.
6. P.B. Bhattachaya, S.K. Jain and S.R. Nagpaul: Basic Abstract Algebra,(2<sup>nd</sup> Edition) Cambridge University Press India Edition.
7. H.S. Hall and S.R. Knight: Higher Algebra,S.Chand & Co. Ltd., New Delhi, 2008.
8. Goel & Gupta: Integral Transforms, Pragati Prakashan, Meerut , 2001.
9. I. N. Herstein: Topic in Algebra, Willey Eastern Ltd., New Delhi, 1975

## **B. Sc. Part II (Semester IV)**

### **M-7 Partial Differential Equations & Calculus of Variation**

#### **Unit I**

Simultaneous differential equations of the first order and the first degree in three variables, Methods of solution of  $dx/P = dy/Q = dz/R$ , Pfaffian differential equation,

Solution of Pfaffian differential equation in three variables, Partial differential equations and origins of first order partial differential equation, Formation of partial differential equations by eliminating arbitrary function and arbitrary constants.

#### **Unit II**

Lagrange's equation, Integral surface passing through given curve, Compatible system of first order equation, Charpit's method, Jacobi's method.

#### **Unit III**

Partial differential equation of second and higher order, Linear partial differential equation of second order with constant coefficients, Homogeneous and Non-homogeneous linear partial differential equations with constant coefficients, Partial differential equations reducible to equations with constant coefficients.

#### **Unit IV**

Functional, Continuity of functional, Linear functional, Extremum of a functional, Euler's differential equation and applications, Invariance of Euler's equations.

**Text Books:****1. Elements of Partial Differential Equations:**

IAN N. Sneddon, McGraw- Hill Book Company, 1986

Scope: Chapter 1 (articles 2,3,5,6) and Chapter 2 (articles 1, 2, 4,5,9,10,13).

**2. Mathematics for Degree Students (B.Sc. Second year)**

Dr. P. K .Mittal , S.Chand and Co. Ltd, New Delhi, 2011.

Scope : Chapters 10, 11, 13 of Differential Equations.

**Reference Books:**

1. Erwin Kreyszig: Advanced Engineering Mathematics, John Willey and Son's, Inc., 1999.
2. D.A.Murray: Introductory Course on Differential Equations, Orient Longman(India), 1967.
3. A.R.Forsyth: A Treatise on Differential Equations, Macmillan and Co. Ltd, London.
4. Francis B.Hilderbrand: Advance Calculus for Applications , Prentice Hall of India Pvt.ltd , New Delhi , 1977.
5. Jane Cronin: Differential Equations, Marcel Dekkar, Inc. New York, 1994.
6. Richard Bronson: Theory and Problems of Differential Equations, McGraw Hill, Inc., 1973.
7. B. Courant and D. Hilbert : Methods of Mathematical Physics,(Volumes I & II), Wiley Interscience, 1953.
8. I.M. Gelfand and S.V. Fomin: Calculus of Variables , Prentice Hill, Englewood Cliffs (New Jersey), 1963.
9. A.M. Arthurs: Complementary Variational Principles, Clarendon Press, Oxford, 1970.
10. V.Komkov: Variational Principles of Continuum Mechanics with Engineering Applications, (Volume I), Reidel Pub. Dordrecht, Holland, 1985.
11. J.I. Oden and J.N Reddy: Variational Methods in Theoretical Mechanics, Springer-Verlag, 1976.

12. G. F. Simmons: Differential Equations with Applications & Historical Notes (Second Editions) McGraw-Hill, 1991.
13. Frank Ayres: Theory and Problems of Differential Equations, McGraw-Hill Book Co., 1998.
14. A. S. Gupta: Calculus of Variations with Applications, Prentice Hall of India Pvt. Ltd., New Delhi, 1997.

## **B. Sc. Part II (Semester IV)**

### **M-8 Mechanics**

#### **Unit I**

Analytical condition of equilibrium of coplanar forces, Virtual work, Catenary.

#### **Unit II**

Velocities and Accelerations along radial and transverse directions, and along tangential and normal directions, Simple harmonic motion.

#### **Unit III**

Mechanics of a particle and a system of particles , Constraints, D'Alembert's Principle and Lagrange's equations ,Velocity-dependant potential and the Dissipation function , Applications of Lagrangian.

#### **Unit IV**

Reduction to the equivalent one-body problem , Equations of motion and First integrals , Virial theorem, Central orbits.

#### **Text Books:**

##### **1. Mathematics for Degree Students (B.sc Second Year )**

Dr. P. K. Mittal , S. Chand & Co Ltd , New Delhi , 2011.

Scope: Chapters 1,2,3 of Statics and Chapters 1,2,3 of Dynamics.

##### **2. Classical Mechanics (Second Edition)**

Herbert Goldstein , Narosa Publishing House , New Delhi , 1998.

Scope : Chapter 1 and Chapter 3 (articles 3.1,3.2,3.4,3.5)

#### **Reference Books:**

##### **1. R. S. Verma: A Text Book on Statics, Pothishala Pvt. Ltd. Allahabad.**

##### **2. S.L. Loney: Statics , Macmillan and Company, London.**

3. S.L. Loney: An Elementary Treatise on the Dynamics of a Particle and of Rigid Bodies, Cambridge University Press, 1956.

## **B. Sc. Final (Semester V)**

### **M-9 Analysis**

#### **Unit I**

Fourier series, Even & Odd functions, Dirichlet's condition, Half Range Fourier Sine and Cosine series.

#### **Unit II**

The Riemann-Stieltjes integral, Existence and Properties of the integral, The Fundamental theorem of calculus.

#### **Unit III**

Differentiability of complex function, Analytic function, Cauchy- Reimann equations, Harmonic functions, Constructions of analytic functions.

#### **Unit IV**

Elementary function, Mapping of elementary function, Mobius transformation, Cross ratio, Fixed points, Inverse points and Critical points of mappings, Conformal mapping.

#### **Text Books:**

##### **1. Differential Equations with Applications and Historical Notes (Second Edition)**

G. F. Simmons, McGraw-Hill International Editions, 1991.

Scope: Chapter 6 (articles 33,34,35,36)

##### **2. Principles of Mathematical Analysis (Third Edition)**

Walter Rudin, McGraw-Hill International Edition, 1976.

Scope: Chapter 6 (articles 6.1-6.13 and 6.20-6.22.)

##### **3. Functions of a Complex Variable**

Goyal & Gupta, Pragati Prakashan, 2010.

Scope: Chapters 3 and 5.

**Reference Books:**

1. I. M. Apastol: Mathematical Analysis, Narosa Publishing house, New Delhi, 1985
2. R. R. Goldberg: Real Analysis, Oxford & IBH Publishing Co., New Delhi, 1970
3. S. Lang: Undergraduate Analysis, Springer-Verlag, New York, 1983
4. D. Somasundaram and B. Chaudhary: A First Course in Mathematical Analysis , S. Chand Co. New Delhi, 2000
5. P. K. Jain and S. K. Kaushik: An Introduction to Real Analysis, S. Chand & Co., New Delhi. 2000.
6. R. V. Churchill and J. W. Brown: Complex Variables and Applications (5<sup>th</sup> Edition), McGraw Hill, New York, 1990
7. Monk J. Ablowitz and A. S. Fokas: Complex Variables (Introduction and Applications), Cambridge University Press, South Asian Edition, 1998.
8. Shanti Narayan: A Course of Mathematical Analysis, S. Chand & Co. Ltd., New Delhi.
9. Shanti Narayan: Theory of Complex Variables, S. Chand & Co. Ltd., New Delhi.

**B. Sc. Final (Semester V)**  
**M-10 Metric Space, Complex integration & Algebra**

**Unit I**

Countable and uncountable sets, Definition and examples of metric space, Neighbourhood, Limit points, Interior points, Open and closed sets, closure and interior.

**Unit II**

Completeness, Compactness, Connectedness

**Unit III**

Ring, Integral domain, Ideals, Fields, Quotient ring, Ring-Homomorphism.

**Unit IV**

Complex integration: Cauchy's integral theorem and formula, Singularity, Residue theorem, Evaluation of integrals.

**Text Books:**

**1. Principles of Mathematical Analysis (Third Edition)**

Walter Rudin, McGraw Hill International Editions, 1976.

Scope: Chapter 2

**2. Functions of a Complex Variable**

Goyal & Gupta, Pragati Prakashan, 2010.

Scope: Chapters 7 ,8, 9.

**3. Topics in Algebra ( Second Edition)**

I.N.Herstein , Wiley Eastern Ltd. , New Delhi , 1975.

Scope:Chapter 3 (articles 3.1-3.4).

**Reference Books:**

1. R. V. Churchill and J. W. Brown: Complex Variables and Applications (5<sup>th</sup> Edition), McGraw Hill, New York, 1990
2. Mark J. Ablowitz and A. S. Fokas: Complex Variables (Introduction and Applications), Cambridge University Press, South Asian Edition, 1998
3. G. F. Simmons: Introduction to Topology and Modern Analysis, McGraw Hill Book Company,
4. E. C. Titchmarsh: Theory of Functions.
5. N. Jacobson: Basic Algebra (Volume I & II), W. H. Freeman, 1980 (Also Published by Hindustan Company)
6. K. B. Datta: Matrix and Linear Algebra, Prentice Hall of India Pvt., New Delhi, 2000.
7. K. Hoffman and R. Kunze: Linear Algebra (2<sup>nd</sup> Edition), Prentice-Hill Englewood Cliffs (New Jersey) 1971.
8. Shanti Narayan: Theory of Complex Variables, S. Chand & Co. Ltd., New Delhi.
9. P. K. Jain and K. Ahmad: Metric Spaces, Narosa Publishing House, New Delhi, 1968.

## **B. Sc. Final (Semester VI)**

### **M-11 Abstract Algebra**

#### **Unit I**

Group Automorphisms, Inner Automorphisms, Cayley's theorem, Conjugacy relation, Normalizer.

#### **Unit II**

Definition and examples of Vector Spaces, Subspaces, Sum and direct sum of subspaces, Linear span, Linear Dependence and independence, Basis, Dimensions.

#### **Unit III**

Algebra of linear transformation, Range, Rank, Kernel, Nullity of a linear map, Inverse of linear transformation, Composition of linear maps.

#### **Unit IV**

Matrix associated with a linear map, Linear map associated with a matrix, Rank and nullity of a matrix, Inner product space, Gram-Schmidt orthogonalisation process, Orthogonal and unitary matrices.

#### **Text Books:**

##### **1. Topics in Algebra**

I. N. Herstein, Wiley Eastern Ltd., New Delhi, 1975.

Scope: Chapter 2 (Art. 2.8, 2.9, 2.11)

##### **2. An Introduction to Linear Algebra**

V. Krishnamurthy, V. P. Mainra and J. L. Arora

Affiliated East-West Pres Pvt. Ltd., 1976.

Scope: Chapters 3, 4, 5, 7

**Reference Books:**

1. I. S. Luther and I. B.S. Passi: Algebra [Volume-I Groups, Volume II-Rings], Narosa Publishing House, New Delhi , (Vol. I-1996 , Vol. II-1999).
2. Vivek Sahani and Vikas Bist: Algebra, Narosa Publishing House, New Delhi, 1997
3. S. Kumaresan: Linear Algebra (A Geometrical Approach), Prentice Hall of India, 2000
4. S. K. Jain, A. Gunawardena and P. B. Bhattacharya: Basic Linear Algebra with MATLAB, Key College Publishing (Springer-Verlag) 2001.
5. K. Hoffman and R. Kunze: Linear Algebra (2<sup>nd</sup> Edition), Prentice-Hall, Englewood Cliffs (New Jersey), 1971.
6. K. B. Datta: Matrix and Linear Algebra, Prentice Hall of India Pvt., New Delhi, 2000
7. Shanti Narayan: A Text Book of Modern Abstract Algebra, S. Chand & Co.Ltd., New Delhi.
8. N. Jacobson: Basic Algebra (Volumes I & II), W. H. Freeman, 1980 (Also Published by Hindustan Publishing Company).
9. D. S. Malik, J. N. Mordeson and M. K. Sen: Fundamentals of Abstract Algebra, McGraw- Hill International Edition,1997.
- 10.P. B. Bhattacharya, S. K. Jain and S. R. Nagpaul: Basic Abstract Algebra (2<sup>nd</sup> Edition), Cambridge University Press, India Edition, 1997.

## **B. Sc. Final (Semester VI)**

### **M-12 Discrete Mathematics and Elementary Number Theory (Optional Paper)**

•

#### **Unit I**

Binary Relations, Equivalence Relation, Partitions, Partial Order Relation, Lattices, Duality, Distributive and Complemented Lattices, Boolean Algebra, Graph, Multigraph, Weighted Graphs, Isomorphisms of Graphs, Node

#### **Unit II**

Divisibility, Division Algorithm, G.C.D., Euclidean Algorithm L.C.M., Primes, Properties of Congruences, Theorems of Fermat, Euler & Wilson, Conguence of degree 1, Chinese Remainder Theorem, The Function  $\varphi(n)$ .

#### **Unit III**

Quadratic Residues and Reciprocity, The Jacobi's symbol, Greatest integer function , Arithmetic functions, Moebius inversion formula.

#### **Unit IV**

The Diophantine equations,  $ax + by = c$ , Positive solutions, Other linear equations, The equations  $x^2 + y^2 = z^2$  &  $x^4 + y^4 = z^4$ , Farrey sequences.

#### **Text Books:**

##### **1. Discrete Mathematical Structures with Applications to Computer Science**

J. P. Tremblay and R. Manohar, Tata McGraw-Hill Edition, 1997.

Scope: Chapters 2, 4, 5 ( Art. 2.3.1, 2.3.2, 2.3.4, 2.3.5, 2.3.8, 2.3.9, 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.2.1, 5.1.1, 5.1.2, 5.1.4)

##### **2. An Introduction to the theory of Numbers (Third Edition)**

I. Niven and H. S. Zuckerman, John Wiley,.

Scope: Chapters 1,2, 3, 4, 5, 6

**Reference Books:**

1. C. L. Liu: Elements of Discrete Mathematics (Second Edition), McGraw Hill International Edition, Computer Sciences Series, 1986.
2. David M. Burton: Elementary Number Theory, Win. C. Brown Publishers, Dubugaelawa, 1989.
3. K. Ireland and M. Rosen: A Classical Introduction to Modern Number Theory, GTM Volume 84, Springer-Verlag 1972
4. G. A. Jones and I. M. Jones: Elementary Number Theory, Springer, 1998
5. W. Sierpinski: Elementary Theory of Number, North-Holland, 1988, Ireland.
6. K. Rosen and M. Rosen: A Classical Introduction to Modern Number Theory, GTM Volume 94, Springer-Verlag, 1972.

**B. Sc. Final (Semester VI)**  
**M-12 Differential Geometry (Optional Paper)**

•

**Unit I**

Parametric representation and definition of curve in space , Special Curves and their representation, length of arc, Tangent at a given point to a curve, Oscillating plane, Normal Plane , Principal normal and binormal , Rectifying plane , Fundamental planes, Curvature of curve, Torsion of curve, Serret-Frenet Formulae, Helices, Locus of the centre of curvature, Oscillating sphere (Sphere of Curvature), Locus of centre of spherical curvature.

**Unit II**

Involute & Evolute , The curvature and torsion of the evolute, Bertrand curves, Fundamental theorem for space curves, Envelopes and characteristics relating to one parameter family of surfaces and planes, Developable surfaces, Ruled surfaces.

**Unit III**

Curves on a surface, Parametric Curves, Two fundamental forms, Positive definiteness, Fundamental magnitudes for some important surfaces, Direction coefficients, Orthogonal trajectories of given curves , The formulas of Gauss , Meusnier's theorem , Lines of curvature as parametric curves , Euler's theorem on normal curvature, Rodrigues' formula, Third fundamental form.

**Unit IV**

Definition and the differential equations of Geodesic, Canonical equations for Geodesics, Geodesics on a surface of revolution, Normal property of Geodesics, Tortion of Geodesic, Curvature of Geodesic, Bonnet's Theorem, Geodesic parallels, Geodesic polar coordinates, Theorems on geodesic parallels, Geodesic ellipse and hyperbolas, Gauss-Bonnet Theorem, Gaussian Curvature.

**Text Books:****1. Differential Geometry (Third Revised Edition)**

H. D. Singh & P. K. Singh, Ram Prasad and Sons, Agra-3, 1995.

Scope: Chapter 2 (Art. 2.1 to 2.24) and Chapter 7 (Art. 7.1 to 7.24)

**2. Differential Geometry (Fifth Edition)**

Bansilal & Sanjay Arora, Atma Ram & Sons.

Scope: Chapters 2, 3(Art. 2.60 to 2.90, 3.20, 3.40, 3.50 to 3.63, 3.70 to 3.81) and

Chapters 4, 5 (Art. 4.00 to 4.31, 4.33,4.40,4.41,4.73,4.74, 5.20,5.21, 5.30, 5.35)

**Reference Books:**

1. I. M. Singer and J. A. Thorpe, Lecture Notes on Elementary Topology and Geometry.  
Springer-verlag, 1967
2. B. O. Nell. Elementary Differential Geometry, Academic Press, 1966.
3. S. Sternberg, Lectures on Differential Geometry, Prentice-Hall. 1976.
4. M. Docarmo : Differential Geometry of Curves and Surfaces, Prentice Hall, 1976.

**B. Sc. Final (Semester VI)**  
**M-12 Special Theory of Relativity (Optional Paper)**

**Unit I**

Newtonian Relativity , Galilean Transformations , The theory of Ether, Michelson – Morley experiment , Lorentz transformation equations , Geometrical interpretation of Lorentz transformations , Group properties of Lorentz transformations.

**Unit II**

Event and Particle , Simultaneity, Relativistic formulae for composition of velocities (Transformation of particle velocities), Relativistic addition law for velocities ,Relativistic formulae for composition of accelerations of a particle, Transformation of Lorentz contraction factor , length contraction , time dilation.

**Unit III**

Tensors , Riemannian metric, metric tensor or fundamental tensor, Minkowski space , Space and Timelike intervals , Light cone or null cone , world points and world lines , Events occurring at the same point and the same time , four vector , four tensors .

**Unit IV**

Equivalence of mass and energy i. e.  $E= mc^2$ , Transformation formula for mass , Transformation formula for momentum and energy ,Energy momentum four vector, four-velocity , four- acceleration ,Relativistic equations of motions, The energy momentum tensor  $T^{ij}$  , Maxwell's equations of electromagnetic theory in vacuo , Propagation of electric and magnetic field strengths , four potential , Transformations of electromagnetic four potential vector.

**Text Books:****1. The Theory of Relativity**

C. Moller, Oxford Claredon Press , 1952.

**2. Theory of Relativity**

Goyal and Gupta, Krishna Prakashan, Meerut , Delhi.

**Reference Books:**

1. Murray R.. Spiegel, Theory and Problems on Vector Analysis SIJ Metrics and Introduction to Tensor Theory, Schaum's outline Series, Mcgraw -Hill Book Company.
2. Sriranjan Banerji and Asip Banerjee, The Theory of Relativity. PHI, New Delhi 2010.

# B.Sc. I

Semester-I

Paper-I

## History And Microbial Morphology

Unit-I: History and scope of Microbiology.

i) Discovery of microbe ii) Theory of biogenesis and a biogenesis.

iii) Contributions of Louis Pasteur, Robert Koch, Lister Winogradsky and Beijerinck, John Tyndall iv) Branches of Microbiology: a] systemic microbiology including bacteriology, mycology, phycology, virology, b] biotechnology, c] geomicrobiology, d] exobiology, e] medical microbiology, f] environmental microbiology

Unit-II: Prokaryotic Cell structure I

i) A Typical Bacterial cell structure, ii) Structure of cell wall (-gram +ve, gram-ve)

iii) Cell membrane: Fluid mosaic model, mesosomes iv) Ribosomes, Nucleoid, plasmids, Storage granule

Unit- III

i) Capsules, slime layer, Pili, Flagella (including types and structure).

ii) Endospore structure, formation and germination iii) Exospores, Myxospores, Eukaryotic spores, iv) significance of dormancy

Unit IV—Bacterial Taxonomy

i) Significance of classification, ii) Intuitive classification, Whittaker five kingdom system, iii) Bergy's manual ninth edition, numerical classification, iv) Approaches in modern classification: GC:AT Ratio, DNA Hybridization, 16S rRNA Cataloguing and phylogeny

Paper-II-Microbial Diversity.

Unit-I:Prokaryotic microbes

- i)General characters of a)Proteobacteria, b)Mycoplasma, c)Rickettsia and chlamydia
- ii)Cyanobacteria: Study of anabena and applications of cyanobacteria
- iii)Actinomycetes: Streptomysis and their applications
- iv)Archaeabacteria: Methanogenic bacteria and their importance

Unit-II:Eukaryotic microbes

- i)Fungi and yeast:General characters,Asexual and sexual mode of reproduction,slide culture techniques.
- ii)Algae:-General characters and industrially important algal cells
- iii)Protozoans: General characters and life cycle of trypanosome
- iv)Differences between prokaryotes and eukaryotes

Unit-III:Acellular microbes:Viruses.

- i)Discovery of viruses, General structure, symmetry and classification
- ii)Cultivation,chick embryo,tissue culture
- iii) Detection of viral growth iv)T4-Bacteriophages,lytic cycle, Lysogeny and Lambda viruses.

Unit-IV:Microbial interaction.

- i)Positive and negative interaction:Commensalism, synergism, syntropism, mutualism, parasitism, predation, antagonism, competition
- ii)Protist-Protist Interaction:Bdellovibrio
- iii)Protist-Plant interaction: Root nodule bacteria
- iv)Protist-Animal interaction: Rumen bacteria, insect midgut bacteria, luminescent bacteria

Semester-II

Paper-I-Microbial Physiology

Unit-I:Microbial Nutrition.

- i)Nutritional types of bacteria.ii)Basic nutritional requirements.
- iii)Types of culture media, growth, selective, enriched, enrichment, synthetic non synthetic.
- iv)Axenic cultures. Diauxic cultures.

Unit-II:Microbial growth and cell cycle.

- i)Bacterial cell cycle ii)Principle of growth curve and mathematical expression.
- iii)Continuous culture: Turbidostat and chemostat.
- iv) Factors influencing microbial growth.

Unit-III:Microbial control.

- i)Concept of microbial death ii)General terms: microbiostatic, cidal disinfectant, sanitizer.
- iii)Ideal antimicrobial agents.
- iv)Physical methods;a)Heat and moist sterilization.b)Dry sterilization, c)Low temperature.  
d)Filtration, e)radiation, f)osmotic pressure.

Unit-IV: Chemical agents

- i) Phenolics, Alcohols, Halogens, Heavy metals, Quaternary ammonium compounds, Bignamides-Chlorohexidines, Surface active agents, Aldehydes
- b)Gaseous sterilization
- c)Chemotherapeutic agents
- i)Mechanism of cell injury.
- ii)Factors influencing antibiotic activity
- d)Phenol coefficient

Semester-II

Paper-II-Microbial Techniques

Unit-I:Microscopy-I Principle and application

- i)Bright field microscopy, ii) Dark field microscopy, iii)Electron Microscopy(TEM, SEM),  
iv)Confocal microscopy.

Unit-II: Microscopy- II-Principle and applications

- i)Atomic Force Microscopy ii)Phase contrast microscopy.iii)Fluorescent microscopy.

Unit-III- Staining techniques

- i) Stains and dyes, chromophore, auxochrome, chromogens, types of stains.
- ii) Staining techniques :simple, differential, gram staining, acid fast staining.
- iii) Staining of specific structure: flagella, spores, capsule (negative)
- iv) Theory of staining

Unit-IV:Nutritional and growth techniques.

- i)Isolation of pure culture:various techniques.
- ii)Determination of C N P etc. by auxeno graphic and replica plate technique
- iii)Synchronous culture techniques.iv)Measurement of growth.

### **Practicals Sem I**

1. General concept of basic equipments and apparatus
2. Preparation of media and stains
3. Isolation of microbes from air, water, soil
4. Performance of simple Grams, acidfast and spores staining
5. Isolation of pure culture
6. Performance of slide culture technique and fungal staining
7. Performance of antibiosis
8. Performance of motility

### **Practicals Sem II**

1. Enumeration of microbes by SPC method
2. Performance of oligo dyanamic action
3. Determination of phenol coefficient
4. Study the effect of salt on growth
5. To perform membrane filtration
6. To demonstrate the effect of radiation
7. To cultivate anaerobic bacteria
8. Demonstration of Micrometry

B.Sc. II Semester III

Paper I

Chemistry of Organic Constituents And Enzymology

**Unit I—Carbohydrates And Lipids**

Classification of carbohydrates ,Structure of glucose, fructose, maltose, lactose, sucrose, raffinose, starch, hyaluronic acid, glycogen, cellulose, osazone formation

Classification of lipids, structure of triglyceride, compound lipids, derived lipids

**Unit II---Amino acids and proteins**

Classification of amino acids, titration curve, acidic, basic and neutral amino acids, peptide bond theory, organizational levels of proteins, concept of oligomeric protein

**UnitIII--- Enzymology**

Definitions and nature of enzymes, classification, nomenclature, primary concept of enzyme kinetics, MM equation, modifications of MM equations, activation energy, transition state, ES complex, enzyme activity, katal,specific activity, turn over number

Enzyme inhibition and their types, enzyme regulation, their types, allosteric sites, allosteric modulators, functional diversity such as holoenzyme, apoenzyme, coenzyme, cofactor, prosthetic group, isoenzymes, membrane bound enzymes, multienzyme complex, zymogens

**Unit IV---Nucleic acid and Vitamins**

Structure of purines, pyrimidines, nucleosides, nucleotides, DNA, RNA, and various forms of DNA

Types of vitamins, Classification on the basis of solubility, functions of vitamins, Hyper and hypovitaminosis

B.Sc. II Semester III

Paper II

Industrial Microbiology

Unit I---Fundamentals of industrial microbiology

Definition and scope of industrial microbiology, general concept, primary screening,secondary screening, strain development, sterilization of fermentors, production of media and air

Unit II---Fermentor design

Types of fermentation processes, design of typical fermentor, parts of fermentor, factors effecting fermentor design, control of agitation,aeration, pH and dissolved oxygen, types of fermentors

Unit III ---scale up and DSP

Inoculum development, scale up of fermentor process, raw media for media preparation, Harvesting and product recovery

Unit IV ---Industrial Production

Production, biochemistry, recovery and uses of: SCP, Bakers yeast, ethanol, penicillin, semisynthetic penicillin, citric acid, Vit B12 and beer and wine

B.Sc. II Semester IV

Paper I

Metabolism

Unit I---Carbohydrate

General strategy of metabolism, EMP pathway and its regulation, TCA cycle and its regulation, Outline of ED pathway, Pentose Phosphate pathway, PK pathway

Unit II---Lipid and Nucleic Acid

Betaoxidation, Omegaoxidation, Replication of DNA, modes of replication, general features, enzymes involved, rolling circle and knife and fork model, Prokaryotic transcription including general features, enzymes involved and reverse transcription

Unit III---Amino acids and Proteins

Amino acid breakdown, deamination,(alanine, tyrosine, metionone) urea cycle, metabolic breakdown of individual amino acids, glucogenic and ketogenic amino acids  
Genetic code and Prokaryotic translation

Unit IV---Energy Generation

High energy molecules, substrate level phosphorylation, Cyclic and noncyclic photophosphorylation, Oxidative phosphorylation and ATP generation

B.Sc. II Semester IV

Paper II

Applied Microbiology

Unit I ---Water microbiology

Significance of bacteriological analysis of water, collection and handling of water samples, indicators of excretal pollution, bacteriological analysis of water for coliforms and faecal streptococci (MTFT, MFT), water treatment using SSF and RSF, methods of chlorination, differences between fecal and non fecal organisms

Unit II---Waste water treatment

Sewage types, composition, physical, chemical and biological characteristics, BOD, COD, ThOD, trickling filter, activated sludge, RBC, sludge digester, oxidation pond, septic tank, imhoff tank

Unit III--- Air and Soil microbiology

Microbial analysis of air , settling plate and Anderson technique, bacteria and fungi as biopesticides, biofertilizers, PSB, mycorrhiza, microbial leaching of copper and uranium

Unit IV --- Food microbiology

Food spoilage organisms, canning process, pasteurization, low temperature preservation, chemical preservation

Food borne diseases and food intoxication

Practicals

Semester III

1. Identification of carbohydrates and lipids
2. Detection of enzymes: amylase, catalase, gelatinase, lipase
3. Estimation of proteins
4. Estimation of DNA
5. Estimation of RNA
6. Production and estimation of alcohol
7. Isolation of amylase producer from soil

8. Leavening capacity of yeast
9. Immobilization of yeast and demonstration of invertase activity

#### Practicals Sem IV

1 Isolation of organisms from water and sewage

2 Determination of MPN

3 IMViC Test

4 Determination of DO, alkalinity

5 MBRT, Phosphatase test

6 BOD and COD

7 Detection of arsenic by bioassay

8 determination of Chlorine demand

B.Sc. Final Semester V

Paper-I

Medical microbiology

Unit-I

Epidemiology and host –parasite relationship.

a) Definitions:

i) Signs, symptoms and syndrome of disease, stages of infectious diseases - incubation period, prodromal phase, invasive phase, decline phase and the period of convalescence, primary infection, secondary infection, acute infection, chronic infection local and systemic infection.

ii) Bacteremia, septicaemia, pyamia, toxemia, Viremia.

iii) Epidemic, Endemic, Pandemic, Zoonotic, Exotic.

b) Dynamics of disease transmission:

i) Causative or etiological agents [list]

ii) sources of reservoir of infection.

.Exogenous Human (case and carrier) Non-living reservoir.

Endogenous infections.

iii) Portal of exit

iv) Mode of transmission - Contact, Vehicle, Vector, Air-borne, transplacental and laboratory/hospital infections.

v) Portal of entry.

vi) Susceptibility of host.

c) control of communicable diseases: Control of sources, blocking the channels of transmission, protecting the susceptible host.

## Unit-II

a)Microbial mechanism of Pathogenicity: pathogenicity and virulence, exaltation and attenuation, MID, MLD, ID 50, LD50.

i) Invasiveness:- adherence, capsule, enzymes.

ii) Toxigenicity:- Exotoxins and Endotoxins.

b) Normal flora of healthy human host:

Definition, origin significance, Germ free and Gnotobiotic life.

Characteristics of normal flora..

c) Infectious microbiology: Microbial diseases of skin, eye, digestive, respiratory, cardiovascular, lymphatic, urinary, reproductive and nervous systems.

(outline of structure of each system and lists of infectious diseases affecting the particular system).

## Unit-III

Study of pathogenic organisms: Morphology, cultural characteristics, biochemical characteristics, serology, lab diagnosis

1. Bacteria:

. *Salmonella typhi* and *paratyphi A & B*.

. *Mycobacterium tuberculosis*.

. *Spirochetes-treponemma pallidum*

2. Viruses:

. HIV

. Hepatitis A & B

3. Protozoa:

. *Plasmodium*

## Unit-IV

Disease control:

Basic principle of drug designing.

Development of modern drug delivery system.

Basic mechanism of action of drugs.

Bacterial cell wall synthesis inhibitor; Penicillin

Bacterial protein synthesis inhibitor: chloramphenicol

Bacterial DNA synthesis inhibitor: Nalidixic acid, Floxacin antibiotics.

Antimetabolites:Trimethoprime,sulfamethoxazole.

Non automated and automated in vitro drug susceptibility testing-kirby-Bauer disc diffusion method and e-strip method.

Reasons for development of resistance

Semester V

Paper-II

Molecular biology and bioinstrumentation

Unit-I

Gene mutation and regulation.

a)Concept of gene,muton,recon,cistron,monocistronic and polycistronic gene,gene within gene,spit gene.

b)Gene regulation:lac operon(detail)

c)mutation:Definition,random vs directed mutation,type of mutation,base pair substitution,frame shift,point,nonsense,missense,and silent mutation.

d)Genetic suppression:Intergenic and Intragenic.

e)Molecular basis of mutation:Mechanism of spontaneous and induced mutation.

Unit-II

Genetic recombination:

a)Definition,Basic concept of recombination

b)General types of recombination.

c)Transformation.

d)Conjugation

e)Transductions

f)Transposable genetic elements(Prokaryotic)

### **Unit-III**

#### **Bioinstrumentation-I( Principles and applications)**

a)Spectroscopy:Laws of absorption,limitations of beer law,UV-Visible spectroscopy and its applications.

b)Centrifugation:Type of centrifuge,analytical and ultra centrifugation,density gradient centrifugation.

c)Electrophoresis:Principle,types of electrophoresis,agarose gel electrophoresis and SDS-PAGE.

### **Unit-IV**

#### **Bioinstrumentation-II( Principles and applications)**

a)Chromatography:Thin layer chromatography, ion exchange, gel filtration, HPLC

b)Isotope tracer technique: Method and applications.

Detection and measurement of stable isotope: Mass spectrometry.

Detection and measurement of radioactive isotope: GM counter, scintillation counter.

B.Sc. Final Semester VI

Paper-I

Immunology

Unit-I: Defensive mechanism of host:

a) Nonspecific defences of the host:

i) species, race and individual resistance.

ii) age, sex, hormonal and nutritional influences.

iii) Mechanism of non-specific defences:

I. First line of defence: Skin, mucus membrane, Mechanical, chemical and microbial defences.

II. Second line of defence: Phagocytosis, inflammation, fever, interferon, complement system.

b) Acquired immunity: Active and Passive immunity.

c) Organs involved in immune function:

1. Primary lymphoid organs: Bursa, bone marrow, thymus.

2. Secondary lymphoid organs: Lymph nodes, Spleen, MALT, GALT, CALT.

Unit-II:

a) Diagram of Haematopoiesis.

b) Cells of immune system: general characters of

1) B and T cells,

2) Monocytes and macrophages,

3) Neutrophils, Eosinophils and basophiles.

4) Mast cells

5) Dendritic cells

6) Natural Killer cells.

c) B-cell biology: (Humoral immunity)

- 1.Primary and secondary immune response
  - 2.Clonal selection and clonal deletion(immune tolerance)
  - 3.T-cell dependent antibody response. outline
  - 4.T-cell independent antibody response.outline
- d)T-cell biology:(Cell mediated immunity)
- 1.Types of T-cells and Cluster of differentiation(CD)
  - 2.T-cell receptor(TCR)
  - 3.Cytotoxic T-cell response
  - 4.MHC molecules and antigen presentation.(diagrammatic)
- 5.Cytokines-Definition,types(colony stimulating factor,Interleukins,Tumor necrosis factor alpha).

Unit-III:

a)Antigens:

I)Definition,Complete antigen,hapten,epitope,valence.

II)Factors determining antigenicity

III)Antigenic mosaic of bacteria

IV)Antigens in relation to human being:Species specific,isoantigen,autoantigen(RA),Organ specific antigens,Heterophile antigens.

b)Antibody:

I.Definition,General structure.

II. Classes of Immunoglobulins and their functions.

c)Ag-Ab reactions(Diagnostic immunology)

I. General features of antigen-antibody reactions.

II. Antibody titre,rising antibody titre,paired sera

III. Precipitation: Precipitation in liquids, Immunodiffusion, Immunolectrophoresis.

IV.	Agglutination:	Slide	agglutination,tube agglutination,haemagglutination,Haemagglutination inhibition test,coomb's test,passive agglutination.
-----	----------------	-------	--

## UNIT IV

- a) Tagged antibody test: ELISA direct and indirect
- b) Immunofluorescence
- c)Hypersensitivity reactions:Definition,Gel & Coomb's classification.

1.Type I (Anaphylaxis) Hypersensitivity:Mechanism of anaphylaxis,systemic and localized anaphylaxix,prevention of anaphylaxis.

2.Type II (Cytotoxic) Hypersensitivity:

.Blood transfusion reaction(Rh compatibility)

.Heamolytic diseases of the new borne

3.Type III (Immune complex)hypersensitive:

.Arthus reaction

.Serum sickness.

4.Type IV(delayed)Hypersensitivity: Mantaux test, allergic contact dermatitis.

Semester VI

Paper II

Biotechnology

Unit I:

Tools & techniques of genetic engineering:

- a) Preparation of pure samples of DNA, range of enzymes used in DNA manipulation, analysis of DNA fragment size, Joining of DNA molecule, vectors and their types.
- b) Introducing rDNA into host cell, transformation of cells, identification of transformed cells, selection of clones, direct and indirect method.
- c) Expression of cloned genes, construction of gene library, cells for cloning, expression of prokaryotic genes.
- d) PCR and its application, DNA fingerprinting.

Unit-II: Application of genetic engineering:

a) Health Biotechnology:

- i) Production of hormones: insulin
- ii) Production of interferon.
- iii) Production of vaccines: Conventional vaccines: BCG, salk, Diphtheria toxoid, ATS, DNA vaccines, Edible vaccines.
- iv) Hybridoma technology, monoclonal antibody formation

Unit-III

b) Agricultural biotechnology:

- i) Protoplast fusion
- ii) Biopesticides.
- iii) Biofertilizers

c) Industrial biotechnology

- i) Bio sensor and Nano biotechnology applications

ii) Biochips and concept of microarray.

d) Ethics and hazards of biotechnology.

#### Unit-IV Food

1) Genetically modified food. definition and one example

2) Oriental Fermented food: soya sauce, miso, sufu

3) Transgenic plants. BT Cotton

4) Transgenic animals and clones: Knockout mice, Dollyship, Milching animals

#### Practicals

##### Semester v

- 1) Isolation of bacterial DNA
- 2) Isolation of plasmid DNA
- 3) Demonstration of restriction digestion
- 4) Estimation of creatinine by spectrophotometric method
- 5) Perform gel filtration
- 6) Perform paper chromatography
- 7) Perform TLC
- 8) Identification of bacteria: E coli, S aureus, Salmonella, Proteus

#### Practicals

##### Semester VI

- 1) Perform VDRL test
- 2) Perform Widal test
- 3) Perform immunodiffusion
- 4) Perform Western blot
- 5) Perform PCR
- 6) Development of sphaeroplast
- 7) Production of biofertilizer
- 8) Production of soyasauce

## REFERENCES

1. A. J. Salle, Fundamental Principles Bacteriology, Tata McGraw-Hill edition, 1974.
2. David R. Boone and Richard W. Castenholz, Bergey's manual of systematic bacteriology, second edition, Vol One, Springer, 2005.
3. Don J. Brenner, Noel R. Krieg and James T. Staley, Bergey's manual of systematic bacteriology, Second edition, Vol two A, B and C, Springer, 2005.
4. Dr. H. A. Modi, Elementary Microbiology, Fundamentals of Microbiology, Vol. I, Akta Prakashan Nadiad, 1995.
5. Eugene W. Nester, Denise G. Anderson, C. Evans Roberrts, Jr., Nancy N. Pearsall, Martha T. Nester, Microbiology A Human Perspective, Third edition, McGraw-Hill International edition, 2001.
6. George A. Wistreich, Max D. Lechtman, Microbiology, Fifth edition, Macmillan Publishing Company, 1988.
7. Gerard J. Tortora, Berdell R. Funke & Christine L. Case, Microbiology an introduction, Ninth edition, Pearson Education Inc., 2011.
8. Jacquelyn G. Black, Microbiology Principles and Explorations, Sixth edition, Wiley International edition, 2005.
9. John G. Holt, Noel R. Krieg, Peter H. A. Sneath, James T. Staley and Stanley T. Williams, Bergey's manual of determinative bacteriology, Ninth Edition, Lippincott Williams and Wilkins, 2000.
10. John L. Ingraham, Catherine A. Ingraham, Introduction to Microbiology, Second edition, Brooks/Cole, 2000.
11. Kathleen Park Talaro, Foundation in Microbiology, Sixth edition, McGraw-Hill International edition, 2008.
12. Michael T. Madigan, John M. Martinko, Brock Biology of Microorganisms, Eleventh edition, International edition, Pearson Prentice Hall, 2006.
13. O. P. Sharma, Algae, Tata McGraw Hill Education Private Limited, 2011.
14. Powar & Dagnawala, General Microbiology, Vol. II, Himalaya Publishing House, 1982.
15. Prescott, Harley, Klein's, Willey, Sherwood, Woolverton, Microbiology, Seventh edition, McGraw-Hill International edition, 2008.
16. Roger Y. Stanier, John L. Ingraham, Mark L, Wheelis & Page R. Painter, General Microbiology, Fifth edition, 1987.
17. The Bacteria, Dr.J.B.Chawla, Dr.M.L.Jisnani; M/s Rajni Prakashan, First edition, 2013
18. Microbial Diversity, Dr.J.B.Chawla, Dr.M.L.Jisnani; M/s Rajni Prakashan, First edition, 2013
19. Industrial Microbiology, Dr. G.L. Bhoosreddy, Dr. B.J. Wadher, Dr. A.V. Gomashe and Dr.Mrs. K.V. Dubey, Himalaya Publishing House.

**Rashtrasant Tukadoji Maharaj Nagpur  
University, Nagpur**

**SYLLABUS**

**REVISED**

**FOR**

**2020-21 ONWARDS**

**B.Sc. Microbiology**

**(Semester Pattern)**

# Syllabus

## B.Sc. Part- I

### Microbiology

SEMESTER I		
Course Code	Title	Lectures
Paper I	<b>FUNDAMENTALS OF MICROBIOLOGY.</b>	
<b>Unit-I</b>	<b>History of Microbiology</b>  1. Discovery of Microbes, 2. Theory of biogenesis & abiogenesis 3. Contributions of- Antonie van Leeuwenhoek, Louis Pasteur , Robert Koch, Joseph Lister, Winogradsky, Beijerinck, John Tyndall, Thomas M. Rivers 4. Branches of Microbiology- Definition and scope of a) Systemic Microbiology- Bacteriology, Mycology, Phycology, Virology, b) Biotechnology, c) Geo microbiology, d)Exobiology, e) Medical microbiology, f) Environmental Microbiology g) Industrial Microbiology h) Food Microbiology	09
<b>Unit-II</b>	<b>Bacterial cell structure</b>  1. Differences between prokaryotes and eukaryotes 2. Description of sizes, shapes and arrangements of bacteria 3. <b>Typical Bacterial cell structure-</b> a) Structure of cell wall (Gram positive & Gram negative bacteria) b) Cell membrane:- Fluid mosaic model, mesosomes 4. Ribosomes, Nucleoid, Plasmids, cytoplasmic inclusions 5. Capsules, slime layer, pili, flagella 6. Endospore structure- formation, germination. 7. Exospores, Myxospores, Eukaryotic spores 8. Significance of dormancy	07

<b>Unit- III</b>	<b>Microbial Nutrition</b>  1. Nutritional types of bacteria 2. Basic nutritional requirements. 3. Types of culture media- Selective, Differential, Enriched, Synthetic and non synthetic (Definition, ingredients, principle and applications). 4. Media for isolation of fungi- Definition, ingredients, principle and applications 5. Enrichment Culture	07
<b>Unit-IV</b>	<b>Microbial growth:</b>  1. Bacterial reproduction. 2. Axenic cultures. 3. Growth curve 4. Mathematical expression of growth. 5. Continuous culture – Chemostat and turbidostat 6. Synchronous growth 7. Diauxic culture 8. Factors influencing microbial growth.	07
		30

<b>SEMESTER I</b>		
<b>Course Code</b>	<b>Title</b>	<b>Lectures</b>
<b>Paper II</b>	<b>BASIC TECHNIQUES IN MICROBIOLOGY</b>	
<b>Unit-I</b>	<b>Microscopy</b>  <b>Principle, applications and ray diagram:</b> 1. Simple, compound microscope—Bright field Microscopy, 2. Dark field Microscopy, 3. Electron microscopy (TEM, SEM), 4. Phase-contrast microscopy, 5. Fluorescent microscopy.	08

<b>Unit-II</b>	<b>Staining Techniques.</b>  1. Stains & dyes, chromophore, auxochrome, chromogenes, types of stains 2. Theories of staining 3. Staining techniques : Simple, negative staining, differential staining- Gram staining, acid-fast staining 4. Staining of specific structures: flagella , spores, capsule	07
<b>Unit- III</b>	<b>Microbial Techniques</b>  1. Isolation of pure culture by various methods. 2. Determination of nutritional requirement by auxonographic technique, replica plating technique & multi-point inoculator technique. 3. Measurement of growth 4. Preservation of microorganisms, National & international collection centers	07
<b>Unit-IV</b>	<b>Microbial control</b>  1. Terms & definitions used in microbial control- Sterilization, inhibition, Microbiostatic, microbial, disinfectant, sanitizer, viricide, sporicide, antimetabolite antibiotic, germicide, Preservative etc. 2. Concept of microbial death 3. Properties of ideal antimicrobial agent. 4. Physical control methods—types, mode of action & applications only-a) High & low temperature b) filtration c) radiation d) osmotic pressure. 5. Chemical agents—Different types, mode of action & applications only- a) Phenols b) Alcohols c) Halogenes d) Heavy metals e) Quaternary ammonium compounds f) surface active agents g) phenol-coefficient 6. Mechanism of cell injury 7. Chemotherapeutic agent—sulphonamides only- mode of action & application, Antibiotics, examples according to mode of action,source	08
		30

<b>SEMESTER I</b>		
<b>Sr. No.</b>	<b>Title</b>	<b>Lectures</b>
	<b>PRACTICAL</b>	
1	General guidelines for safety in microbiology laboratory, possible laboratory hazards, safety precautions and disposal of laboratory waste and ethics in microbiology.	30
2	General concept of basic equipments & apparatus.	
3	Preparation of media & stains.	
4	Study of permanent slides of Streptococci, Diplococci, Capsule forming bacteria, Micrococcus sp. <i>Clostridium tetani</i> , <i>Bacillus anthracis</i> , <i>Vibrio cholera</i> , <i>Mycobacterium tuberculosis</i> , <i>Treponema palladium</i> , Cell organelles	
5	Demonstration of microbes from environment & body parts – Study colony characteristics	
6	Staining—Simple staining,	
7	Differential staining - Gram staining,	
8	Endospore staining.	
9	Bacterial motility by hanging drop method (Major).	
10	Isolation of pure culture by streak plate method,	
11	Isolation of pure culture by spread plate and pour plate method (Major).	
12	Anaerobic cultivation of bacteria.	
13	Oligodynamic effect (Major).	
14	Effect of UV radiation on bacteria using replica plate technique (Major).	
<b>Perform at least 8 practical (Excluding 1, 2 and 3). Experiment no. 9, 10, 11 are compulsory.</b>		
<b>Scheme of practical examination-</b> <ol style="list-style-type: none"> <li>1. One long expt.-----10 Marks</li> <li>2. One short expt.-----05 Marks</li> <li>3. Spotting-----05 Marks</li> <li>4. Viva-voce-----05 Marks</li> <li>5. Record-----05 Marks</li> </ol> <hr/> <p style="text-align: center;">30 Marks</p>		

## **Books**

1. Prescott, Hurley. Klein-Microbiology, 7<sup>th</sup> edition, International edition, McGraw Hill.
2. Kathleen Park Talaro& Arthur Talaro - Foundations in Microbiology International edition 2002,| McGraw Hill.
3. Michael T. Madigan & J. M. Martin, Brock, Biology of Microorganisms 12<sup>th</sup> Ed. International edition 2006, Pearson Prentice Hall.
4. A.J. Salle, Fundamental Principles of Bacteriology.
5. Stanier. Ingraham et al ,General Microbiology 4th & 5th Ed. 1987, Macmillan Education Ltd
6. Microbiology TMH 5th Edition by Michael J. Pelczar Jr., E.C.S. Chan ,Noel R. Krieg
7. BIS:12035.1986: Code of Safety in Microbiological Laboratories
8. Microbiology An Introduction. 6th Edition. Tortora, Funke and Case. Adisson Wesley Longman Inc. 1998.
9. Introduction to Microbial Techniques by Gunasekaran
10. Microbiology: Fundamentals and Applications by Ronald M. Atlas, New York: Macmillan Publication

# Syllabus

## B.Sc. Part- I

### Microbiology

SEMESTER II		
Course Code	Title	Lectures
Paper I	<b>MICROBIAL DIVERSITY</b>	
Unit-I	<b>Prokaryotic microbes</b> <ol style="list-style-type: none"><li>General characters of a) Proteobacteria, b) Mycoplasma, c) Rickettsia and d) Chlamydia</li><li>Cyanobacteria: Characteristics of anabena and applications of cyanobacteria</li><li>Actinomycetes: Characteristics of Streptomyces and their applications</li><li>Archae bacteria: Types of archae bacteria (Brief description), Methanogenic bacteria and their importance</li></ol>	09
Unit-II	<b>Eukaryotic microbes</b> <ol style="list-style-type: none"><li>Fungi and yeast: General characters, Asexual and sexual mode of reproduction,</li><li>Algae:-General characters and industrially important algal cells</li><li>Protozoans: General characters and life cycle of <i>Entamoeba histolytica</i></li></ol>	06
Unit- III	<b>Acellular microbes: Viruses.</b> <ol style="list-style-type: none"><li>Discovery of viruses, General structure, symmetry and classification</li><li>Cultivation, chick embryo &amp; tissue culture method</li><li>Detection of viral growth</li><li>T4-Bacteriophages- lytic cycle,</li><li>Lambda phage- Lysogenic cycle.</li></ol>	07

<b>Unit-IV</b>	<b>Microbial interaction</b>	08
	<ol style="list-style-type: none"> <li>1. Positive and negative interaction: Commensalism, synergism, syntropism, mutualism, parasitism, predation, antagonism, competition</li> <li>2. Protist-Protist Interaction: Bdellovibrio</li> <li>3. Protist-Plant interaction: Root nodule bacteria</li> <li>4. Protist-Animal interaction: Rumen bacteria, insect midgut bacteria, luminescent bacteria</li> </ol>	30

<b>SEMESTER II</b>		
<b>Course Code</b>	<b>Title</b>	<b>Lectures</b>
<b>Paper II</b>	<b>FOOD MICROBIOLOGY &amp; MILK MICROBIOLOGY</b>	
<b>Unit-I</b>	<b>Spoilage of Food</b>	07
	<ol style="list-style-type: none"> <li>1. Classification of food on the basis of ease of spoilage</li> <li>2. Sources of microorganisms in food, microbial load</li> <li>3. Spoilage of vegetables – factors responsible &amp; types of spoilage.</li> <li>4. Spoilage of meat &amp; meat products- factors responsible &amp; types of spoilage.</li> <li>5. Spoilage of canned food – factors responsible &amp; types.</li> </ol>	
<b>Unit-II</b>	<b>Preservation of food &amp; Food borne diseases</b>	07
	<ol style="list-style-type: none"> <li>1. General principles of food preservation.</li> <li>2. Preservation by physical methods- <ul style="list-style-type: none"> <li>i) By high temperature- TDP, TDT, Effect of high temperature on food, factors affecting high temperature application. Canning in detail.</li> <li>ii) By low temperature— chilling, freezing, and thawing, factors affecting low temperature, effect of low temperature on food.</li> </ul> </li> <li>3. Preservation by chemical preservatives—Acetates, citric acid, lactic acid, propionates, sorbates, nitrates, salt &amp; sugar. Mode of action, applications.</li> </ol>	

<b>Unit- III</b>	<b>Milk Microbiology</b>  1. Composition of milk. 2. Sources of microorganisms in milk. 3. Types of spoilage of milk & milk products. 4. Preservation by high temperature—Pasteurization in detail, UHT, Pasteurization test—Phosphatase test 5. Preservation by low temperature 6. Determining the quality of milk—plate count & MBRT. 7. Production of curd/Dahi & Shrikhand. 8. Production of Cheese—Classification of cheese. Production of Cheddar cheese & cottage cheese	08
<b>Unit-IV</b>	<b>Food Borne Diseases and Food Standards</b>  1. Food Poisoning –food intoxication and food infection 2. <i>Clostridium</i> , <i>Staphylococcal</i> enterotoxic poisoning, and <i>Bacillus cereus</i> food poisoning: organism, source, foods involved, outbreak conditions, effect on human health & prevention 3. Aflatoxin- sources of contamination, foods involved, effect on human health & prevention 4. Introduction to FDA, BIS and FSSAI- objectives and responsibilities 5. Introduction to HACCP	08
		30

<b>SEMESTER II</b>		
<b>Sr. No.</b>	<b>Title</b>	<b>Lectures</b>
	<b>PRACTICAL</b>	
1	General guidelines for safety in microbiology laboratory, possible laboratory hazards, safety precautions and disposal of laboratory waste and ethics in microbiology.	30
2	Study of permanent slides of special bacteria--- Fungi ( <i>Aspergillus</i> , <i>Penicillium</i> and <i>Mucor</i> ) Protozoa ( <i>Plasmodium vivax</i> , <i>Trypanosoma</i> and <i>amoeba</i> ) & Algae ( <i>Spirullina</i> , <i>Anabena</i> and <i>Euglena</i> ), <i>Mycoplasma</i> , <i>Rickettsia</i> and <i>Chlamydia</i>	
3	Slide culture techniques for the cultivation and study of mould.	
4	Determining the microbiological quality of food- Total aerobic bacterial count and yeast & mold count by SPC method (Major).	

5 6 7 8 9 10 11 12 13	Coliform detection in food as per BIS. Enumeration total aerobic viable count in milk in raw and pasteurized milk by serial dilution method (Major). Quality of milk by MBRT. Phosphatase test. Effect of salt on microbial growth (Major). Effect of sugar on microbial growth (Major). Determination of TDP & TDT Determination of MIC of preservative on test organism (Major). Production of curd by using standard lactic culture and determine acidity.	
---	---	--

### Perform at least 8 practical

#### Scheme of practical examination-

1. One long expt.----- 10 Marks
2. One short expt.----- 05 Marks
3. Spotting-----05 Marks
4. Viva-voce-----05 Marks
5. Record-----05 Marks

30 Marks

## Books

1. Food Microbiology by Frazier 5th ed
2. Modern Food Microbiology by James Jay 6th ed
3. Applied Dairy Microbiology by Martha & Steele
4. Prescott, Hurley. Klein-Microbiology, 7<sup>th</sup> edition, International edition, McGraw Hill.
5. Kathleen Park Talaro & Arthur Talaro- Foundations in Microbiology International edition 2002,|McGraw Hill.
6. William C. Frazier, Dennis C. Westhoff, N. M. Vanitha (2013). Food Microbiology, 5thEdn.McGraw-Hill Education (India).
7. Banwart G. J. (1989). Basic Food microbiology, 2nd Edn. Chapman and Hall. International Thompson Publishing.
8. Michael T. Madigan & J.M. Martin, Brock Biology of Microorganisms 12<sup>th</sup> Ed. International edition 2006, Pearson Prentice Hall.
9. Stanier.Ingrahametal,GeneralMicrobiology4th&5thEd.1987,MacmillanEducation Ltd
10. Microbiology TMH 5th Edition by Michael J.Pelczar Jr., E.C.S. Chan ,Noel R. Krieg
11. Microbiology An Introduction. 6th Edition. Tortora,Funke and Case. AdissonWesley Longman Inc. 1998.
12. BIS standards, FSSAI
13. Outlines of Biochemistry. E.E. Conn &P.K.Stumpf ,G. Bruening, R.N.Doi. 5 Edition, John Wiley and sons
14. Clarence Henry Eckles, Willes Barnes Combs, Harold Macy (1943). Milk and milkproducts, 4th Ed. McGraw-Hill book Company, Incorporated.
15. Sarkar Chatterjee Swagata Food and Microbes, Himalaya Publishing House

# Syllabus

## B.Sc. Part- II

### Microbiology

SEMESTER III		
Course Code	Title	Lectures
Paper I	<b>CHEMISTRY OF ORGANIC CONSTITUENTS AND ENZYMOLOGY</b>	
Unit-I	<b>Carbohydrates and Lipids</b> 1. Classification of carbohydrates, 2. Structure of glucose, fructose, maltose, lactose, sucrose, raffinose, starch, hyaluronic acid, glycogen, cellulose, osazone formation 3. Classification of lipids, structure of triglyceride, compound lipids, derived lipids	07
Unit-II	<b>Amino acids and proteins</b> 1. Classification of amino acids, 2. Titration curve, acidic, basic and neutral amino acids, 3. Peptide bond theory, 4. Organizational levels of proteins, 5. Concept of oligomeric protein	06
Unit- III	<b>Enzymology</b> 1. Definitions and nature of enzymes, classification, nomenclature, 2. Primary concept of enzyme kinetics, MM equation, modifications of MM equations, 3. Activation energy, transition state, ES complex, enzyme activity, katal, specific activity ,turnover number 4. Enzyme inhibition and their types, 5. Enzyme regulation, their types, 6. Allosteric sites, allosteric modulators, 7. Functional diversity such as holoenzyme, apoenzyme, coenzyme, cofactor, prosthetic group, isoenzymes, 8. Membrane bound enzymes, multienzyme complex, zymogens	09

<b>Unit-IV</b>	<b>Nucleic acid and Vitamins</b> 1. Structure of purines, pyrimidines, nucleosides, nucleotides, 2. Structure of DNA, RNA, and various forms of DNA 3. Types of vitamins, Classification on the basis of solubility, functions of vitamins, 4. Hypervitaminosis – Definition, causes, symptoms, treatment of Vit. A and D 5. Hypovitaminosis – Definition, causes, symptoms, treatment of Vit. B12, A and D	08
		30

<b>SEMESTER III</b>		
<b>Course Code</b>	<b>Title</b>	<b>Lectures</b>
<b>Paper II</b>	<b>INDUSTRIAL MICROBIOLOGY</b>	
<b>Unit-I</b>	<b>Fundamentals of industrial microbiology and Fermentor design</b> 1. Definition, History and scope of industrial microbiology, 2. Design of typical fermentor, parts of fermentor, 3. Types of fermentors, 4. Types of fermentation processes 5. Isolation of industrially important micro organisms- Primary screening and secondary screening	07
<b>Unit-II</b>	<b>Upstream processing in fermentation process</b> 1. Strain development, 2. Inoculum development, 3. Scale up of fermentor process 4. Raw materials used for media preparation, 5. Sterilization of fermentors, production media and air 6. Factors affecting fermentation process such as agitation, aeration, pH, dissolved oxygen and rheological properties	07
<b>Unit- III</b>	<b>Downstream processing in fermentation process and Quality Control</b> 1. Outline of downstream process 2. Harvesting of biomass- methods and principles 3. Product recovery and purification- methods and principles 4. Concept of Good Manufacturing Practices 5. Microbiological quality checking as per pharmaceutical compendium such as IP and USP	08

<b>Unit-IV</b>	<b>Entrepreneurial microbiology</b> Production, biochemistry, recovery and uses of 1. Single Cell Protein - Spirulina 2. Bakers yeast, 3. Ethanol 4. Penicillin, semi synthetic penicillin, 5. Citric acid 6. Beer and Wine	08
		30

<b>SEMESTER III</b>		
<b>Sr. No.</b>	<b>Title</b>	<b>Lectures</b>
	<b>PRACTICAL</b>	
1	General guidelines for safety in microbiology laboratory, possible laboratory hazards, safety precautions and disposal of laboratory waste and ethics in microbiology.	30
2	Calibration of pH meter, validation of autoclave, Validation of Laminar air Flow unit	
3	Qualitative detection of carbohydrates, protein, nucleic acid and lipids	
4	Detection of enzymes: amylase, catalase, gelatinase, lipase, oxidase	
5	Isolation of amylase producer from soil	
6	Sugar and alcohol tolerance of <i>Saccharomyces cerevisiae</i> (Major)	
7	Production and estimation of alcohol (Major)	
8	Leavening capacity of yeast (Major)	
9	Detection of penicillinase activity (Major)	
10	Chemical estimation of penicillin	
11	Determination of sugar quantity in any natural source of carbohydrate	
12	Determination of protein quantity (Major).	
13	Bioassay of penicillin	
14	Sterility testing of pharmaceutical products	
15	Microbiological quality of non sterile pharma products as per IP (Major)	
16	Growth promotion test (Major)	
<b>Perform at least 8 practical. Experiment no. 1 is compulsory.</b>		

**Scheme of practical examination-**

1. One long expt.-----10 Marks
2. One short expt.-----05 Marks
3. Spotting-----05 Marks
4. Viva-voce-----05 Marks
5. Record-----05 Marks

---

30 Marks

**Books**

1. Lehninger. Principles of Biochemistry. 4th Edition. D. Nelson and M. Cox. W.H. Freeman and Company. New York2005
2. Microbiology an Introduction. 6<sup>th</sup> Edition. Tortora, Funke and Case. Adisson Wesley Longman Inc. 1998.
3. Prescott, Hurley. Klein-Microbiology, 5th & 6th edition, International edition 2002 & 2006, McGraw Hill.
4. Garrett, R. H. and Grisham, C. M. (2004) Biochemistry. 3rd Ed. Brooks/Cole, Publishing Company, California.
5. Conn Eric, Stumpf Paul K., Bruuening George, Doi Roy H., (1987) Outlines of Biochemistry 5th Ed , John Wiley and Sons, New Delhi.
6. H. Patel. (1985), Industrial Microbiology, Macmillan India Ltd.
7. Butterworths Heinemann. *Bioreactor Design and Product Yield* (1992), BIOTOL series,
8. Casida, L. E., (1984), Industrial Microbiology, Wiley Easterbs, New Delhi
9. Indian Pharmacopia and British Pharmacopia (Latest Edn).
10. Lydersen B., N. a. D' Elia and K. M. Nelson (Eds.) (1993) *Bioprocess Engineering: Syatems, Equipment and Facilities*, John Wiley and Sons Inc.
11. *Operational Modes of Bioreactors*, (1992) BIOTOL series, Butterworths Heinemann.
12. Peter F. Stanbury. Principles Of Fermentation Technology, 2E, Elsevier (A Division of Reed Elsevier India Pvt. Limited), 2009
13. Prescott, S.C. and Dunn, C. G., (1983) Industrial Microbiology, Reed G. AVI tech books.
14. Reed G. Ed. Prescott and Dunn's Industrial Microbiology. 4th Ed., CBS Pub. New Delhi.
15. Stanbury, P. F. and Whittaker, A. (1984) Principles of Fermentation technology, Pergamon press.
16. Van Damme E. J. (1984) Biotechnology of Industrial Antibiotics, Marcel Dekker Inc. New York.
17. Wiseman A.(1985) Topics in Enzyme and Fermentation - Biotechnology, Vol. 1 and 2, John Wiley and Sons, New York

# Syllabus

## B.Sc. Part- II

### Microbiology

SEMESTER IV		
Course Code	Title	Lectures
Paper I	<b>METABOLISM</b>	
<b>Unit-I</b>	<b>Carbohydrate</b> 1. General strategy of metabolism, 2. EMP pathway and its regulation, 3. TCA cycle and its regulation, 4. Outline of ED pathway, 5. Pentose Phosphate pathway, 6. PK pathway	08
<b>Unit-II</b>	<b>Lipid and Nucleic Acid</b> 1. Betaoxidation and Omegaoxidation, 2. Replication of DNA, modes of replication, general features, enzymes involved, rolling circle and knife and fork model, 3. Prokaryotic transcription including general features, enzymes involved and reverse transcription	08
<b>Unit- III</b>	<b>Amino acids and Proteins</b> 1. Amino acid breakdown, deamination, (alanine, tyrosine, methionine), 2. Metabolic breakdown of individual amino acids (alanine, arginine, methionine and tryptophan) 3. Glucogenic and ketogenic amino acids 4. Genetic code and 5. Prokaryotic translation	08
<b>Unit-IV</b>	<b>Energy Generation</b> 1. High energy molecules, 2. Substrate level phosphorylation, 3. Cyclic and noncyclic photophosphorylation, 4. Oxidative phosphorylation and ATP generation	06
		30

SEMESTER IV		
Course Code	Title	Lectures
Paper II	ENVIRONMENTAL MICROBIOLOGY	
<b>Unit-I</b>	<b>Fresh Water microbiology</b>  1. <b>Fresh water</b> – Definition, Examples of fresh water i.e. ice sheets, ice caps, glaciers, icebergs, bogs, ponds, lakes, rivers, streams, and underground water and their outline. 2. <b>Potable water</b> - Definition, Water treatment using SSF and RSF, Methods of chlorination, Water Quality Standards (BIS and WHO). 3. <b>Microbiological Quality Testing</b> - Significance of bacteriological analysis of water, collection and handling of water samples, indicators of excretal pollution, bacteriological analysis of water for coliforms and faecal streptococci (MTFT, MFT), differences between fecal and non fecal organisms	06
<b>Unit-II</b>	<b>Waste Water Treatment</b>  1. Sewage types, composition, physical, chemical and biological characteristics, BOD, COD, ThOD 2. Primary Treatment, 3. Secondary Treatment – Trickling filter, Activated sludge, RBC, Sludge digester, Oxidation pond, Septic tank, and Imhoff tank 4. Tertiary Treatment, 5. Disposal of treated wastewater.	08
<b>Unit- III</b>	<b>Air and Agricultural microbiology</b>  1. <b>Air Microbiology</b> - Significance of Microbial analysis of air, settling plate and Anderson technique. 2. <b>Agricultural Microbiology</b> – Symbiotic nitrogen fixing bacteria, mechanism of nitrogenase enzyme, formation of root nodules, non-symbiotic nitrogen fixing bacteria, bacteria and fungi as biopesticides, Phosphate solubilizing microorganisms, mycorrhiza	08

<b>Unit-IV</b>	<b>Bioremediation and Biomagnifications</b>	08
	<ol style="list-style-type: none"> <li>1. <b>Bioremediation</b>- Role of plant and microbes</li> <li>2. <b>Bioaugmentation</b> - Definition, significance with example</li> <li>3. <b>Xenobiotics and recalcitrant compounds</b> – Definition, environmental significance and examples</li> <li>4. <b>Microbial leaching</b> – Concept, advantages and bioleaching of copper</li> <li>5. <b>Bioaccumulation and Biomagnification</b> - Definition, environmental significance and examples</li> </ol>	30

<b>SEMESTER IV</b>		<b>Lectures</b>
<b>Sr. No.</b>	<b>Title</b>	
<b>PRACTICAL</b>		
1	General guidelines for safety in microbiology laboratory, possible laboratory hazards, safety precautions and disposal of laboratory waste and ethics in microbiology.	30
2	Isolation of Salmonella from water and sewage	
3	Determination of MPN of drinking water (Major)	
4	IMViC Test	
5	Determination of DO (Major)	
6	Determination of Alkalinity	
7	Determination of total solids, water soluble and water insoluble solids in waste water	
8	Determination of BOD and COD of waste water (Demonstration)	
9	Determination of Available Chlorine in Bleaching Powder/Sodium hypochlorite (Major)	
10	Isolation of Rhizobium from root nodules (Major)	
11	Isolation of Phosphate solubilizing microorganisms from soil	
12	Monitoring of indoor microbial count	
<b>Perform at least 8 practical</b>		

**Scheme of practical examination-**

1. One long expt.-----10 Marks
2. One short expt.-----05 Marks
3. Spotting-----05 Marks
4. Viva-voce-----05 Marks
5. Record-----05 Marks

---

30 Marks

**Books**

1. Principles of Biochemistry- G. Zubay, W.W. Parson, D.E.Vance. Wm.C.Brown Publishers
2. Fundamentals of Biochemistry. D. Voetand J. Voet Publisher Wiley plus Edition 5th.
3. Lehninger- Principles of Biochemistry- David Nelson, Michael Cox. 4 edition W.H. Freeman & Company[Low price edition- for sale in India, Pakistan, Sri Lanka, Bangladesh, Nepal & Bhutan]
4. Principles & techniques of Biochemistry &Mol biology 6th ed, Keith Wilson & John Walker, Cambridge University press, 2006
5. Laboratory manual in Biochemistry- J. Jayaraman
6. Ajay Singh, Owen P. Ward, 2004 edition, Applied Bioremediation and Phytoremediation (Soil Biology). Springer;
7. David S. Ingram, N.F. Robertson (1999). Plant Disease.1st Edn.: Collins
8. George Nicholas Agrios (2005).Plant Pathology.5th Edn. Academic Press Inc.
9. James M. Jay, Martin J. Loessner, David A. Golden (2005). Modern food microbiology, 7th Edn. Springer Science & Business.
10. John Postgate, (1998). Nitrogen Fixation. Cambridge University Press
11. K. S. Bilgrami, H. C. Dube (1984). A textbook of modern plant pathology. 7th Edn.
12. Martin Alexander (1999). Biodegradation and Bioremediation. Academic Press
13. Matthew Dickinson, (2003). Molecular Plant Pathology. Garland Publishing Inc.
14. N. S. SubbaRao. (1995). Soil Microorganisms and Plant growth. 3rd Edn. Science Pub Inc
15. R. Barry King, John K. Sheldon, Gilbert M. Long, 1997 Practical Environmental
16. Bioremediation: The Field Guide, 2nd Edn. CRC Press
17. Air Quality Standards- NAAQS Manual , Volume I 4. Prescott's Microbiology, 8th Edition; Joanne M. Willey, Linda M. Sherwood, Christopher J.Woolverton,2011, McGraw Hill International Edition
18. Fundamentals of Microbiology, 9 th Edition , Frobisher, Hinsdill, Crabtree, Goodheart, 1974, Saunders College Publishing
19. Introduction to Environmental Microbiology – Barbara Kolwzan , Waldemar Adamiak (E Book)
20. Soil Microbiology-4th Edition, N.S Subba Rao,2000, Oxford and IBH Publishing Co. Pvt. Ltd

# Syllabus

## B.Sc. Part- III

### Microbiology

SEMESTER V		
Course Code	Title	Lectures
Paper I	<b>MEDICAL MICROBIOLOGY</b>	
Unit-I	<p><b>Epidemiology and host-parasite relationship.</b></p> <p><b>1. Definitions:</b></p> <ul style="list-style-type: none"><li>i. Signs, symptoms and syndrome of disease, stages of infectious diseases-incubation period, prodromal phase, Invasive phase, decline phase and the period of convalescence, primary infection, secondary infection, acute infection, chronic infection local and systemic infection, iatrogenic infection, nosocomial infection, congenital infection, teratogenic infection, fulminating infection, atypical infection, latent infection</li><li>ii. Bacteremia, septicaemia, pyamia, toxemia, Viremia.</li><li>iii. Epidemic, Endemic, Pandemic, Zoonotic, Exotic, prosodemic sporadic disease.</li></ul> <p><b>2. Dynamics of disease transmission:</b></p> <ul style="list-style-type: none"><li>i. Causative or etiological agents[list]</li><li>ii. Sources of reservoir of infection. Exogenous Human (case and carrier) Non-living reservoir. Endogenous infections</li><li>iii. Portal of exit</li><li>iv. Mode of transmission-Contact, Vehicle, Vector, Air-borne, trans placental and laboratory/hospital infections.</li><li>v. Portal of entry.</li><li>vi. Susceptibility of host.</li></ul> <p><b>3. Control of communicable diseases:</b> Control of sources, blocking the channels of transmission, protecting the susceptible host.</p>	08

<b>Unit-II</b>	<b>Infectious Microbiology and Normal Flora</b> 1. Microbial mechanism of Pathogenicity: pathogenicity and virulence, exaltation and attenuation, MID, MLD, ID 50, LD50. i. Invasiveness:-adherence,capsule,enzymes. ii. Toxigenicity:-Exotoxins and Endotoxins. 2. Normal flora of healthy human host: i. Definition, origin, significance, Germ free and Gnotobiotic life. ii. Characteristics of normal flora 3. Infectious microbiology: Microbial diseases of skin, eye, digestive, respiratory, cardiovascular, lymphatic, urinary, reproductive and nervous systems. (Outline of structure of each system and lists of infectious diseases affecting the particular system).	08
<b>Unit- III</b>	<b>Study of pathogenic organisms</b> <b>Morphology, cultural characteristics, biochemical characteristics, pathogenesis, serology, lab diagnosis</b> <b>1. Bacteria</b> i. <i>Escherichia coli</i> ii. <i>Staphylococcus aureus</i> iii. <i>Salmonella typhi</i> and <i>paratyphi A&amp;B</i> iv. <i>Mycobacterium tuberculosis</i> . v. <i>Spirochetes-Treponema pallidum</i> <b>2. Viruses</b> i. HIV ii. Hepatitis A&B <b>3. Protozoa</b> i. <i>Plasmodium vivax</i>	07
<b>Unit-IV</b>	<b>Disease control</b> 1. Basic mechanism of action of drugs. i. Bacterial cell wall synthesis inhibitor; Penicillin ii. Bacterial protein synthesis inhibitor: Chloramphenicol iii. Bacterial DNA synthesis inhibitor: Nalidixic acid, Floxacin iv. Anti metabolites: Trimethoprim, sulfamethoxazole. 2. Non automated and automated <i>in vitro</i> drug susceptibility testing- Kirby-Bauer disc diffusion method and E-strip method. 3. Various mechanisms of development of drug resistance	07
		30

<b>SEMESTER V</b>		
<b>Course Code</b>	<b>Title</b>	<b>Lectures</b>
<b>Paper II</b>	<b>MOLECULAR BIOLOGY AND BIOINSTRUMENTATION</b>	
<b>Unit-I</b>	<b>Gene mutation and regulation.</b> <ol style="list-style-type: none"> <li>1. Concept of gene, muton, recon, cistron, mono cistronic and polycistronic gene, gene within gene, spit gene.</li> <li>2. Gene regulation: lac operon(detail)</li> <li>3. Mutation: Definition, random vs directed mutation, type of mutation, base pair substitution, frame shift, point, nonsense, missense, and silent mutation.</li> <li>4. Genetic suppression: Intergenic and Intragenic.</li> <li>5. Molecular basis of mutation: Mechanism of spontaneous and induced mutation.</li> </ol>	08
<b>Unit-II</b>	<b>Genetic recombination:</b> <ol style="list-style-type: none"> <li>1. Definition, Basic concept of recombination</li> <li>2. General types of recombination.</li> <li>3. Transformation.</li> <li>4. Conjugation</li> <li>5. Transductions</li> <li>6. Transposable genetic elements (Prokaryotic)</li> </ol>	07
<b>Unit- III</b>	<b>Bioinstrumentation-I (Principles and applications)</b> <ol style="list-style-type: none"> <li>1. Spectroscopy: Laws of absorption, limitations of Beer law, UV-Visible spectroscopy and its applications.</li> <li>2. Centrifugation: Type of centrifuge, analytical and differential centrifugation.</li> <li>3. Electrophoresis: Principle, agarose gel electrophoresis and SDS- PAGE.</li> <li>4. Factors affecting electrophoresis mobility</li> </ol>	08
<b>Unit-IV</b>	<b>Bioinstrumentation-II (Principles and applications)</b> <ol style="list-style-type: none"> <li>1. Chromatography: Thin layer chromatography, ion exchange, gel filtration</li> <li>2. Isotope tracer technique: Method and applications.</li> <li>3. Detection and measurement of radioactive isotope: GM counter, scintillation counter.</li> </ol>	07
		30

<b>SEMESTER V</b>		
<b>Sr. No.</b>	<b>Title</b>	<b>Lectures</b>
	<b>PRACTICAL</b>	
1	General guidelines for safety in microbiology laboratory, possible laboratory hazards, safety precautions and disposal of laboratory waste and ethics in microbiology.	30
2	Agarose gel electrophoresis (Major)	
3	Calibration of spectrophotometer	
4	Estimation of creatinine by spectrophotometric method (Major)	
5	Perform gel filtration (Major)	
6	Perform paper chromatography of amino acids and sugars	
7	Perform TLC of amino acids and sugars (Major)	
8	Identification of bacteria: <i>E.coli</i> , <i>S.aureus</i> , <i>Salmonella</i> , <i>Proteus vulgaris</i> (Major)	
9	Antibiotic sensitivity test by Kirby-Bauer method and E strip method	
10	MIC of antibiotic by well diffusion method/dilution method (Major)	
11	Antigen Preparation: O & H antigen preparation of <i>Salmonella</i> and Confirmation by slide agglutination	
12	Acid fast staining of <i>M. tuberculosis</i> .	
<b>Perform at least 8 practical</b>		
<b>Scheme of practical examination-</b> <ol style="list-style-type: none"> <li>1. One long expt.-----10 Marks</li> <li>2. One short expt.-----05 Marks</li> <li>3. Spotting-----05 Marks</li> <li>4. Viva-voce-----05 Marks</li> <li>5. Record-----05 Marks</li> </ol> <hr/> 30 Marks		

## Books

1. Tortora, G.J., Funke, B.R., Case, C.L, 1992. Microbiology: An introduction 5th Edition, Benjamin Pub. Co. NY
2. Roitt, P.I: Mims, C.J. Medical Microbiology
3. Chakraborty, P., 2003 A textbook of Microbiology, 2nd Edition New Central Book Agency, India.
4. Medical Microbiology edited by Samuel Baron. Fourth edition. (University of Texas Medical Branch of Galvesion)
5. Sherris, John C, Ed, Medical Microbiology: an Introduction to infectious diseases. Elsevier Publication IIInd edition.

6. Virulence mechanisms of bacterial pathogens (Second edition) by Roth, Bolin, Brogden Minion and Michael.
7. Ganti, A. Sastry.1975. Veterinary Pathology. Seventh Edition. Revised by P. Rama Rao.
8. Davis B.D., Delbacco, 1990 Microbiology 4th edition, J.B. Lippincott Co. NY
9. Wolfgang K. Joklik, 1992, Zinsser Microbiology 20<sup>th</sup> Edition, McGraw-Hill Professional Publishing.
10. Dey, N.C and Dey, TK. 1988, Medical Bacteriology, Allied Agency, Calcutta, 17 Edition
11. Ananthnarayana, R. and C.E, Jayaram Panikar, 1996 Text book of microbiology, 5th edition, Orient Longman.
12. Park and Park, Preventive and Social medicine. 2013, Publisher: Banarsidas Bhanot, Jabalpur
13. David Greenwood, 1995, Antimicrobial Chemotherapy, 3<sup>rd</sup> Edition,Oxford University Press.
14. Franklin, T.J and Snow, G. A. 2012, Biochemistry of Antimicrobial Action. Springer Science & Business Media
15. Mukherjee, K.L 1988 Medical Laboratory Technology, Vol III, 10th Edition, Tata Mc. Graw-Hill Pub Co
16. Bruce A. (2008), Molecular Biology of the Cell, 5<sup>th</sup> Edn. Publisher: Garland Science, New York.
17. David Freidfelder, (1987).Molecular Biology, 2<sup>nd</sup>Edn. Jones & Bartlett Pub.
18. Gardner, Simmons, Snustad. (2006), Principles of Genetics, 8<sup>th</sup>Edn.John Wiley & Sons. Inc. New York.
19. Gunther S. Stent, (1978), Molecular Genetics: An Introductory Narrative, 2 Edn. W.H.Freeman& Co.
20. Hayes, W. (1964), The Genetics of Bacteria and their Viruses, CBS Pub. New Delhi. James D. Watson, Tania A. Baker, Stephen P. Bell, Alexander Gann, Michael
21. Levine, Richard Losick, (2013 ), Molecular Biology of the Gene, 7 Edn. Pearson Publishers.
22. Jocelyn E. Krebs, Elliott S. Goldstein, Stephen T. Kilpatrick, (2012) Lewin's GENES XI , 11th Edn. Jones &Bartlett Learning
23. Lodish H. et al. (2012), Molecular Cell Biology, 7th Edn. W. H. Freeman & Company. New York.
24. Primrose, S. B. (2002).Principles of Gene Manipulation 6th Edn. Oxford: Blackwell Scientific Publications
25. Russel Peter. (2009), iGenetics: A Molecular Approach, 3rd Edn. Publisher BenjaminCummings
26. Russel, Peter, (1990), Essential Genetics, 7th Edn. Blackwell Science Pub.
27. Strickberger, M.W. (1985), Genetics, 3rd Edition Macmillan Pub. Co. NY.

# Syllabus

## B.Sc. Part- III

### Microbiology

SEMESTER VI		
Course Code	Title	Lectures
Paper I	<b>IMMUNOLOGY</b>	
<b>Unit-I</b>	<b>Immunity and Non specific defenses</b> 1. Immunity: Definition and general concept 2. Haematopoiesis and Cells of immune system a) Diagram of Haematopoiesis b) General characteristics of i. B and T cells, ii. Monocytes and macrophages, iii. Neutrophils, Eosinophils and basophiles. iv. Mast cells v. Dendritic cells vi. Natural Killer cells 3. Non specific defenses of the host: a) Species, race and individual resistance. b) Age, sex, hormonal and nutritional influences. 4. Mechanism of non-specific defenses: a) First line of defense – Physical, chemical and biological barriers b) Second line of defense: i. Humoral components: Defensins, pattern recognition proteins (PRP) and pathogen associated molecular patterns (PAMPs), complement, kinins, acute phase reactants. ii. Cellular components: Phagocytic cells – PMNL, macrophages (reticulo-endothelial cell system) and dendritic cells 5. Functions: Phagocytosis (oxygen dependent and independent systems), Complement activation (General concept), Coagulation system, Inflammation (cardinal signs, mediators, vascular and cellular changes, role of Toll-like receptors)	08

<b>Unit-II</b> <ul style="list-style-type: none"> <li><b>1. Antigen</b> <ul style="list-style-type: none"> <li>a) Concepts and factors affecting immunogenecity</li> <li>b) Antigenic determinants, haptens and cross-reactivity, Carriers, Adjuvants</li> <li>c) Types of antigens: Thymus-dependent and thymus-independent antigens, Synthetic antigens, Soluble and particulate antigens, Autoantigens, Isoantigens, Species specific antigens, Organ specific antigens, Heterophile antigens</li> </ul> </li> <li><b>2. Immunoglobulins</b> <ul style="list-style-type: none"> <li>a) Structure of basic unit, chemical and biological properties</li> <li>b) Characteristic of domain structure, functions of light and heavy chain domains</li> <li>c) Molecular basis of antibody diversity (kappa chain, lambda chain and heavy chain diversity)</li> <li>d) Classes of Immunoglobulins and their functions.</li> </ul> </li> <li><b>3. Organs of immune system</b> <ul style="list-style-type: none"> <li>a) Primary lymphoid organs (Thymus and Bursa): Thymus – structure, thymic education (positive and negative selection), Bone marrow</li> <li>b) Secondary lymphoid organs – Structure and function of spleen and lymph node, mucous associated lymphoid tissue and lymphatic system and lymph circulation</li> </ul> </li> </ul>	<b>08</b>
<b>Unit- III</b> <ul style="list-style-type: none"> <li><b>1. Adaptive / Acquired Immunity (Third line of defense):</b> <ul style="list-style-type: none"> <li>a) Acquired immunity: Active and Passive immunity.</li> <li>b) Primary and secondary response and its significance in vaccination programs</li> <li>c) Clonal selection and clonal deletion (immune tolerance)</li> <li>d) B cell biology, role of cytokines in activation and differentiation of B-cells</li> </ul> </li> <li><b>2. Cell Mediated Immune Response</b> <ul style="list-style-type: none"> <li>a) Activation and differentiation of T cells</li> <li>b) Mechanism of CTL mediated cytotoxicity, ADCC</li> <li>c) Applications of CMI</li> </ul> </li> <li><b>3. T-cell biology</b> <ul style="list-style-type: none"> <li>a) T-cell dependent antibody response. outline</li> <li>b) T-cell independent antibody response. outline</li> <li>c) Types of T-cells and Cluster of differentiation(CD)</li> <li>d) T-cell receptor(TCR)</li> </ul> </li> <li><b>4. Cytokines</b> <ul style="list-style-type: none"> <li>a) Definition and general characteristics</li> <li>b) Types- colony stimulating factor, Interleukins, Tumor necrosis factor alpha</li> </ul> </li> </ul>	<b>07</b>

<b>Unit-IV</b>	<p><b>1. Antigen-antibody interaction</b></p> <ul style="list-style-type: none"> <li>a) Principles of interactions: Antibody affinity and avidity,</li> <li>b) Ratio of antigen antibody, lattice hypothesis,</li> <li>c) Antibody titre, rising antibody titre, paired sera</li> </ul> <p><b>2. Antigen-antibody Reactions (Diagnostic immunology)</b></p> <ul style="list-style-type: none"> <li>a) Precipitation: Precipitation in liquids and gels, Immuno diffusion, Immuno electrophoresis.</li> <li>b) Agglutination: Slide agglutination, tube agglutination, haemagglutination, Haemagglutination inhibition test</li> <li>c) Tagged antibody test: ELISA direct and indirect</li> </ul> <p><b>3. Hypersensitivity reactions</b></p> <ul style="list-style-type: none"> <li>a) Definition, Gel &amp; Coomb's classification (Outline).</li> <li>b) Anaphylaxis</li> <li>c) Blood transfusion reaction (Rh compatibility),</li> <li>d) Arthus reaction,</li> <li>e) Mantoux test,</li> </ul>	07
		30

<b>SEMESTER VI</b>		
<b>Course Code</b>	<b>Title</b>	<b>Lectures</b>
<b>Paper II</b>	<b>MICROBIAL BIOTECHNOLOGY &amp; RECOMBINANT DNA TECHNOLOGY</b>	
<b>Unit-I</b>	<p><b>Tools &amp; Techniques of Genetic engineering</b></p> <ul style="list-style-type: none"> <li>1. Introduction- Definition &amp; scope of Biotechnology &amp; Recombinant DNA technology.</li> <li>2. Preparation of pure sample of DNA, enzymes used in DNA manipulation, analysis of DNA fragment size, joining of DNA fragments, vectors &amp; their types</li> <li>3. Introduction of rDNA into host cell, transformation of cells, identification of transformed cells, selection of clones – direct &amp; indirect methods.</li> <li>4. Expression of cloned genes, construction of gene library, cells for cloning, expression of prokaryotic genes.</li> <li>5. PCR &amp; its application, DNA finger printing.</li> </ul>	08

<b>Unit-II</b>	<b>Health care Biotechnology</b>  1. Production of hormones : Insulin 2. Production of Interferon 3. Production of vaccines : Conventional vaccines – BCG, Salk, Diphteria Toxoid , ATS, DNA Vaccine, Edible vaccines 4. Hybridoma technology, monoclonal antibody production 5. Gene Therapy.	07
<b>Unit- III</b>	<b>Agricultural Biotechnology.</b>  1. Protoplast fusion- Protist - Plant interaction, application of <i>Agrobacterium tumifaciens</i> in gene transfer. 2. Production of Biopesticides – Buculo virus 3. Production of Biofertilizers – Rhizobium 4. Oriental Fermented food: Definition and production of soyasauce 5. Genetically modified foods- Definition and concept of golden rice 6. Transgenic plants— Definition and concept of BT Cotton	08
<b>Unit-IV</b>	<b>Industrial Biotechnology</b>  1. Biosensors—General concept of construction, Applications, Glucose sensor as an example. Concept of Nanobiotechnology 2. Biochips- definition, example and applications 3. Enzyme technology- Applications of enzymes in industry, Production of industrial enzyme—amylase by deep tank & SSF, purification & recovery. Immobilized enzymes – applications & general methods of production- example invertase immobilization. 4. Ethics & hazards of biotechnology	07
		30

<b>SEMESTER VI</b>		
<b>Sr. No.</b>	<b>Title</b>	<b>Lectures</b>
	<b>PRACTICAL</b>	
1	General guidelines for safety in microbiology laboratory, possible laboratory hazards, safety precautions and disposal of laboratory waste and ethics in microbiology.	30
2	Study of permanent slides- T.S. of spleen, thymus, bursa of fabricius and lymphnode	
3	Isolation of plasmid DNA (Major)	
4	Demonstration of restriction digestion	
5	Perform Quantitative WIDAL test	
6	Rapid plasma reagin (RPR) Test titre	
7	Blood Group Detection (Direct and Reverse typing)	
8	ASO/RA test	
9	Pregnancy test	
10	Perform Immuno diffusion (Major)	
11	ELISA Test	
12	Coomb's Direct test	
13	Estimation of amylase (Major)	
14	Determination of Total viable Rhizobium and Azatobacter count in commercially available biofertilizers (Major)	
15	Immobilization of yeast and demonstration of invertase activity (Major)	
<b>Perform at least 8 practical</b>		
<b>Scheme of practical examination-</b> <ol style="list-style-type: none"> <li>1. One long expt.----- 10 Marks</li> <li>2. One short expt.----- 05 Marks</li> <li>3. Spotting-----05 Marks</li> <li>4. Viva-voce-----05 Marks</li> <li>5. Record-----05 Marks</li> </ol> <hr/> 30 Marks		

## **Books**

1. Jawetz, Melnick and Adelberg's Medical Microbiology, 26<sup>th</sup> Edition, Lange publication
2. Bacterial Pathogenesis –A molecular approach Abigail Salyer And Dixie Whitt 2nd Ed ASM press
3. Ananthanarayan and Panicker's, Textbook of Microbiology, 9 edition
4. Kuby Immunology, 6<sup>th</sup> Edition, W H Freeman and Company
5. Pathak & Palan, Immunology: Essential & Fundamental, 1<sup>st</sup>& 3<sup>rd</sup> Edition, Capital Publishing Company
  
6. Fahim Khan, Elements of Immunology, Pearson Education
7. Biotechnology by B.D. Singh
8. Baron Samuel , Medical Microbiology, 4 edition
9. Crueger W. and Crueger A. 2000 "Biotechnology -"A Textbook of Industrial Microbiology", 2nd Edition, Panima Publishing Corporation, New Delhi.
10. R. C. Dubey, 2005 A Textbook of "Biotechnology" S. Chand and Company, New Delhi

**BIOCHEMISTRY**  
**B. Sc. Semester Pattern Syllabus**  
**B. Sc. Part I – Semester I**  
**BIOCHEMISTRY**  
**(With effect from academic session 2013-14)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carries 20 marks (each paper 10marks).
 

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks
-----	
Total - 150 marks	
-----	
  
- 2) The distribution of marks in practical shall be as follows.
 

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks
-----	
Total - 30 marks	
-----	
  
- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) The B. Sc. Students of Biochemistry shall pay atleast one visit to any Biochemical / Research Institute as study tour during three-year degree course.
- 6) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 7) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 8) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 9) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part I – Semester I - PAPER I**  
**BIOMOLECULES & HUMAN PHYSIOLOGY**

**UNIT I:**

**Carbohydrates:** Structure of monosaccharides, stereoisomerism and optical isomerism of sugars, reactions of aldehydes and ketone groups, ring structure and anomeric forms, mutarotation. Chemical reactions of sugars, important derivatives of monosaccharides, di- and tri-saccarides Structure, occurrence and biological importance of monosaccharides, oligosaccharides and polysaccharides, e.g. glycogen, Starch, cellulose, blood group polysaccharides, inulin, chitin, glycosaminoglycans.

**UNIT II**

**Lipids:** Definition and classification. Fatty acids: introduction, classification, nomenclature, structure and properties of saturated and unsaturated fatty acids. Essential fatty acids. Triacylglycerols: nomenclature, physical properties, chemical properties and characterization of fats - hydrolysis, saponification value, acid value, rancidity of fats, Reichert-Meissel number and reaction of glycerol. Biological significance of fats. Glycerophospholipids (lecithins, lysolecithins, cephalins. phosphatidyl serine, phosphatidyl inositol, plasmalogens), sphingomyelins, glycolipids -cerebrosides, gangliosides.

**UNIT III:**

- A) Muscles:** Structure of striated muscle fiber. Molecular organization of contractile system, Sliding mechanism of muscle contraction, Neuromuscular Junction
- B) Digestion.** Digestion and absorption of carbohydrates, fats, proteins.

**UNIT IV:**

**Membrane structure & transport:** Membrane composition, Fluid mosaic model of Singer & Nicolson. Active & passive transport, Na-K pump, Calcium Pump

**B. Sc. Part I – Semester I - PAPER II  
(MICROBIOLOGY & VIROLOGY)**

**UNIT – I:**

- A) History & Development of microbiology:** Controversy over spontaneous generation, Fermentation & Germ theory of diseases, Concept of immunization.
- B) Microscopy:** Compound Microscopy: Parts of Compound microscope, Numerical aperture & its importance, Resolving power, Importance of Oil immersion objective, Ray diagram of compound light microscope, Principles and applications of Dark field, Phase contrast, UV & Fluorescent microscopy. Electron microscopy: Principle and Ray diagram.

**UNIT II:**

- A) Staining:** Principle and technique of simple & differential staining (Gram, Acid-fast & Endospore staining).
- B) Viruses:** General characteristics of viruses. Virus Structure. Basis of Virus classification. Detailed study of Lytic cycle & Lysogeny.

**UNIT – III:**

- A) Classification of Microorganisms:** Prokaryotes and Eukaryotes, Haeckal system, Whittaker system, Bergey's Manual.
- B) Bacteria:** i) Bacterial morphology & subcellular structures (General morphology of bacteria, shapes & sizes). ii) Slime layer & capsule. iii) Cell wall structure of Gm +ve & Gm-ve cells iv) General account of Ribosome, Flagella & Fimbriae. v) Chromatin materials, plasmids and episomes. vi) Endospore: Detailed study of endospore structure & its formation, Basis of resistance.

**UNIT IV:**

**Growth:** i) Growth rate and generation time, ii) Details of growth curve & its various phases. Synchronous cultures: Selection by size, age & induction. iii) Continuous cultures: Chemostat, Turbidostat & Dialysis techniques. iv) Measurement of growth: - Total cell count and viable cell count method. v) Physical conditions required for growth: - a) Temperature: - Classification of microorganisms on the basis of temp. requirements. b) Classification on the basis of gaseous requirements. c) Classification on the basis of hydrogen ion concentration

**B. Sc. Part I Semester I  
PRACTICALS**

**[A] Biomolecules**

- 1) Qualitative analysis of Carbohydrates, Proteins, Urea, Creatinine, Cholesterol.
- 2) Colorimetric estimation of proteins by biuret method.
- 3) Extraction of total lipids by Folch Method.
- 4) Determination saponification value of fats.
- 5) Determination of Acid value of fats.
- 6) Preparation of starch from potato and its hydrolysis by salivary amylase.

**[B] Microbiology**

- 1) Demonstration, uses, & care of microbiological equipments.
- 2) Isolation of Bacteria on nutrient agar plate from water, air, skin, teeth samples etc.
- 3) Simple staining of Bacterial pure culture
- 4) Gram staining of bacterial pure culture.
- 5) Identification of spore producing capacity of bacterial pure culture & its comparison with any endospore-producing bacteria.
- 6) Bacterial capsule staining

- 7) Anaerobic culture of bacteria
- 8) Demonstration of starch hydrolysis by bacterial cultures.
- 9) Effect of osmotic pressure on bacterial growth.
- 10) Isolation of bacteriophage from sewage / other sources.

**Note: - Mandatory to perform atleast 3 practical from each section**

\*\*\*\*\*

**Semester I**  
**BOOKS FOR REFERENCE**

- 1) Human Physiology, Vol. I & II, - C. C. Chatterjee – Medical Allied Agency – Calcutta.
  - 2) Concise Medical Physiology – Choudhary – New Central Book Agency – Calcutta.
  - 3) TextBook of Medical Physiology – Guyton – Prism Books Pvt. Ltd. – Bangalore.
  - 4) Harper's Biochemistry – Murray, Granner, Mayes, and Rodwell – Prentice Hall International Inc.
  - 5) Biochemistry – Lehninger – CBS Publishers.
  - 6) Biochemistry – Stryer – W. H. Freeman & Co. – New York.
  - 7) Text Book of Biochemistry – West, Todd, Mason, Bruggen – Amerind Publishing Co. Pvt., Ltd.
  - 8) General Microbiology, Vol. I & II – Powar, Darginawala – Himalaya Publishing House.
  - 9) General Microbiology – Stanier, Adelberg, Ingraham – The Macmillan Press – London.
  - 10) Fundamental Principles of Bacteriology – Salle – TMH Pub. Co. Ltd. – New Delhi.
  - 11) Microbiology – Davis, Dulbacco, Eisen, Ginsberg – Harper International Edition.
  - 12) Microbiology – Pelczar, Chan, Kreig – McGraw Hill Int. Edition.
  - 13) Microbiology-An Introduction – Tortora, Funke, Case, Benjamin – Cummings Publ. Co.
  - 14) Fundamental Virology (1995) – B. N. Fields, D. M. Knipe, P. M. Howley, R. M. Chanock, J. L. Meenick, T. P. Monath, Strans, Lippin Cott Raven.
- 

**BIOCHEMISTRY**

**B. Sc. Semester Pattern Syllabus**

**B. Sc. Part I – Semester II**

**BIOCHEMISTRY**

**(With effect from academic session 2013-14)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carries 20 marks (each paper 10marks)..  

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks

---

	Total - 150 marks
--	-------------------

---
- 2) The distribution of marks in practical shall be as follows.  

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks

---

	Total - 30 marks
--	------------------

---
- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) The B. Sc. Students of Biochemistry shall pay atleast one visit to any Biochemical / Research Institute as study tour during three-year degree course.
- 6) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.

- 7) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 8) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 9) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

### **B. Sc. Part I – Semester II - PAPER I HUMAN PHYSIOLOGY**

#### **UNIT I:**

**Excretion:** - Structure of Nephron in brief. Mechanism of urine formation. (Glomerular filtration, Tubular reabsorption & Active secretion). Regulation of acid-base balance by the kidney. Brief idea of Juxtaglomerular apparatus.

**Reproduction:** Brief account of histological structure of Ovary & Testis. Structure & Functions of male & female sex hormones. Menstrual Cycle

#### **UNIT II**

**Hematology:** - Composition of blood, proteins in plasma & their functions, Coagulation of blood. Structure of hemoglobin and its functions, Mechanism of transport of O<sub>2</sub> & CO<sub>2</sub> by blood, Bohr's effect and chloride shift. Functions of RBCs, Fate of RBCs, Platelets & WBCs like Neutrophil, Eosinophil, Basophil, Lymphocytes (T & B) & Monocytes.

#### **UNIT III:**

**Neurobiology:** Structure of Neurons, Physiological properties of Nerve fibers, Detailed account of impulse generation (Membrane potential, its development, depolarization, repolarization) & conductivity (Transmission of impulse in myelinated and nonmyelinated nerve fiber). ii) Synapse and mechanism of synaptic transmission (Cholinergic and adrenergic transmission).

#### **UNIT IV**

**Endocrines:** -An overview of important endocrine glands & their hormones. Chemistry and classification of hormones. Role of Hypothalamus & Pituitary in hormone secretion. Storage, secretion and function of hormones (Thyroxine, parathormone, adrenaline, noradrenaline, insulin, glucagon, cortisol, Sex hormones). Concept of second messengers like cAMP, cGMP, Ca<sup>+2</sup>, diacylglycerol and inositol-tri-phosphate. Basic mechanism of action of Peptide and Steroid hormones.

\* \* \* \* \*

### **B. Sc. Part I – Semester II - PAPER II (MICROBIOLOGY & IMMUNOLOGY)**

#### **UNIT – I:**

**Nutrition:** i) Basic nutritional requirements: ii) Nutritional classification of bacteria: Phototrophs & chemotrophs. iii) Pure cultures and methods of obtaining pure cultures.

#### **UNIT II**

**Microbial control:** i) Terminology: ii) Factors influencing antimicrobial activity. iii) Mechanism of cell injury iv) Physical control methods, v) Chemical control methods vi) Chemotherapeutic agents: - Sulphonamides and Antibiotics vii) Standardization of disinfectant: Phenol coefficient.

#### **UNIT – III:**

##### **Immunology:**

- A) **The immune system:** - Active & Passive Immunity, Organ & cells of the immune system & their functions.
- B) **Immunoglobulins:** - Nature & general properties of antibodies, Antibody reactions & antibody binding sites, Antibody specificity, Haptens, Basic structure of IgG, Brief account of other types of antibodies.

#### **UNIT IV**

##### **Immunology:**

- A) Clonal selection theory. Brief idea of Hybridomas and monoclonal antibodies, Preparation and its application.

- B) Brief idea of Complement system.  
 C) Brief account of cell mediated (Cellular) immunity & Humoral (Noncellular) immunity.

\* \* \* \* \*

### **B. Sc. Part I Semester II PRACTICALS**

**[A] Physiology**

1. RBC count
2. Measurement of blood pressure by sphygmomanometer.
3. Differential leucocyte count of blood.
4. WBC count.
5. Estimation of urine / serum creatinine
6. Estimation of urine / serum urea by diacetyl monoxime method
7. Assay of hemoglobin by hemoglobinometer.
8. Colorimetric estimation of blood/serum cholesterol.
9. ESR of blood.
10. Determination of clotting time of blood by capillary tube method.
11. Estimation of glucose by Benedict quantitative method.
12. Determination of bilirubin in serum

**[B] Microbiology**

13. Motility of given bacterial pure culture & its comparison with Lactobacillus / P. vulgaris.
14. Antibiotic sensitivity of bacterial pure culture.
15. Oligodynamic activity test of copper / metal.
16. Detection of coliforms in water.
17. Isolation of pure culture (any one or two bacteria from above sample) by pour plate method.
18. Isolation of pure culture by Streak plate method
19. Isolation of pure culture by spread plate method
20. To study the germicidal effect of UV light on bacterial growth.
21. Demonstration of effectiveness of alcohol as a disinfectant.
22. Detection of bacteria / fungi in spoiled food

**[C] Immunology**

23. Pregnancy test.
24. Ouchterlony immunodiffusion.
25. Demonstration of immunoelectrophoresis
26. Determination of blood groups (ABO & Rh system).

**Note: - Mandatory to perform atleast 6 practicals, 3 from section A, 2 from section B and 1 from section C**

\* \* \* \* \*

### **Semester II BOOKS FOR REFERENCE**

- 1) Human Physiology, Vol. I & II, - C. C. Chatterjee – Medical Allied Agency – Calcutta.
- 2) Concise Medical Physiology – Choudhary – New Central Book Agency – Calcutta.
- 3) TextBook of Medical Physiology – Guyton – Prism Books Pvt. Ltd. – Bangalore.
- 4) Harper's Biochemistry – Murray, Granner, Mayes, and Rodwell – Prentice Hall International Inc.
- 5) Biochemistry – Lehninger – CBS Publishers.
- 6) Biochemistry – Stryer – W. H. Freeman & Co. – New York.
- 7) Text Book of Biochemistry – West, Todd, Mason, Bruggen – Amerind Publishing Co. Pvt., Ltd.
- 8) Immunology – Riott, Brastoff, Male – Mosby
- 9) Introduction to Immunology – Nandini Shetty.
- 10) Immunology – Janis Kuby. – W. H. Freeman and Co.
- 11) General Microbiology, Vol. I & II – Powar, Dagnawala – Himalaya Publishing House.
- 12) General Microbiology – Stanier, Adelberg, Ingraham – The Macmillan Press – London.
- 13) Fundamental Principles of Bacteriology – Salle – TMH Pub. Co. Ltd. – New Delhi.
- 14) Microbiology – Davis, Dulbacco, Eisen, Ginsberg – Harper International Edition.
- 15) Microbiology – Pelczar, Chan, Kreig –McGraw Hill Int. Edition.
- 16) Microbiology-An Introduction – Tortora, Funke, Case, Benjamin – Cummings Publ. Co.
- 17) Outlines of Biochemistry – Conn & Stumpf.
- 18) The Experimental Foundations of Immunology – W. R. Clark.

**B. Sc. Semester Pattern Syllabus**  
**B. Sc. Part II – Semester III**  
**BIOCHEMISTRY**  
**(With effect from academic session 2014-15)**

- 10) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carries 20 marks (each paper 10marks).

1) .

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks
<hr/>	
Total - 150 marks	
<hr/>	

- 2) The distribution of marks in practical shall be as follows.

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks
<hr/>	

Total - 30 marks

- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) The B. Sc. Students of Biochemistry shall pay atleast one visit to any Biochemical / Research Institute as study tour during three-year degree course.
- 6) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 7) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 8) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 9) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part II – Semester III - PAPER - I**  
**(MACROMOLECULES)**

**UNIT I:**

**Proteins: -**

- a) Quick review of amino acids, physico-chemical properties of amino acids (Solubility, Boiling & melting points, Reactions like Edman's, Sanger's, Dansyl chloride, Ninhydrin & Formaldehyde). Unusual amino acids.
- b) Determination of primary structure of proteins
- c) Peptide mapping, Merrifield-Gutt synthesis.

**UNIT II:**

**Proteins: -**

- a) Secondary structure of proteins: - The  $\alpha$  helix,  $\beta$ -pleated sheet structures.
- b) Tertiary structure of proteins: Forces that stabilize the structure, Concept of domains, Protein denaturation.
- c) Quaternary structure of proteins: Subunit interaction
- d) Structure and biological functions of Collagen

**UNIT-III:****Nucleic acids: -**

- a) Chemical structure & base composition of nucleic acids, Chargaff's rules.
- b) Double helical structures, Watson - Crick Model (B-DNA), Deviations from Watson - Crick Model, Other DNA helices (A- & Z- DNA).
- c) Forces stabilizing nucleic acid structures, Denaturation & renaturation, Sugar phosphate chain conformation, Base pairing, Base stacking, Hydrophobic and ionic interactions,

**UNIT-IV:****Nucleic acids: -**

- a) Tm & buoyant density and their relationship with G-C content in DNA, Satellite DNA.
- b) DNA sequencing: Maxam-Gilbert & Sanger's dideoxynucleotide sequencing.
- c) Structure of m-RNA, r-RNA & t-RNA.

**B. Sc. Part II – Semester III - PAPER – II  
(BIOPHYSICAL TECHNIQUES I)****UNIT – I:****Spectrophotometry:-**

- a) Concepts of electromagnetic radiation's, Spectrum, Absorption of electromagnetic radiation's, Orbital theory, Concept of orbitals & their involvement in absorption of electromagnetic radiation's, Concept of chromophores, Beer's law – derivation & deviations, Extinction coefficient.
- b) Instrumentation & applications of UV & Visible spectrophotometry.

**UNIT II:****Spectrophotometry:-**

- a) Spectrofluorometry, Absorption & emission flame photometry.
- b) **Buffers and pH:** Buffer capacity, Mechanism of buffer action, Henderson-Hasselbalch equation, Isoelectric pH, Biochemically & Physiologically important buffers. Titration curve of weak acids, Titration curve of amino acids. Electrometric determination of pH (Hydrogen, Calomel and combined glass electrode).

**UNIT III:****Chromatography:-**

- a) Partition principle, partition coefficient, Nature of partition forces, Detailed account of Paper, Thin layer & Column chromatography (Column efficiency and concept of plates).
- b) Gel filtration: - Concept of distribution coefficient, Types of gels & glass beads, Applications.

**UNIT IV:****Chromatography:-**

- a) Ion-Exchange chromatography: - Principle, Types of resins, Choice of buffers, Applications.
- b) Affinity chromatography: - Principle, Selection of ligand, Ligand attachment, Specific & non-specific elution, Applications.
- c) Elements of High Pressure Liquid Chromatography & Gas Chromatography.

**B. Sc. Part II Semester III  
PRACTICALS**

- 1) Quantitative estimation of amino acids using Ninhydrin reaction.
- 2) Estimation of DNA by diphenylamine reaction.
- 3) Estimation of RNA by orcinol reaction.
- 4) Determination of albumin and A / G ratio in serum.
- 5) The validity of Beer's law for colorimetric estimation of creatinine.
- 6) Estimation of blood glucose by Nelson-Somogyi method.
- 7) Estimation of blood sugar by Orthotolidine method.
- 8) Determination of absorption maxima of hemoglobin.
- 9) Absorption spectrum of NAD and NADH
- 10) Separation of amino acids by two-dimensional TLC.
- 11) Separation of amino acids by descending\ascending paper chromatography.
- 12) Estimation of glycine by Sorenson's formol titration.

- 13) Preparation of standard buffers and determination of a pH of a solution.
- 14) Determination of pKa of weak acid by pH meter.
- 15) Determination of isoelectric pH of casein, egg albumin & BSA.
- 16) Titration of mixture of strong acid and weak acid.
- 17) Titration curves of amino acid/weak acids and determination of pK value.
- 18) Colorimetric estimation of calcium in serum.

**Mandatory to perform atleast 6 practical**

\* \* \* \* \*

**Semester III  
BOOKS FOR REFERENCE**

- 1) Harper's Biochemistry – Murray, Granner, Mayes, Rodwell- Prentice Hall International Inc.
  - 2) Biochemistry – Lehninger – CBS publishers.
  - 3) Biochemistry – Stryer – W. H. Freeman & Co. – New York.
  - 4) Textbook of Biochemistry – West, Todd, Bruggen, Mason – Amerind publishing Co. Pvt. Ltd.
  - 5) Biophysical Chemistry, Principles & Techniques – Upadhyay, Upadhyay & Nath – Himalaya Publ. House.
  - 6) A Biologists Guide to Principle & Techniques of Practical Biochemistry – Williams & Wilson – Edward Ernold Publ.
  - 7) The Tools of Biochemistry – T. G. Cooper.
  - 8) Principles & Techniques of Practical Biochemistry – Wilson, Walker- Cambridge Univ. Press.
  - 9) Principles of Biochemistry – White, Handler, Smith – McGraw Hill Publ.
  - 10) Biologist's Physical Chemistry – T. G. Morris.
  - 11) Chromatography – G. Abbott.
  - 12) Methods in Experimental Biology – R. Ralph.
  - 13) Physical biochemistry – vanHolde – Prentice Hall Inc.
  - 14) Physical Biochemistry – D. Friefelder – W. H. Freeman & Co.
  - 15) Chromatography: A Lab Handbook of chromatographic and electrophoretic methods – Erich Heftman – Van Nostrand Reinhold, NY.
  - 16) Immunology – Riott, Brastoff, Male – Mosby
  - 17) Introduction to Immunology – Nandini Shetty.
  - 18) Immunology – Janis Kuby. – W. H. Freeman and Co
- 

**B. Sc. Semester Pattern Syllabus  
B. Sc. Part II – Semester IV  
BIOCHEMISTRY  
(With effect from academic session 2014-15)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carries 20 marks (each paper 10marks).

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks

---

Total - 150 marks

---

- 2) The distribution of marks in practical shall be as follows.

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks

---

Total - 30 marks

---

- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.

- 5) The B. Sc. Students of Biochemistry shall pay atleast one visit to any Biochemical / Research Institute as study tour during three-year degree course.
- 6) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 7) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 8) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 9) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

### **B. Sc. Part II – Semester IV - PAPER - I (ENZYMOLOGY)**

#### **UNIT - I:**

- a) History & Terminology
- b) Classification & nomenclature of enzymes, Specificity of enzyme action (Lock & key model & Induced fit model).
- c) Enzyme catalysis: Proximity & Orientation effect, covalent catalysis, acid-base catalysis, metal ion catalysis.
- d) Regulatory enzymes: - Allosteric (ATCase) & covalently modulated (Glycogen phosphorylase) enzymes.

#### **UNIT II:**

- a) Mechanism of action of Chymotrypsin and Ribonuclease.
- b) Role of vitamins as coenzyme precursors (Riboflavin, Niacin, Pyridoxine, Biotin and Thiamine)
- c) Effect of enzyme concentration, upward & downward curvatures with examples.
- d) Effect of temperature on enzyme activity & temperature quotient.

#### **UNIT-III:**

Enzyme kinetics: Importance of measuring initial velocities, Derivation of Michaelis-Menten equation, Single & double reciprocal plots, Graphical representation of various inhibitors (Competitive, Noncompetitive & Uncompetitive) on Lineweaver-Burke plots. Importance of  $K_{cat} / K_m$ . Bisubstrate reactions – brief introduction to sequential and ping-pong mechanisms with examples.

#### **UNIT IV**

- a) Effect of pH, General pH profile diagram with exceptions.
- b) Concept of enzyme assay & its importance, Enzyme activity units (Katal & Specific activity)
- c) Enzyme isolation and purification:- Enzyme solubilization, Brief idea of various fractionation procedures, Criteria for enzyme purity and homogeneity,

\* \* \* \* \*

### **B. Sc. Part II – Semester IV - PAPER – II (BIOPHYSICAL & BIOCHEMICAL TECHNIQUES)**

#### **UNIT – I:**

##### **Electrophoresis:-**

- a) Migration of ions in electric field, Factors affecting electrophoretic mobility.
- b) Paper electrophoresis: - Electrophoretic run, Detection techniques, Cellulose acetate electrophoresis, High voltage electrophoresis, Applications.
- c) Gel electrophoresis: - Types of gels, Solubilizers, Procedure, Column & slab gels, Detection, Recovery & Estimation of macromolecules, Applications.

#### **UNIT II**

##### **Electrophoresis:-**

Disc-Gel electrophoresis: - Procedure & Applications.

- a) SDS-PAGE Electrophoresis: - Isoelectric focussing, Principle, Establishing pH gradients, Stabilization against convection, Procedures & applications.

- b) **Immunological techniques:** Immunodiffusion, Immunolectrophoresis, Radioimmunoassay, ELISA and immunofluorescence.

#### **UNIT – III:**

##### **Isotopic tracer technique: -**

- a) Radioactive & stable isotopes, Pattern and rate of radioactive decay. Units of radioactivity.
- b) Measurement of radioactivity: - Geiger-Muller counter, Solid & Liquid scintillation counters (Basic principle, instrumentation & technique), Autoradiography. Cerenkov radiation. Brief idea of radiation dosimetry.
- c) Measurement of stable isotopes by Mass Spectrometry
- d) Isotopes commonly used in biochemical studies –  $^{32}\text{P}$ ,  $^{35}\text{S}$ ,  $^{14}\text{C}$ ,  $^3\text{H}$ . Applications of isotopes in biochemistry, Principles of tracer techniques, Its advantages and limitations, Distribution studies, Isotope dilution technique, Metabolic studies, Clinical application.

#### **UNIT IV**

##### **Centrifugation: -**

- a) Basic principles, Mathematics & theory (RCF, Sedimentation coefficient, Svedberg constant)
- b) Types of centrifuge :- Desk top, High speed & Ultracentrifuges.
- c) Preparative centrifugation: - Differential & density gradient centrifugation, Applications (Isolation of cell components).
- d) Analytical centrifugation: - Determination of molecular weight by sedimentation velocity & sedimentation equilibrium methods.

\* \* \* \* \*

#### **B. Sc. Part II Semester IV PRACTICALS**

- 1) Estimation of ascorbic acid by 2,6-dichlorophenol indophenol method
- 2) Isolation of casein by isoelectric precipitation method.
- 3) Estimation of proteins by Folin-Lowry's method.
- 4) Fractionation of proteins by ammonium sulphate and determination of its purity by PAGE electrophoresis.
- 5) To show using PAGE that commercially available BSA is not a homogeneous preparation.
- 6) SDS-PAGE of BSA & comparison of results with previous (PAGE) experiment.
- 7) Immobilization of enzymes / cells by entrapment in alginate gel.
- 8) Isolation of cell organelles by differential centrifugation
- 9) Assay of salivary amylase
- 10) Isolation of Urease and demonstration of its activity
- 11) Paper electrophoresis of serum proteins
- 12) Gel electrophoresis of serum proteins
- 13) Effect of pH on activity of enzyme
- 14) Effect of temperature on activity of enzyme
- 15) Demonstration of dialysis
- 16) Radial immunodiffusion.
- 17) Widal test
- 18) Demonstration of Salting-Out of proteins by ammonium sulphate precipitation.

**Mandatory to perform atleast 6 practical**

\* \* \* \* \*

#### **Semester IV BOOKS FOR REFERENCE**

- 1) Biochemistry – Lehninger – CBS publishers.
- 2) Biochemistry – Stryer – W. H. Freeman & Co. – New York.
- 3) The nature of enzymology – Foster – Croom Helm, London.
- 4) Fundamentals of enzymology – Price & Stevens – Oxford Science Publ.
- 5) Principles of enzymology for food science – J. R. Whitkar – M. Dekker Publs.
- 6) Enzymes – Dixon & Webb – Academic press.
- 7) Biophysical Chemistry, Principles & Techniques – Upadhyay, Upadhyay & Nath – Himalaya Publ. House.
- 8) A Biologists Guide to Principle & Techniques of Practical Biochemistry – Williams & Wilson – Edward Ernold Publ.

- 9) The Tools of Biochemistry – T. G. Cooper.
  - 10) Principles & Techniques of Practical Biochemistry – Wilson, Walker- Cambridge Univ. Press.
  - 11) Outlines of Biochemistry – Conn & Stumpf.
  - 12) Physical Biochemistry – H. B. Bull – John Wiley & Sons.
  - 13) Enzyme Kinetics – Irwin H. Segal – Wiley Intersci. Publ.
  - 14) Principles of Biochemistry – White, Handler, Smith – McGraw Hill Publ.
  - 15) Biologist's Physical Chemistry – T. G. Morris.
  - 16) Enzyme Kinetics – Paul Engel.
  - 17) Enzyme Technology – Chaplin, Buche – Cambridge Univ. Press.
  - 18) Chromatography – G. Abbott.
  - 19) Methods in Experimental Biology – R. Ralph.
  - 20) Physical biochemistry – vanHolde – Prentice Hall Inc.
  - 21) Physical Biochemistry – D. Friesfelder – W. H. Freeman & Co.
- 

**B. Sc. Semester Pattern Syllabus**

**B. Sc. Part III – Semester V**

**BIOCHEMISTRY**

**(With effect from academic session 2015-16)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carries 20 marks (each paper 10 marks).

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks
<hr/>	
Total - 150 marks	
<hr/>	

- 2) The distribution of marks in practical shall be as follows.
 

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks
<hr/>	
Total - 30 marks	
<hr/>	
- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) The B. Sc. Students of Biochemistry shall pay at least one visit to any Biochemical / Research Institute as study tour during three-year degree course.
- 6) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 7) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 8) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 9) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part III – Semester V - PAPER – I**  
**(METABOLISM I)**

**UNIT – I:****Bioenergetics:**

- a) Concept of free energy, Entropy, Enthalpy & Redox Potential. Determination of  $\Delta G^0$  for a reaction.
- b) High energy phosphate compounds (Ex. ATP, Phosphoenol pyruvate, Creatine phosphate etc.) – phosphate potential, Free energy of hydrolysis of ATP along with reasons for high  $\Delta G^0$ . Other high energy compounds.
- c) ATP-ADP Cycle, Energy charge (Phosphate potential) & its relation to metabolic regulation.

**UNIT II****Techniques involved in metabolic studies: -**

- a) Studies with intact organisms, Excised organs, Organ slices, Isolated cells, Cell organelles & purified enzymes. Drawbacks & Advantages of each.
- b) Studies with microorganisms & tissue culture, Advantages & disadvantages of each.
- c) Clinical techniques employed in metabolic studies: Fistula, Catheterization & Organectomy.
- d) Tracer studies, Inhibitors & mutation studies.

**UNIT – III:****Carbohydrate metabolism: -**

- a) Detailed account of glycolysis with energy considerations & regulation, Entry of fructose, mannose & galactose in glycolysis, Cori cycle, Fute or substrate cycles in carbohydrate metabolism.
- b) Glycogenolysis & Glycogenesis – Detailed account & hormonal control. Glycogen storage diseases.
- c) Formation of acetyl CoA & detailed account of TCA Cycle, Isotopic tests of TCA cycle (Concept of Prochirality), Regulation, Amphibolic and anaplerotic nature of TCA cycle.

**UNIT IV****Carbohydrate metabolism:-**

- a) Glyoxylate cycle and its role in conversion of fats into carbohydrates.
- b) Gluconeogenesis– Detailed account of bypass reactions, Regulation, Malate & glycerophosphate shuttle system.
- c) **Electron Transport chain**-Structure of mitochondria, oxidative and substrate level phosphorylation, Electron carriers of ETC, Incomplete reduction of oxygen (Cell injury – superoxide radicle), ATP Synthase (F1 F0 ATPase), Chemiosmotic hypothesis, Sites of ATP synthesis, Specific inhibitors and uncouplers of oxidative phosphorylation.

**B. Sc. Part III – Semester V - PAPER – II**  
**(MOLECULAR BIOLOGY)**

**UNIT –I:****DNA Replication in Prokaryotes: -**

- a) Basic Features of replication: Semiconservative nature of replication with experimental proof, Origin of replication, priming, 5' → 3' direction of replication, Leading and lagging strand, bidirectional / unidirectional replication.
- b) Different models of replication: Theta (θ) model, Rolling circle or sigma (σ) replication
- c) Concept of Okazaki Fragment with experimental proof.
- d) DNA replication in E. coli: Initiation, Elongation and Termination

**UNIT –II:****DNA Replication in Prokaryotes: -**

- a) DNA Polymerases: Structure of polymerase I, Structure and properties of Klenow fragment, 5' → 3' exonuclease activity, Nick translation, DNA polymerase III: Concept of holoenzyme, processivity, fidelity of replication. Other types of polymerases.
- b) Regulation of E. coli Replication: concepts of C and D value.
- c) DNA damage & repair: Ames test, types of DNA damage, Mismatch Repair (mut HLS system), Base Excision Repair, Nucleotide Excision Repair, Direct Repair, SOS or Error Prone repair.

**UNIT – III:****Transcription: -**

- a. Basic features of RNA synthesis, Terminology, Prokaryotic RNA polymerases

- b. Prokaryotic transcription: Initiation, elongation and termination with reference to Role of promoter, determination of length of promoter by DNA foot printing method. Conserved features of promoter. Weak and strong promoters, role of  $\sigma$  subunit, Different kinds of sigma subunits, Promoter binding and activation, RNA chain initiation and promoter escape, abortive initiation, rho dependent and independent termination of transcription.

#### **UNIT – IV:**

##### **Transcription: -**

- a) Inhibitors of prokaryotic transcription: e.g. rifamycins.
- b) Regulation of gene expression in prokaryotes: Lac Operon & Trp Operon
- c) Reverse transcription.

#### **B. Sc. Part III Semester V PRACTICALS**

- 1) To measure concentration of DNA & RNA by UV spectrophotometry.
- 2) Estimation of protein by Bradford method.
- 3) UV spectrophotometric estimation of a given protein by E 280/260 method.
- 4) Colorimetric estimation of inorganic phosphate in serum by Fiske-Subbarow method.
- 5) Isolation of glycogen from liver source and its estimation by anthrone method.
- 6) Determination of true glucose by Glucometer/Glucose oxidase method.
- 7) Determination of glucose by Folin-Wu method.
- 8) Effect of NaF on glycolysis in RBC by estimating glucose.
- 9) Determination of creatine & creatinine in urine.
- 10) Determination of serum acetylcholine esterase.
- 11) Screening test for glucose-6-phosphate dehydrogenase in RBCs.
- 12) Determination of serum pyruvate kinase.
- 13) Isolation of RNA from yeast

**Mandatory to perform atleast 6 practical**

\* \* \* \* \*

#### **Semester V BOOKS FOR REFERENCE**

- 1) Harper's Biochemistry – Murray, Granner, Mayes, Rodwell – Prentice Hall International Inc.
  - 2) Biochemistry – Lehninger – CBS Publishers.
  - 3) Biochemistry – Stryer – W. H. Freeman & Co. New York.
  - 4) Biochemistry – Geoffrey L. Zubay – McGraw Hill.
  - 5) Biochemistry – J. David Rawn – Neil Patterson publs. NC.
  - 6) Textbook of Biochemistry – West, Todd, Mason, Bruggen – Amerind Publishing Co. Pvt. Ltd.
  - 7) Mol Bio (Fundamentals of molecular biology) – Upadhyay & Upadhyay, Himalaya Publishing House.
  - 8) Molecular Biology – David Friedlander – Narosa Publishing House, New Delhi.
  - 9) Cell Biology, Genetics, Molecular Biology, Evolution & Ecology – Verma, Agarwal – S. Chand & Co.
  - 10) Molecular & Cell Biology – Bhamrah – Anmol Publ. Pvt. Ltd., New Delhi.
  - 11) Molecular Biology of the Cell – Alberts, Bray, Lewis, Raff, Roberts, Watson – Garland Publishers, New York.
  - 12) Molecular Biology of the gene – J. D. Watson, NH Hopkins, Roberts, Stertz, Weiner- Freeman.
  - 13) Molecular Biology of the Gene – Watson, Hopkins, Roberts, Steitz, Weiner – Benjamin Cummings Publishing Co.
  - 14) Molecular Cell Biology – Baltimore, Zipursky, Matsudaria, Darnel – W. H. Freeman & Co., New York.
  - 15) Principles of Biochemistry – White, Handler, Smith – McGraw Hill Publ.
-

**B. Sc. Semester Pattern Syllabus****B. Sc. Part III – Semester VI****BIOCHEMISTRY****(With effect from academic session 2015-16)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carry 20 marks.

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks
<hr/>	
Total - 150 marks	
<hr/>	

- 2) The distribution of marks in practical shall be as follows.

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks
<hr/>	

---

Total - 30 marks

---

- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) The B. Sc. Students of Biochemistry shall pay atleast one visit to any Biochemical / Research Institute as study tour during three-year degree course.
- 6) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 7) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 8) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 9) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part III – Semester VI - PAPER – I****(METABOLISM II)****UNIT – I:****Lipid metabolism: -**

- a) Hydrolysis of triacylglycerols, transport of fatty acids into mitochondria (Carnitine), Detailed account of  $\beta$ -oxidation of fatty acids ( $\beta$ -oxidation in mitochondria and peroxisomes), Oxidation of unsaturated fatty acids & odd carbon fatty acids.  $\alpha$  &  $\omega$ -Oxidation- Brief idea. ATP yield from fatty acid oxidation. Regulation.
- b) Detailed account of HMP Shunt & its significance in general, its connection to lipid metabolism.

**UNIT – II:****Lipid metabolism: -**

- a) Ketogenesis, Ketosis & ketoacidosis in physiology & pathology.
- b) Biosynthesis of fatty acids, Fatty acid synthase complex, Regulation, Microsomal & Mitochondrial system of chain elongation & synthesis of unsaturated fatty acids.
- c) Biosynthesis of triglycerides & phospholipids (Phosphatidyl-ethanolamine, choline, inositol), sphingolipids.

**UNIT – III:****Protein metabolism: -**

- a) Transamination.
- b) Oxidative & Non-oxidative deamination.
- c) Transport of ammonia (Carrier of ammonia – Glutamine, Alanine).
- d) Urea cycle – Detailed account, Linkage of urea & TCA cycle, Compartmentation of urea cycle, Regulation, Metabolic disorders of Urea cycle, Treatment of disorder of urea cycle.
- e) Transmethylation & Decarboxylation.
- f) Metabolism of phenylalanine. Glycogenic and ketogenic amino acids.

**UNIT IV****Nucleic acid metabolism: -**

- a) Biosynthesis of purine nucleotides & its regulation (De novo synthesis), Recycling of purine bases by salvage pathway using PRPP.
  - b) Catabolism of purine nucleotides, Gout.
  - c) Biosynthesis of pyrimidine nucleotides – De novo synthesis, its regulation & Salvage synthesis.
  - d) Catabolism of pyrimidine nucleotides.
  - e) Ribonucleotides as precursors of deoxiribonucleotides (Ribonucleotide reductase & its regulation)
  - f) Concept of cyclic nucleotides in metabolism, cAMP.
- \* \* \* \* \*

**B. Sc. Part III – Semester VI - PAPER – II  
(MOLECULAR BIOLOGY & rDNA TECHNOLOGY)****UNIT –I:****Genetic Code & Decoding System: -**

- a. **The Genetic Code:** Features of genetic code, Deciphering the genetic code, Wobble hypothesis,
- b. **The decoding system:** - i) Aminoacyl synthetases, ii) Brief structure of t-RNA, iii) Attachment of amino acid to t-RNA, iv) Error correction in amino acylation.
- c. Selection of initiation codon – (Shine-Dalgarno sequence).

**UNIT II****Translation:**

**Protein synthesis-** Initiation, Elongation & Termination (Ribosome structure, A and P sites, charged tRNA, f met tRNA, initiator codon, formation of 70S initiation complex, role of EF-Tu, EF-Ts, EF-G, and GTP. Release factors RF1 and RF2.

**UNIT –III:****Basic Introduction to rDNA Technology**

- a. **Terminology:**
- b. **Restriction endonucleases:** Restriction-modification system, types of restriction enzymes, sticky and blunt ends.
- c. **Joining DNA molecules:** joining blunt ended molecules, homopolymer tail joining, joining cohesive ends, use of T4 DNA ligase, use of linkers and adaptors.
- d. **Vectors:** Plasmids – Characteristics of an Ideal Vector, Types of plasmids: pBR322 and pUC18. Lambda insertion and replacement vectors, cosmids, phagemids, Ti-plasmid. Concept of expression vectors. Features of expression vectors necessary for expression of heterologous genes. Shuttle vectors.

**UNIT –III:****Basic Introduction to rDNA Technology**

- a) **Methods of transformation/transfection:** Calcium-phosphate precipitation, Electroporation,
  - b) **Selection:** selection by the use of antibiotic resistance, blue-white screening.
  - c) **Screening methods:** functional cloning or complementation, southern and northern blotting, colony lift screening, western blotting, immunological methods, screening through protein activity
  - d) **Genomic and cDNA libraries:** Method of generating genomic and cDNA library, comparison between the two types of libraries, Advantages and disadvantages of cDNA library.
  - e) **Polymerase chain reaction:** Detailed procedure of PCR, important considerations for primer designing, Salient applications of PCR.
  - f) **Applications of recombinant DNA technology:** Brief idea about recombinant DNA products in medicine (insulin, hGH), Recombinant vaccines, Gene therapy, DNA fingerprinting, Bt cotton, herbicide resistance.
- \* \* \* \* \*

**B. Sc. Part III Semester VI**  
**PRACTICALS**

- 1) Estimation of serum urea by diacetyl monoxime method.
- 2) Assay of activity of SGOT & SGPT.
- 3) Assay of activity of serum acid & alkaline phosphatase.
- 4) Inhibition of alkaline phosphatase activity by EDTA.
- 5) Assay of activity of papain.
- 6) Determination of serum phospholipids.
- 7) Determination of serum lipase.
- 8) Determination of serum isocitrate dehydrogenase.
- 9) Estimation of lipase by titrimetric method.
- 10) Demonstration of isolation of plasmid by alkaline lysis method.
- 11) Demonstration of isolation of genomic DNA.
- 12) Demonstration of Southern / western blotting.
- 13) Demonstration of replica plating technique.
- 14) Demonstration of restriction digestion
- 15) Identification of Lac+ bacteria by blue white screeing using IPTG
- 16) Determination of uric acid in urine
- 17) Determination of ketone bodies in urine
- 18) Determination of urinary ammonia

\* \* \* \* \*

**Semester VI**  
**BOOKS FOR REFERENCE**

- 1) Harper's Biochemistry – Murray, Granner, Mayes, Rodwell – Prentice Hall International Inc.
- 2) Biochemistry – Lehninger – CBS Publishers.
- 3) Biochemistry – Stryer – W. H. Freeman & Co. New York.
- 4) Biochemistry – Geoffrey L. Zubay – McGraw Hill.
- 5) Biochemistry – J. David Rawn – Neil Patterson publs. NC.
- 6) Textbook of Biochemistry– West, Todd, Mason, Bruggen – Amerind Publishing Co. Pvt. Ltd.
- 7) Mol Bio (Fundamentals of molecular biology) – Upadhyay & Upadhyay, Himalaya Publishing House.
- 8) Molecular Biology – David Friefelder – Narosa Publishing House, New Delhi.
- 9) Cell Biology, Genetics, Molecular Biology, Evolution & Ecology – Verma, Agarwal – S. Chand & Co.
- 10) Molecular & Cell Biology – Bhamrah – Anmol Publ. Pvt. Ltd., New Delhi.
- 11) Molecular Biology of the Cell – Alberts, Bray, Lewis, Raff, Roberts, Watson – Garland Publishers, New York.
- 12) Molecular Biology of the gene – J. D. Watson, NH Hopkins, Roberts, Stertz, Weiner- Freeman.
- 13) Concepts in Biotechnology – Editors- Balasubramanian, Bryee, Dharmalingam, Green, Jayaraman – Sangam Books.
- 14) Molecular Biology of the Gene – Watson, Hopkins, Roberts, Steitz, Weiner – Benjamin Cummings Publishing Co.
- 15) Molecular Cell Biology – Baltimore, Zipursky, Matsudaria, Darnel – W. H. Freeman & Co., New York.
- 16) Outlines of Biochemistry – Conn & Stumpf.
- 17) Principles of Biochemistry – White, Handler, Smith – McGraw Hill Publ.
- 18) Cell & Molecular Biology – Phillip Sheller – Wiley Publ.
- 19) Introduction to Modern Biochemistry – Karlson – Academic Press.

**BIOTECHNOLOGY**  
**B. Sc. Semester Pattern Syllabus**  
**B. Sc. Part I – Semester I**  
**BIOTECHNOLOGY**  
**(With effect from academic session 2013-14)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carry 20 marks.
- |                     |          |
|---------------------|----------|
| Theory Paper I      | 50 marks |
| Theory Paper II     | 50 marks |
| Practical           | 30 marks |
| Internal Assessment | 20 marks |
| -----               |          |
| Total - 150 marks   |          |
| -----               |          |
- 2) The distribution of marks in practical shall be as follows.
 

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks
-----	
Total - 30 marks	
-----	
  - 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
  - 4) Students are expected to perform all the practicals mentioned in the syllabus.
  - 5) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
  - 6) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
  - 7) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
  - 8) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part I – Semester I - PAPER I**  
**MICROBIOLOGY**

**UNIT I**

**History, Development and Microscopy**

History and development of microbiology: contributions of Louis Pasteur, Robert Koch and Edward Jenner.

Microscopy: Compound microscopy: Numerical aperture and its importance, resolving power, oil immersion objectives and their significance, principles and applications of dark field, phase contrast, fluorescent microscopy.

Electron microscopy: Principle, ray diagram and applications, TEM and SEM, comparison between optical and electron microscope, limitations of electron microscopy.

Stains and staining procedures: Acidic, basic and neutral stains, Gram staining, Acid fast staining, Flagella staining, Endospore staining.

**UNIT II**

**Bacteria:**

Bacterial morphology and subcellular structures, general morphology of bacteria, shapes and sizes, generalized diagram of typical bacterial cell.

Slime layer and capsule, difference between the structure, function and the position of the two structures.

Cell wall of gram +ve and Gram -ve cells.

General account of flagella and fimbriae.

Chromatin material, plasmids; definition and kind of plasmids (conjugative and non-conjugative) F, R, and Col plasmids.

Endospores: Detailed study of endospore structure and its formation, germination, basis of resistance.

### **UNIT III**

- A. A brief idea Bergey's manual. Morphology of archaea, archaeal cell membrane (differences between bacterial and archaeal cell membrane), other cell structures, concept of the three distinct archaea groups.
- B. **Viruses:** General characteristics of viruses, difference between virus and typical microbial cell, structure, different shapes and symmetries with one example of each type, classification of viruses on the basis of nucleic acids, phage and animal cell viruses, example of each and their importance. Brief idea of lytic cycle and lysogeny.

### **UNIT IV**

Nutrition: Basic nutritional requirements: Basic idea of such nutrients as water, carbon, nitrogen, sulfur and vitamins etc., natural and synthetic media, nutritional classification of bacteria. Selective and Differential media, Enriched media, Enrichment media.

## **B. Sc. Part I – Semester I - PAPER II (MACROMOLEULES)**

### **UNIT I**

#### **Nucleic Acids**

Chemical structure and base composition of nucleic acids, Chargaff's rules, Watson Crick Model (B-DNA), deviations from Watson-Crick model, other forms of DNA (A- and Z-DNA), forces stabilizing nucleic acid structures, (hydrogen bonds and hydrophobic associations, base stacking). Maxam and Gilbert DNA sequencing, structure of t-RNA.

### **UNIT II**

#### **Chromosomes, Concept of Genes and Nucleosomes**

Concept of prokaryotic genes and eukaryotic genes: Definition of a gene, concept of split genes, introns, exons, spacers, C-value and C-value paradox, basic idea of Cot curves.

Chromatin structure: Nucleosome structure (10 nm fibre, experiments leading to discovery of nucleosomal structure, types of histones, arrangement of histones in the octamer, H1 histone and its role, role and length of linker DNA), 30 nm fibers (arrangement of nucleosome in a helical structure), domain and loop structure (further compacting of 30 nm fibre, role of scaffolding proteins). Role of telomere and centromere, telomeric and centromeric repeat sequences.

### **UNIT III**

Amino acids: Structure of amino acids occurring in proteins, classification of amino acids (pH based, polarity based and nutrition based), Physico-chemical properties of amino acids (solubility, boiling and melting points, reactions like Edman's, Sanger's, Dansyl chloride, ninhydrin). Titration curves of neutral, basic and acidic amino acids.

Primary structure of proteins: Determination of primary structure (end group analysis, cleavage of disulfide bonds, amino acid composition, use of endopeptidase specificity, sequence determination, assignment of disulfide position).

### **UNIT IV**

Secondary structure of proteins: The  $\alpha$ -helix,  $\beta$ -structures (parallel, antiparallel, mixed,  $\beta$ -turn).

Tertiary structure of proteins: Forces that stabilize the structure (electrostatic forces, hydrogen and disulfide bonds, hydrophobic associations), myoglobin as an example of tertiary structure, concept of domains, protein denaturation.

Quaternary structure of proteins: Forces stabilizing quaternary structure, advantages of oligomeric proteins.

**B.Sc. I**  
**SEMESTER I PRACTICALS**  
**Biotechnology**  
**Microbiology & Macromolecules**

1. Formol titration of glycine.
2. Quantitative Estimation of proteins by Biuret method
3. Determination of albumin & A/G retion in serum.
4. Estimation of DNA by Diphenylamine method
5. Estimation of RNA by Orcinol method
6. Quantitative estimation of amino acids using Ninhydrin reaction.
7. Demonstration, use and care of microbiological equipments.
8. Preparation of media, sterilization and isolation of bacteria.
9. Isolation of Bacteriophage from sewage / other sources.
10. Demonstration of motility of Bacteria.
11. Simple staining of bacteria
12. Gram staining of Bacteria
13. Acid fast staining of Bacteria
14. Endospore staining.
15. Demonstration of starch hydrolysis by bacterial cultures
16. Growth of fecal coliforms on selective media.

**Note: - Mandatory to perform atleast 6 practical**

\* \* \* \* \*

**BIOTECHNOLOGY**  
**B. Sc. Semester Pattern Syllabus**  
**B. Sc. Part I – Semester II**  
**BIOTECHNOLOGY**  
**(With effect from academic session 2013-14)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carry 20 marks.
 

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks

---

Total -	150 marks
---------	-----------

---
- 2) The distribution of marks in practical shall be as follows.
 

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks

---

Total -	30 marks
---------	----------

---
- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 6) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.

- 7) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
  - 8) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.
- \* \* \* \* \*

### **B. Sc. Part I – Semester II - PAPER I** **MICROBIOLOGY & CELL BIOLOGY**

#### **UNIT I**

##### **Microbial Growth**

Growth: Growth rate and generation time, details of growth curve and its various phases.

Concept of synchronous cultures, continuous and batch cultures (chemostat and turbidostat). Measurement of growth.

Physical conditions required for growth: Temperature (classification of microorganisms on the basis of temperature requirements), Ph etc. Pure cultures and cultural characteristics. Maintenance of pure culture.

#### **UNIT II:**

##### **B. Microbial Control**

Microbial Control: Terminologies - Sterilization, disinfection, antiseptic, sanitization, germicide, microbistasis, preservative and antimicrobial agents.

Mechanism of cell injury: Damage to cell wall, cell membrane, denaturation of proteins, inhibition of protein synthesis, transcription, replication, other metabolic reactions and change in supercoiling of DNA.

Physical control: Temperature (moist heat, autoclave, dry heat, hot air oven and incinerators), dessication, surface tension, osmotic pressure, radiation, UV light, electricity, ultrasonic sound waves, filtration.

Chemical control: Antiseptics and disinfectants (halogens, alcohol, gaseous sterilization).

Concept of biological control.

#### **UNIT III**

##### **Cell Biology**

Eukaryotic Cell - Structure and function of the following: nucleus, nuclear membrane, nucleoplasm, nucleolus, golgi complex, endoplasmic reticulum, lysosomes, peroxisomes, glyoxisomes and vacuoles.

#### **UNIT IV**

Plant cell wall.

Cytoskeleton (actin, microtubules) and cell locomotion.

Mitosis and meiosis. Brief idea of cell cycle.

Muscle and nerve cell structure, synaptic transmission and neuromuscular junctions.

\* \* \* \* \*

### **B. Sc. Part I – Semester II - PAPER II** **(CELL CONSTITUENTS & ENZYMOLOGY)**

#### **UNIT I**

##### **Carbohydrates**

Definition, classification, nomenclature of carbohydrates, structures of monosaccharides, disaccharides and polysaccharides (structures of starch and glycogen as examples of homopolysaccharides). Concept and examples of heteropolysaccharides.

#### **UNIT II**

##### **Lipids**

Types of lipids, structures of saturated and unsaturated fatty acids, triglycerides, phospholipids, plasmalogens, gangliosides and sphingolipids. Terpenoids and isoprenoids - definition and representative structures, steroids. Concept of acid value, saponification value and iodine value.

#### **UNIT III**

##### **Enzymes**

Terminology: Active site, allosteric site, Holoenzyme, apoenzyme, coenzyme, substrate, inhibitor, activator, modulator etc.

Classification and nomenclature.

Concept of isoenzymes (example Lactate Dehydrogenase) and multienzymes (example pyruvate dehydrogenase) Substrate Specificity (bond specificity, group specificity, absolute specificity, stereo-specificity, proof-reading mechanism), lock and key and induced fit models.

Concept of allosteric enzymes (brief idea of ATCase as an example)

Mechanisms of catalysis: Acid-base, covalent and metal ion catalysis.

#### **UNIT IV**

Assay of Enzymes: Concept of activity, specific activity, turnover number, units of enzyme activity (katal, international unit), spectrophotometric methods of assay of enzymes (simple and coupled assay), very brief idea of other methods.

Enzyme kinetics: Michaelis-Menten equation, effect of substrate concentration, effect of enzyme concentration, effect of Ph and temperature, temperature quotient, single reciprocal( Eadie-Hoffstee equation) and double reciprocal plots( Lineweaver-Burke plots), enzyme inhibition kinetics (reversible inhibition types – competitive, uncompetitive and non-competitive), brief idea of irreversible inhibition.

\* \* \* \* \*

**B.Sc. I**  
**SEMESTER II PRACTICALS**  
**Biotechnology**  
**Microbiology, Cell constituents & Enzymology**

1. Qualitative Analysis of sugars and proteins.
2. Quantitative estimation of sugars (Dinitrosalicylic acid method).
3. Estimation of glucose by Benedict's quantitative method
4. Quantitative estimation of proteins by Lowry's method.
5. Extraction and quantification of total lipids.
6. Determination of saponification value of Fats
7. Determination of Acid Value of Fats
8. Isolation of urease and demonstration of its activity
9. Assay of protease activity.
10. Preparation of starch from Potato and its hydrolysis by salivary amylase.
11. Assay of alkaline phosphatase
12. Immobilization of enzymes / cells by entrapment in alginate gel
13. Effect of temperature / pH on enzyme activity
14. Isolation of pure culture by pour plate method
15. Isolation of pure culture by streak plate method.
16. Anaerobic cultivation of microorganisms.
17. Cultivation of yeast and moulds.
18. Antibiotic sensitivity assay.
19. Oligodynamic action of metals.
20. To study germicidal effect of UV light on bacterial growth.
21. Stages of mitosis.
22. Stages of meiosis.

**Note: - Mandatory to perform atleast 6 practical.**

\* \* \* \* \*

**B. Sc. Semester Pattern Syllabus**  
**B. Sc. Part II – Semester III**  
**BIOTECHNOLOGY**  
**(With effect from academic session 2014-15)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carry 20 marks.

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks

---

Total - 150 marks

---

- 2) The distribution of marks in practical shall be as follows.

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks

---

Total - 30 marks

---

- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 6) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 7) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 8) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part II – Semester III - PAPER - I**  
**(METABOLISM)**

**UNIT I**

**Bioenergetics:** Concept of free energy, Entropy, Enthalpy & Redox Potential. Concept of high energy bonds as related to the structure of ATP, Phosphoenolpyruvate, Creatine phosphate etc.  
**Glycolysis** (pathway, entry of other monosaccharides and disaccharides, regulation, inhibitors)  
**Gluconeogenesis:** Bypass reactions.

**UNIT II**

**Structure of mitochondria.**  
**TCA cycle:** Detailed account, regulation, amphibolic nature and anaplerosis.  
**Electron Transport Chain:** Components of the chain, sites of ATP synthesis, chemiosmotic theory of oxidative phosphorylation.

**UNIT III**

**Lipid Metabolism**

**β-oxidation** of fatty acids, role of carnitine, oxidation of unsaturated fatty acids & odd carbon fatty acids.  
**Regulation.**  
**Ketogenesis, Ketosis & ketoacidosis** in physiology & pathology.

Biosynthesis of fatty acids, fatty acid synthase complex, regulation, Microsomal & Mitochondrial system of chain elongation & synthesis of unsaturated fatty acids.

#### **UNIT IV**

##### **Metabolism of Nitrogenous Compounds**

Transamination (mechanism). Oxidative & Non-oxidative deamination.

Urea cycle: Detailed account, linkage of urea & TCA cycle, compartmentation of urea cycle, regulation, metabolic disorders of urea cycle.

Transmethylation & Decarboxylation, physiologically important products of decarboxylation.

Biosynthesis of purines and pyrimidines: Salvage pathways.

#### **B. Sc. Part II – Semester III - PAPER – II (BIOPHYSICAL TECHNIQUES I)**

##### **UNIT – I:**

Spectrophotometry: Concept of electromagnetic radiation, spectrum of light, absorption of electromagnetic radiations, Concept of chromophores and auxochromes, involvement of orbitals in absorption of electromagnetic radiations, Absorption spectrum and its uses, Beer's law - derivation and deviations, extinction coefficient. Difference between spectrophotometer and colorimeter. Instrumentation of UV and visible spectrophotometry Double beam spectrometer; dual-wavelength spectrometer

##### **UNIT II:**

- a) Applications of UV and visible spectrophotometry.
- b) Spectrofluorometry: principle, instrumentation and applications. Absorption & emission flame photometry: principle, instrumentation and application.
- c) Principles of IR and Mass spectrometry

##### **UNIT III:**

Chromatography: Partition principle, partition coefficient, nature of partition forces, brief account of paper chromatography.

Thin layer chromatography and column chromatography.

Gel filtration: Concept of distribution coefficient, types of gels and glass beads, applications.

#### **UNIT IV**

Ion-exchange chromatography: Principle, types of resins, choice of buffers, applications including amino acid analyzer.

Affinity chromatography: Principle, selection of ligand, brief idea of ligand attachment, specific and non-specific elution, applications.

Elements of high pressure liquid chromatography.

#### **B.Sc. II SEMESTER III PRACTICALS Biotechnology Metabolism & Biophysical Techniques**

1. Spectrophotometric analysis of DNA denaturation.
2. Determination of absorption spectrum of oxy- and deoxyhemoglobin and methemoglobin.
3. Protein estimation by E280/E260 method.
4. Paper chromatography of amino acids/sugars.
5. TLC of sugars/amino acids.
6. Cellular fractionation and separation of cell organelles using centrifuge.
7. Isolation of mitochondria and assay of marker enzyme.
8. Estimation of Urea by diacetylene monoxime method
9. Estimation of Sugars by Folin Wu method
10. Validity of Beer's law for colorimetric estimation of creatinine.
11. Absorption spectrum of NAD & NADH
12. Preparation of standard buffers and determination of pH of a solution
13. Titration of a mixture of strong & weak acid

**Note: - Mandatory to perform atleast 6 practical**

\* \* \* \* \*

**B. Sc. Semester Pattern Syllabus**  
**B. Sc. Part II – Semester IV**  
**BIOTECHNOLOGY**  
**(With effect from academic session 2014-15)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carry 20 marks.

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks

---

Total - 150 marks

---

- 2) The distribution of marks in practical shall be as follows.

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks

---

Total - 30 marks

---

- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 6) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 7) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 8) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part II – Semester IV - PAPER - I**  
**(IMMUNOLOGY)**

**UNIT I**

Immune system, Organs and cells of immune system

Immunity, innate immune mechanism

Acquired immune mechanism, Antigen, Antigenicity (factors affecting antigenicity)

Humoral immunity, main pathways of complement system.

**UNIT II**

Antibody structure and classes.

Cell mediated immunity: TC mediated immunity, NK cell mediated immunity, ADCC, delayed type hypersensitivity, cytokines and brief idea of MHC.

**UNIT III**

Hypersensitivity and vaccination : General features of hypersensitivity, various types of hypersensitivity, Vaccination: Discovery, principles, significance. Concept of autoimmunity.

**UNIT IV**

Immunological Techniques:Antigen-antibody reactions: Precipitation, agglutination, complement fixation, immunodiffusion, ELISA.

Hybridoma technology: Monoclonal antibodies and their applications in immunodiagnosis.

\* \* \* \* \*

**B. Sc. Part II – Semester IV - PAPER – II**  
**(BIOSTATISTICS & BIOPHYSICAL TECHNIQUES II)**

**UNIT – I:**

- a) Migration of ions in electric field, Factors affecting electrophoretic mobility.
- b) Paper electrophoresis: - Electrophoretic run, Detection techniques, Cellulose acetate electrophoresis, High voltage electrophoresis.
- c) Gel electrophoresis: - Types of gels, Solubilizers, Procedure, Column & slab gels, Detection, Recovery & Estimation of macromolecules.

**UNIT II**

- a) SDS-PAGE Electrophoresis: - applications (determination of molecular weight of proteins, determination of subunit stoichiometry, molecular biology applications).
- b) Isoelectric focussing, Principle, Establishing pH and density gradients, Procedures & applications.
- c) Pulsed-field gel electrophoresis.

**UNIT – III:**

**Isotopic tracer technique: -**

- a) Radioactive & stable isotopes, rate of radioactive decay. Units of radioactivity.
- b) Measurement of radioactivity: - Ionization chambers, proportional counters, Geiger- Muller counter, Solid and liquid scintillation counters (basic principle, instrumentation and technique), Cerenkov radiation.
- c) Measurement of Stable isotopes: Falling drop method for deuterium measurement, Mass spectrometry.
- d) Principles of tracer technique, advantages and limitations, applications of isotopes in biotechnology (distribution studies, metabolic studies, isotope dilution technique, metabolic studies, clinical applications, autoradiography).

**UNIT IV**

**Centrifugation:**

- a) Basic principles, concept of RCF, types of centrifuges (clinical, high speed and ultracentrifuges).
- b) Preparative centrifugation: Differential and density gradient centrifugation, applications (Isolation of cell components).
- c) Analytical centrifugation: Sedimentation coefficient, determination of molecular weight by sedimentation velocity and sedimentation equilibrium methods.

**Biostatistics**

Basic concepts of mean, median, mode, Standard deviation and Standard error

\*\*\*\*\*

**B.Sc. II**  
**SEMESTER IV PRACTICALS**  
**Biotechnology**  
**Immunology & Biophysical techniques**

1. Antigen – antibody reaction – determination of Blood group
2. Pregnancy test
3. Widal test
4. Ouchterloney immunodiffusion
5. Radial immunodiffusion
6. ELISA
7. Isolation of casein by isoelectric precipitation
8. Paper electrophoresis of proteins
9. Gel electrophoresis of proteins.
10. SDS-PAGE of an oligomeric protein.
11. Calculation of mean, median, and mode (manual/computer aided).
12. Calculation of standard deviation and standard error (manual/computer aided).
13. Biostatistical problem based on standard deviation.

**Note: - Mandatory to perform atleast 6 practical**

\*\*\*\*\*

**B. Sc. Semester Pattern Syllabus**  
**B. Sc. Part III – Semester V**  
**BIOTECHNOLOGY**  
**(With effect from academic session 2015-16)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carry 20 marks.

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks

---

Total - 150 marks

---

- 2) The distribution of marks in practical shall be as follows.

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks

---

Total - 30 marks

---

- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 6) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 7) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 8) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

**B. Sc. Part III – Semester V - PAPER – I**  
**(MOLECULAR BIOLOGY)**

**UNIT I**

**DNA Replication**

Enzymology of replication (detailed treatment of DNA polymerase I, brief treatment of pol II and III, helicases, topoisomerases, single strand binding proteins, DNA melting proteins, primase and RNA primers, distributive and processive properties of DNA polymerase I and III, importance of the  $\beta$ -subunit in polymerase III), proof for semiconservative replication, discontinuous replication and Okazaki fragments, Replication origins, initiation, primosome formation, elongation, and termination. Use of DNA replication mutants in the study of replication.

**UNIT II**

**Mutations & DNA Repair**

Gene mutations: Missense, nonsense and frameshift mutations.

Mutagens: Physical and chemical mutagens.

Repair: Mismatch repair, NER, BER, light induced repair, SOS repair.

**UNIT III****Transcription**

Enzymatic synthesis of RNA: Basic features of transcription, structure of prokaryotic RNA polymerase (core enzyme and holoenzyme, significance of  $\sigma$  factor), concept of promoter (Pribnow box, -10 and -35 sequences and their significance), auxiliary proteins of transcription, role of NusA.

Four steps of transcription (promoter binding and activation, RNA chain initiation and promoter escape, chain elongation, termination and release).

**UNIT IV**

Details of initiation, elongation, and termination (intrinsic and rho factor mediated termination).

Brief idea of reverse transcription.

Regulation of Transcription in Prokaryotes: Basic idea of lac- and trp-operons.

**B. Sc. Part III – Semester V - PAPER – II**  
**(MOLECULAR BIOLOGY & rDNA TECHNOLOGY)**

**UNIT I****Genetic Code**

Genetic code: Argument for triplet code, experimental elucidation of codons, identification of start and stop codons, universality, degeneracy and commaless nature of codons.

The decoding system: aminoacyl synthetases, brief structure of tRNA, the adaptor hypothesis, attachment of amino acids to tRNA.

Codon-anticodon interaction - the wobble hypothesis.

Selection of initiation codon - Shine and Dalgarno sequence and the 16S rRNA.

**UNIT II****Protein synthesis:**

Initiation, elongation, and termination.

Regulation of translation: Autogenous control of r-proteins, phage T4 protein p32 translational regulation. Antibiotics affecting translation.

**UNIT III****rDNA Technology**

DNA cloning: Basics of genetic engineering, restriction endonucleases, other enzymes of DNA manipulation.

Vectors: Plasmid vectors (pBR322 and pUC 18/19)

Phage vector: Lambda replacement and insertion vectors

Cosmids, phagemids, and YAC.

Cutting and joining DNA (cohesive end ligation, methods of blunt end ligation). Transfection and transformation.

Selection of transformed cells. Screening methods.

**UNIT IV**

Genomic DNA library and cDNA library – concept and methods of creating these libraries. Advantages and disadvantages of cDNA library over genomic DNA library.

General consideration of Polymerase chain reaction, designing of primers for PCR.

Expression of cloned genes: General features of an expression vector. Expression of a eukaryotic gene in prokaryotes – advantages and problems. Applications of recombinant DNA technology:

**B.Sc. III**  
**SEMESTER V PRACTICALS**  
**Biotechnology**  
**Molecular Biology & rDNA technology**

1. To measure concentration of DNA & RNA by UV spectrophotometry
2. Estimation of proteins by Bradford method
3. Isolation of genomic DNA.
4. Isolation of Plasmid DNA.
5. Isolation of chloroplast DNA.
6. Restriction digestion of DNA.
7. Demonstration of Replica plating technique

8. Identification of Lac+ bacteria by blue white screening using IPTG
9. Ligation of DNA
10. Demonstration of Southern blotting
11. Demonstration of western blotting
12. Chemical mutagenesis and production of microbial mutants.

**Note: - Mandatory to perform atleast 6 practical**

\* \* \* \* \*

### **B. Sc. Semester Pattern Syllabus**

#### **B. Sc. Part III – Semester VI**

#### **BIOTECHNOLOGY**

**(With effect from academic session 2015-16)**

- 1) The examination shall comprise two theory papers, an Internal assessment and a practical. Each theory paper shall be of three hours duration and carry 50 marks. The practical shall be of 6 hours duration and carry 30 marks. Internal assessment carry 20 marks.

Theory Paper I	50 marks
Theory Paper II	50 marks
Practical	30 marks
Internal Assessment	20 marks

---

Total - 150 marks

- 2) The distribution of marks in practical shall be as follows.

[A] Experiments,	20 marks
[B] Practical record	05 marks
[C] Viva	05 marks

---

Total - 30 marks

- 3) The syllabus is based on six theory periods and six practical periods per week. Candidates are required to pass separately in theory, internal assessment and practical examination.
- 4) Students are expected to perform all the practicals mentioned in the syllabus.
- 5) Internal assessment: There shall be one internal assessment based on two theory papers for 10 Marks each. Total 20 Marks. The Internal assessment shall be conducted by the University approved teachers in the relevant subjects. The internal assessment shall be done by the respective college one month prior to the final exam of each semester. The Marks shall be sent to the university immediately after the internal assessment is over.
- 6) At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method teacher / department / college propose to adopt a scheme of marking for internal assessment.
- 7) The internal assessment marks assigned to each theory paper shall be awarded on the basis of attendance / home assignment / class test / Project assignment / seminar / any other innovative practice / activity.
- 8) The concerned teacher / department / college shall have to keep the record of all the above activities till six months after the declaration of result of that semester.

\* \* \* \* \*

### **B. Sc. Part III – Semester VI - PAPER – I**

#### **(APPLICATIONS OF BIOTECHNOLOGY)**

#### **UNIT I**

##### **Environmental Biotechnology**

Water and waste water treatment process: Current community drinking water treatment process, disinfection of water (chlorination and ozonation), primary, secondary and advanced treatment of sewage (domestic waste water),

Definition and concept of: biodegradation, biodeterioration and biotransformation.

**UNIT II**

Xenobiotic and recalcitrant compounds. Bioaccumulation and biomagnification.

Assessment of water and wastewater quality: Concept of COD, DO and BOD. Indicators of faecal pollution and MPN and MF technique for coliforms. Significance and principle of IMViC.

**UNIT III****Industrial Biotechnology**

Basic Principles of Industrial Biotechnology: Important commercial products produced by microorganisms and GMOs and their applications, design of typical submerged fermentor, significance of various parts and provisions of fermentor, isolation of industrially important microorganisms – primary and secondary screening.

**UNIT IV****Food Biotechnology**

Food Biotechnology: Production and types of cheese, microorganisms as food – production of mushroom and spirulina, assessment of microbiological quality of various foods.

Industrial awareness: Quality control and quality assurance in food and pharmaceutical industry, concept of current good manufacturing practices in pharmaceutical industry

\* \* \* \* \*

**B. Sc. Part III – Semester VI - PAPER – II  
(PLANT & ANIMAL BIOTECHNOLOGY)**

**UNIT I:**

- a) Introduction to cell and Tissue culture. Tissue culture as a technique to produce novel plants and hybrids, Laboratory facilities
- b) Tissue culture media (composition and preparation)
- c) Callus and suspension cultures: initiation and maintenance of callus and suspension cultures; single cell clones.

**UNIT II:**

- a) Tissue and micropropagation, suspension culture, callus formation, regeneration, production of haploids, protoplast culture and somatic hybridization
- b) Cloning in plants - Ti plasmid.
- c) Concept of transgenic plants
- d) Bt cotton and other plant applications.

**UNIT III:**

- a) Various techniques of animal cell and tissue culture, Culture media, growth factors, laboratory facilities.
- b) Characteristics of cells in culture: Contact inhibition, anchorage dependence, cell-cell communication etc.; Cell senescence; cell and tissue response to trophic factors.
- c) Primary culture, immortal cells, cell lines.
- d) Maintenance of cell lines in the laboratory.

**UNIT IV:**

- a) Brief idea about recombinant DNA products in medicine (insulin, somatostatin, vaccines), Concept of Gene therapy,
- b) Production of recombinant vaccines – hepatitis.
- c) Concept of transgenic animals
- d) In vitro fertilization and embryo transfer in humans and farm animals.

\* \* \* \* \*

**B.Sc. III  
SEMESTER VI PRACTICALS  
Biotechnology  
Animal, Plant, Industrial & Environmental Biotechnology**

1. Establishing a plant cell culture (both in solid and liquid media) – seed germination, callus culture, suspension cell culture, regeneration from callus cells.
2. Anther culture, embryo culture, suspension culture.

3. Cell count by hemocytometer.
4. Cytology of callus.
5. Establishing primary cell culture of chicken embryo fibroblasts.
6. Animal tissue culture – maintenance of established cell lines.
7. Animal tissue culture – virus cultivation.
8. Measurement of cell size.
9. Microphotography.
10. IMViC test.
11. Determination of COD
12. Testing of chlorine demand of water
13. Microbiological quality assurance of any of the commercially available foods.
14. Bioassay of penicillin/vitamin B12
15. Determination of fecal coliforms by MPN technique/MF technique
16. Isolation of azotobacter and rhizobium.
17. Sterility testing of injectibles.
18. Assay of amylase
19. Determination of seed viability.

Note: - Mandatory to perform atleast 6 practical

\* \* \* \* \*

**DIRECTION, SCHEME AND SYLLABUS**

**FOR**

**SEMESTER PATTERN**

**IN**

**B.Sc. HOME SCIENCE**

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**NAGPUR (M.S.)**

**INDIA**

**2016-2017**



## **RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY**

**(Established by Government of Central Provinces Education Department by  
Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University  
governed by Maharashtra Universities Act, 1994)**

---

### **FACULTY OF HOME SCIENCE**

#### **DIRECTION No. 80 of 2016**

**(Direction issued under Section 14(8) of Maharashtra Universities Act, 1994 relating to  
award of Degree of B.Sc. Home Science)**

**(Three year degree course- Semester Pattern under the Faculty of Home Science.)**

WHEREAS the Maharashtra Universities Act No.XXXV of 1994 has come into force with effect from 22<sup>nd</sup> July, 1994.

AND

WHEREAS the amendment to the said Act came to be effected from academic session 2014-2015.

AND

WHEREAS the Boards of Studies (Special Task Force) in Food and Nutrition, Human Development, Textile & Clothing, Family Resource Management, and Extension Education has accepted and recommended the syllabus along with the scheme of examination for B.Sc. Home Science – semester pattern in the Faculty of Home Science, to be started from academic session 2016-17.

AND

WHEREAS recommendations of various Board of Studies (Special Task Force) in the Faculty of Home Science, regarding Up-gradation and Revision of syllabus and implementation of semester pattern examination system at undergraduate level was considered by the Faculty of Home Science in its meeting held on dated 25-8- 2016.

AND

WHEREAS the syllabus along with the scheme of examination for B.Sc. (Home Science) has been accepted by the Faculty Coordinator of Home Science at their Faculty meeting held on 25-8-2016

AND

WHEREAS the Faculty Coordinator of Home Science has consented to the syllabus and the Scheme of examination of semester I to VI for the Award of B.Sc. Home Science Degree in Faculty of Home Science and recommended the same to Academic Council along with Draft Direction and other details

AND

WHEREAS it is expedient to provide a Direction for the purposes of prescribing examinations leading to the Degree of B.Sc. Home Science in the Faculty of Home Science

and to repeal Direction No. 49 of 2016 governing the existing course and scheme of examinations leading to said degree.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Academic Council on 07-10-2016 under section 14(7) of Maharashtra University Act 1994.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Management Council under section 14(7) of Maharashtra University Act 1994.

**AND**

Now, therefore, I, Dr. Siddharthavinayaka P. Kane, Vice-Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of the powers vested in me under Section 14(7) of the Maharashtra Universities Act of 1994, do hereby issue the following Direction:

1. This Direction shall be called, "Direction governing Examinations leading to the B.Sc. Home Science in the Faculty of Home Science, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur".
2. The following shall be the examinations leading to the Degree of B.Sc. Home Science, namely –
  - (i) The B.Sc. Home Science, Semester I Examination
  - |ii) The B.Sc. Home Science, Semester II Examination
  - (iii) The B.Sc. Home Science, Semester III Examination
  - (iv) The B.Sc. Home Science, Semester IV Examination
  - (v) The B.Sc. Home Science, Semester V Examination
  - (vi) The B.Sc. Home Science, Semester VI Examination
3. The theory examination of Semester-I, II, III, IV, V and VI shall be conducted by the University and shall be held separately at the end of each semester at such places and dates as may be decided by the University and shall be held as per the schedule given in Table 1.

**Table 1**

Sr. No.	Name of the Examination	Main Examination	Supplementary Examination
1	Semester I, III and V	Winter	Summer
2	Semester II, IV and VI	Summer	Winter

4. Subject to the compliance with the provisions of this Direction and of other Ordinances in force from time to time, a candidate for admission to the examination shall :-

(A) In the case of B.Sc Home Science Semester-I

- (i) have passed the XII standard Examination of Maharashtra State Board of Secondary & Higher Secondary Education or an examination recognized as equivalent thereto under the following faculties - Science / Home Science / Commerce / MCVC / Arts with English (Higher or Lower)

**OR**

- (ii) have passed the XII standard Examination of Maharashtra State Board of Secondary & Higher Secondary Education with (i) English (ii) any other language & (iii) Vocational Subject (Paper I, II & III)

**OR**

- (iii) have passed an examination of a Council or Board outside Maharashtra State recognized by the University as equivalent to subpara's (i) & (ii) above; and shall have prosecuted a regular course of study for not less than one academic year in a college.

(B) In the case of B.Sc Home Science Semester-III

- (i) have passed 50% of the B.Sc Home Science Part-I (Semester I and II together) Examination of the University with English as one of the subjects of passing or an examination recognized as equivalent thereto;

(C) In the case of B.Sc Home Science Semester V

- (i) have passed the B.Sc Home Science Semester I, Semester II and 50 % of the total 8 subjects prescribed for semester III and IV of the University or examination recognized as equivalent thereto. It may be noted that to be eligible to be admitted in Semester V, the candidate has to pass at least in 4 theory papers and 4 practical papers respectively in semester III and in Semester IV.

(D) No Person shall be admitted to B.Sc.(Home Science) Semester-I, II, III, IV, V and VI Examinations, if she has already passed the corresponding or an equivalent examination of any other Statutory University.

5. The ATKT rules for admission for the B.Sc. (Home Science) Course (Theory and Practical as separate passing head and on calculation fraction, if any, shall be ignored) shall be as given in the following Table- 2.

**Table.2**

Admission to Semester	The student should have attended the Session / term	Candidates should have passed at least one half of the passing heads of the following examinations (Theory and
-----------------------	---	--

	satisfactorily	Practical as separate passing head and on calculation fraction, if any, shall be ignored)
1	2	3
B.Sc.(Home Science) Semester-I	Semester-I and admitted as per para 6 of this Direction	-----
B.Sc.(Home Science) Semester-II	Semester-II	-----
B.Sc.(Home Science) Semester-III	Semester-III	One half of the total head prescribed for Sem- I and Sem- II examination
B.Sc.(Home Science) Semester-IV	Semester-IV	-----
B.Sc.(Home Science) Semester-V	Semester-V	a) Passed Sem I & II examination and b) One half of the total head prescribed for Sem-III & IV examination
B.Sc.(Home Science) Semester-VI	Semester-VI	

6. a). Without prejudice to the other provisions of Ordinance No.6 relating to the Examinations in General, the provisions of Paragraphs 5, 7, 8, 10 and 31 of the said Ordinance shall apply to every collegiate candidate.
- b). The students admitted to this Degree course shall be governed by the general Ordinances / Directions of the University which are applicable to all the regular or ex-students. These Ordinances includes complete as well as relevant provision of Ordinance No. 1, 2, 6, 7-A, 9, 10, 19, 109, Ordinance No. 30 of 2006, (amended Ordinance No. 4 of 2006), Direction 9 of 2008, Direction 5 of 2004 wherever applicable accordingly AND Direction / Ordinance of ATKT as well as reassessment / provisional admission as issued from time to time .
7. The fees for the examination shall be as prescribed by the University from time to time and whenever any change is made in the fees prescribed for any particular examination that shall be notified through a notification for information of the examinees concerned.
8. Every candidate for B.Sc. Home Science Examination shall be examined in the subjects as set out in the Appendices A-I to A-VI of this Direction.
- i. Medium of instruction shall be English, Marathi, or Hindi.
  - ii. Examination papers shall be set in English, Marathi, and Hindi.
  - iii. The maximum marks allotted to each subject and the minimum marks which an examinee must obtain in order to pass the examination shall be as per the Appendix **A-I to A VI** appended to this Direction.

9. The guidelines for awarding Theory Marks, Internal Assessment and Practical marks (College and external assessment) shall be as per Appendix- **B** appended with this Direction.
10. The Absorption / Matching Scheme shall be as per Appendix- **C** appended with this Direction.
11. The Scheme of Examination shall be as per Appendix: A- I, A- II, A-III, A-IV, A-V, and A-VI (Semester pattern). The details / title of the theory papers can be suitably modified considering the need of the subject without disturbing the main subject nomenclature.
- 12.a). Every candidate for **B.Sc. (Home Science) Semester-I Examination** shall be examined in the following subjects:-

<b>Sr. No.</b>	<b>Name of Subject</b>	<b>Paper Title</b>
1	Food and Nutrition	Fundamentals of Food Science and Nutrition-I
2	Human Development	Fundamentals of Human Development
3	Textile and Clothing	Fundamentals of Textiles and Clothing
4	Family Resource Management	Fundamentals of Family Resource Management
5	Home Science Extension	Fundamentals of Home Science Extension
6	Household Biology	Ecology and Environment –I
7	Chemistry	Basic Chemistry-I
8	Physics	Applied Physics & Basic Computer-I
9	English	English and Communication Skills-I

- 12.b) Every candidate for **B.Sc. (Home Science) Semester-II Examination** shall be examined in the following subjects:-

<b>Sr. No.</b>	<b>Name of Subject</b>	<b>Paper Title</b>
1	Food and Nutrition	Fundamentals of Food Science and Nutrition-II
2	Human Development	Development in Early Years
3	Textile and Clothing	Sewing Techniques
4	Family Resource Management	Interior Decoration & Design
5	Home Science Extension	Social Survey & Community Development
6	Household Biology	Ecology and Environment –II
7	Chemistry	Basic Chemistry-II
8	Physics	Applied Physics & Basic Computer-II

9	English	English and Communication Skills-II
---	---------	-------------------------------------

12.c) Every candidate for **B.Sc. (Home Science) Semester III Examination** shall be examined in the following subjects:-

<b>Sr. No.</b>	<b>Name of Subject</b>	<b>Paper Title</b>
1	Food and Nutrition	Nutrition for Life Span
2	Human Development	Development in Late Childhood & Adolescence
3	Textile and Clothing	Textile Design
4	Family Resource Management	Housing & Interior Designing
5	Home Science Extension	Extension Communication Techniques
6	Applied Physiology/ Household Biology	Applied Physiology-I
7	Chemistry	Applied Chemistry-I
8	Physics	Applied Physics & Computer Application-I

12. d) Every candidate for **B.Sc. (Home Science) Semester IV Examination** shall be examined in the following subjects:-

<b>Sr. No.</b>	<b>Name of Subject</b>	<b>Paper Title</b>
1	Food and Nutrition	Community Nutrition
2	Human Development	Development in Adulthood
3	Textile and Clothing	Surface Ornamentation Techniques
4	Family Resource Management	Housing & Home Furnishing
5	Home Science Extension	Media in Extension
6	Applied Physiology/ Household Biology	Applied Physiology-II
7	Chemistry	Applied Chemistry-II
8	Physics	Applied Physics & Computer Application-II

12 e) Every candidate for **B.Sc. (Home Science) Semester V Examination** shall be examined in the following subjects:-

<b>Sr. No.</b>	<b>Name of Subject</b>	<b>Paper Title</b>
1	Food and Nutrition	Diet Therapy-I
2	Human Development	Family Dynamics & Developmental Assessment
3	Textile and Clothing	Advanced Pattern Making
4	Family Resource	Advanced Resource Management-I

	Management	
5	Home Science Extension	Programme Planning & Building in Extension
6	Nutritional Biochemistry	Nutritional Biochemistry –I
7	Applied Physiology/ Household Biology	Health Science and Hygiene

12 f) Every candidate for **B.Sc. (Home Science) Semester VI Examination** shall be examined in the following subjects:-

Sr. No.	Name of Subject	Paper Title
1	Food and Nutrition	Diet Therapy-II
2	Human Development	Care & Wellbeing in Human Development
3	Textile and Clothing	Fashion Designing
4	Family Resource Management	Advanced Resource Management-II
5	Home Science Extension	Community Development & Management
6	Nutritional Biochemistry	Nutritional Biochemistry –II
7	Applied Physiology/ Household Biology	Public Health

13. The practical examination of Semesters II, IV and VI shall be conducted by University External examiner at the end of semester and the practical examination of Semesters I, III and V shall be conducted by Internal Examiner of college as indicated in Table 3 given below.

Table.3			
Sr. No.	Name of the Examination	Main Examination	Supplementary Examination
1	Semester I, III and V	Winter	Summer
2	Semester II, IV and VI	Summer	Winter

14. The Head of the Department / Principal shall maintain the complete record of the marks obtained by the candidate in the Practical examinations /Practical (College assessment) that shall be submitted, before the commencement of the University examination, to the Controller of Examination, in a sealed cover.

15. There shall be no classification of examinees successful at I, II, III, IV, and V Semester Examinations of B.Sc. Home Science.

16. Division of examinees successful at the VI<sup>th</sup> semester of B.Sc Home Science shall be determined on the basis of the aggregate marks obtained at all the semesters of B.Sc Home Science.

17. Those obtaining 60% or more marks in aggregate shall be placed in First Division and all other successful examinees in the Second Division respectively.

18. An examinee who is successful at an examination and obtained not less than 75% or more of the marks prescribed in a subject shall be declared to have passed the examination with Distinction in that subject.

**Explanation:**

i) Distinction at the B.Sc.(Home Science) Examination shall be awarded on the basis of the marks obtained at the B.Sc. (Home Science) Semester - I, II, III, IV, V and Semester VI Examination taken together.

ii) Distinction shall not be awarded to an examinee availing of the provision of the exemptions and compartments at any of the examination.

19. Successful examinees at the B.Sc.(Home Science) Sem-VI Examination who obtained not less than 60% marks (aggregate of Sem-I, II, III, IV, V & VI Examinations taken together, (including Language) shall be placed in First Division, those obtaining less than 60% but not less than 45% in Second Division, and all other successful examinees in the Third Division.

**Explanation:** Division at the B.Sc.(Home Science) Examination shall be declared on the basis of the marks in all Subjects at the Sem-I, II, III, IV, V & VI Examinations taken together.

20. As soon as possible after the examinations, the Board of Examinations shall publish a list of successful examinees at the B.Sc. (Home Science) Sem-I & II; B.Sc.(Home Science) Sem-III & IV and B.Sc. (Home Science) Sem-V & VI Examinations. Such list at the B.Sc.(Home Science) Semester VI Examination shall be arranged in three Divisions. The names of the examinees passing the examination as a whole in the minimum prescribed period and obtaining the prescribed number of places in First or Second Division shall be arranged in Order of Merit as provided in the Examinations in General Ordinance No. 6.

21. Provisions of Ordinance No 7-A relating to the Condonation of Deficiency of Marks for passing an examination and compartment as amended up-to-date vide ordinance No. 45 of 1983 shall apply to the examinations under this Direction.

22. Successful examinees at the B. Sc.(Home Science) Semester I, II, III, IV, V and VI Examinations shall be entitled to receive a **Certificate** signed by the **Registrar** and

successful examinees at the end of B.Sc. (Home Science) Semester -VI examination shall, on payment of prescribed fees, receive a Degree in the prescribed format, signed by the Vice-Chancellor.

23. Eligibility for Teaching Subjects in Home Science Faculty as per University Grants Commission Norms.

Sr. No.	Name of Subject	Eligibility
1	Food and Nutrition	Post Graduation in Home Science or Concerned Subject
2	Human Development	
3	Textile and Clothing	
4	Family Resource Management	
5	Home Science Extension	
6	Household Biology	Post Graduation in Life Sciences (Zoology, Botany, Biochemistry, Microbiology) and Medical Sciences
7	Applied Physiology	Post Graduation in Life Sciences (Zoology, Biochemistry, Microbiology) and Medical Sciences
8	Chemistry	Post Graduation in Chemistry
9	Physics	Post Graduation in Physics
10	English	Post Graduation in English
11	Nutritional Biochemistry	Post Graduation in Home Science (Food and Nutrition), Life Sciences (Zoology, Biochemistry, Microbiology, Chemistry) Medical Sciences.

24. With the issuance of this Direction, the Direction No 49 of 2016 governing the examinations leading to award of B.Sc Home Science in the Faculty of Home Science shall stand repealed .

25. I, further, direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant Ordinance comes into being, in accordance with the provisions of the Maharashtra Universities Act, 1994.

**Nagpur**

Sd/-

**Date : 7-10- 2016**

**(Dr. Siddharthavinayaka P. Kane)**

**Hon'ble Vice Chancellor**

## **Appendix- A**

### **Faculty of Home Science**

Scheme of Teaching and Examination under Semester pattern for

#### **B.Sc Home Science Programme**

(Provided in Appendix A, semester wise in  
Appendix A-I to Appendix A-VI respectively)

### **Appendix- A-I** **B.Sc Home Science- Semester I**

Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Examination Scheme				Min. Passing Marks Theory
		Theory	Practical	Total	Duration (Hrs)	Max. Marks			
						Theory		University Exam	IA
Paper I (1T-1)	Fundamentals of Food Science and Nutrition-I	2	3	5	3	80	20	100	40
Paper II (1T-2)	Fundamentals of Human Development	2	3	5	3	80	20	100	40
Paper III (1T-3)	Fundamentals of Textiles and Clothing	2	3	5	3	80	20	100	40
Paper IV (1T-4)	Fundamentals of Family Resource Management	2	3	5	3	80	20	100	40
Paper V (1T-5)	Fundamentals of Home Science Extension	2	3	5	3	80	20	100	40
Paper VI (1T-6)	Ecology & Environment -I	2	3	5	2	40	10	50	20
Paper VII (1T-7)	Basic Chemistry –I	2	2	4	2	40	10	50	20
Paper VIII (1T-8)	Applied Physics & Basic Computer -I	2	2	4	2	40	10	50	20
Paper IX (1T-9)	English and Communication Skills-I	4	-	4	3	80	20	100	40
		20	22	42		600	150	750	300

**Separate Passing for Theory and Practical**

**Combined passing 40% –Theory +Internal Assessment (IA) taken together**

**Combined passing 40%- Practical + Internal Assessment (IA) taken together**

**Practical examination of Semester I and Semester II taken together at the end of Semester II**

## Appendix- A-II

### B.Sc Home Science- Semester II

Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Examination Scheme				
		Theory	Practical	Total	Duration (Hrs)	Max. Marks Theory+ IA	Practical + Internal Assessment	Total Marks	Min. Passing Marks Theory + Practical
Paper I (2T-1)	<b>Fundamentals of Food Science and Nutrition-II</b>	2	3	5	3	80+20	40+10	150	40+20
Paper II (2T-2)	<b>Development in Early Years</b>	2	3	5	3	80+20	40+10	150	40+20
Paper III (2T-3)	<b>Sewing Techniques</b>	2	3	5	3	80+20	40+10	150	40+20
Paper IV (2T-4)	<b>Interior Decoration &amp; Design</b>	2	3	5	3	80+20	40+10	150	40+20
Paper V (2T-5)	<b>Social Survey and Community Development</b>	2	3	5	3	80+20	40+10	150	40+20
Paper VI (2T-6)	<b>Ecology &amp; Environment -II</b>	2	3	5	2	40+10	20+05	75	20+10
Paper VII (2T-7)	<b>Basic Chemistry -II</b>	2	2	4	2	40+10	20+05	75	20+10
Paper VIII (2T-8)	<b>Applied Physics &amp; Basic Computer -II</b>	2	2	4	2	40+10	20+05	75	20+10
Paper IX (2T-9)	<b>English and Communication Skills-II</b>	4	-	4	3	80+20	-	100	40
		20	22	42	-	600+150 =750	260+65=325	1075	430

**Separate Passing for Theory and Practical**

**Combined passing 40% –Theory +Internal Assessment (IA)**

**Combined passing 40% - Practical + Internal Assessment (IA)**

**Practical examination of Semester I and Semester II taken together at the end of Semester II**

## **Appendix- A-III**

### **B.Sc Home Science- Semester III**

Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Examination Scheme				
		Theory	Practical	Total	Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks Theory
						Theory			
						University Exam	IA		
Paper I (3T-1)	<b>Nutrition for Life Span</b>	3	3	6	3	80	20	100	40
Paper II (3T-2)	<b>Development in Late Childhood &amp; Adolescence</b>	3	3	6	3	80	20	100	40
Paper III (3T-3)	<b>Textile Design</b>	3	3	6	3	80	20	100	40
Paper IV (3T-4)	<b>Housing &amp; Interior Designing</b>	3	3	6	3	80	20	100	40
Paper V (3T-5)	<b>Extension Communication Techniques</b>	3	3	6	3	80	20	100	40
Paper VI (3T-6)	<b>Applied Physiology-I</b>	2	3	5	2	40	10	50	20
Paper VII (3T-7)	<b>Applied Chemistry-I</b>	2	3	5	2	40	10	50	20
Paper VIII (3T-8)	<b>Applied Physics &amp; Computer Application I</b>	2	3	5	2	40	10	50	20
		21	24	45		520	130	650	260

**Separate Passing for Theory and Practical**

**Combined passing 40% -Theory +Internal Assessment (IA)**

**Combined passing 40% - Practical + Internal Assessment (IA)**

**Practical examination of Semester III and Semester IV taken together at the end of Semester IV**

## Appendix- A-IV

### B.Sc Home Science- Semester IV

Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Examination Scheme				
		Theory	Practical	Total	Duration (Hrs)	Max. Marks Theory +IA	Practical + (IA)	Total Marks	Min. Passing Marks Theory + Practical
Paper I (4T-1)	Community Nutrition	3	3	6	3	80 +20	40+10	150	40+20
Paper II (4T-2)	Development in Adulthood	3	3	6	3	80 +20	40+10	150	40+20
Paper III (4T-3)	Surface Ornamentation Techniques	3	3	6	3	80 +20	40+10	150	40+20
Paper IV (4T-4)	Housing & Home Furnishing	3	3	6	3	80 +20	40+10	150	40+20
Paper V (4T-5)	Media In Extension	3	3	6	3	80 +20	40+10	150	40+20
Paper VI (4T-6)	Applied Physiology-II	2	3	5	2	40+10	20+05	75	20+10
Paper VII (4T-7)	Applied Chemistry-II	2	3	5	2	40+10	20+05	75	20+10
Paper VIII (4T-8)	Applied Physics & Computer Application II	2	3	5	2	40+10	20+05	75	20+10
		21	24	45		520 +130=	260+65=	975	390
						650	325		

**Separate Passing for Theory and Practical**

**Combined passing 40% -Theory +Internal Assessment (IA)**

**Combined passing 40% - Practical + Internal Assessment (IA)**

**Practical examination of Semester III and Semester IV taken together at the end of Semester IV**

## Appendix- A-V

### B.Sc Home Science- Semester V

Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Examination Scheme				Total Marks	Min. Passing Marks Theory		
		Theory	Practical	Total	Duration (Hrs)	Max. Marks		University Exam	IA			
						Theory						
Paper I (5T-1)	<b>Diet Therapy-I</b>	3	3	6	3	80	20	100	40			
Paper II (5T-2)	<b>Family Dynamics &amp; Developmental Assessment</b>	3	3	6	3	80	20	100	40			
Paper III (5T-3)	<b>Advanced Pattern Making</b>	3	3	6	3	80	20	100	40			
Paper IV (5T-4)	<b>Advanced Resource Management-I</b>	3	3	6	3	80	20	100	40			
Paper V (5T-5)	<b>Programme Planning &amp; Building in Extension</b>	3	3	6	3	80	20	100	40			
Paper VI (5T-6)	<b>Nutritional Biochemistry-I</b>	3	3	6	3	80	20	100	40			
Paper VII (5T-7)	<b>Health Science &amp; Hygiene</b>	3	3	6	3	80	20	100	40			
		21	21	42		560	140	700	280			

**Separate Passing for Theory and Practical**

**Combined passing 40% -Theory +Internal Assessment (IA)**

**Combined passing 40% - Practical + Internal Assessment (IA)**

**Practical examination of Semester V and Semester VI taken together at the end of Semester VI**

## **Appendix- A-VI**

### **B.Sc Home Science- Semester VI**

Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Examination Scheme				
		Theory	Practical	Total	Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks Theory + Practical
						Theory University Exam + IA	Practical + (IA)		
Paper I (6T-1)	Diet Therapy-II	3	3	6	3	80 +20	40+10	150	40+20
Paper II (6T-2)	Care and well-being in Human Development	3	3	6	3	80 +20	40+10	150	40+20
Paper III (6T-3)	Fashion Designing	3	3	6	3	80 +20	40+10	150	40+20
Paper IV (6T-4)	Advanced Resource Management-II	3	3	6	3	80 +20	40+10	150	40+20
Paper V (6T-5)	Community Development And Management	3	3	6	3	80 +20	40+10	150	40+20
Paper VI (6HScT-6)	Nutritional Biochemistry- II	3	3	6	3	80 +20	40+10	150	40+20
Paper VII (6T-7)	Public Health	3	3	6	3	80 +20	40+10	150	40+20
		21	21	42		560 +140= 700	350	1050	420

**Separate Passing for Theory and Practical**

**Combined passing 40% –Theory +Internal Assessment (IA)**

**Combined passing 40% - Practical + Internal Assessment (IA)**

**Practical examination of Semester V and Semester VI taken together at the end of Semester VI**

## **Appendix: B**

### **Guidelines for Internal Assessment (IA), Theory Paper Pattern and Practicals**

1. Each semester shall comprise of minimum 90 teaching days.
2. For all Practicals the batch will be of 16 students.
3. The Practical Examination will be conducted for even semester (Semester-II, IV and VI) the practical examination will be conducted by both External and Internal examiner.
4. The marks for Practical shall be allotted by Internal and External examiner together and marks of Internal Assessment to be given by Internal but the articles prepared or reports to be presented before the External examiner and marks to be finalized.
5. All theory and practical examinations are as per shown in the scheme.

#### **I-Internal Assessment (IA) :**

1.The internal assessment shall be done by the College at least 15 days prior to the final examination of each semester. The Marks shall be sent to the University immediately after the Assessment in the prescribed format.

#### **-Guidelines for Internal Assessment are appended herewith.**

- a) The internal assessment marks assigned to each theory paper as mentioned in **Appendix - A** shall be awarded on the basis of assignments like class test, attendance, project assignments, seminar, study tour, industrial visits, visit to educational institutions and research organizations, field work, group discussions or any other innovative practice / activity.
- b) There shall be one / two assignments (as described above) per Theory paper.
- c) There shall be no separate / extra allotment of work load to the teacher concerned. He/ She shall conduct the Internal assessment activity during the regular teaching days / periods as a part of regular teaching activity.
- d) The concerned teacher / department / college shall have to keep the record of all the above activities until six months after the declaration of the results of that semester.
- e) At the beginning of each semester, every teacher shall inform his / her students clearly the method he / she intend to adopt and the scheme of marking for internal assessment.
- f) Teacher shall announce the schedule of activity for internal assessment in advance in consultation with HOD / Principal.
- g) Final submission of internal marks to the university shall be before the commencement of the university theory examinations.

#### **II-Theory Papers:**

- All Theory papers shall be divided into four units.
- The theory question papers shall be of 3 hours duration and comprise of 5 questions with equal weightage to all units.

- The pattern of question papers shall be as follows :
  1. Four units in each paper
  2. One question on each unit (including sub questions)
  3. Fifth question on all units
  4. Maximum marks of each theory paper shall be as provided in Appendix A-I to A-VI of this Direction.

### **III. Practicals**

- i) Practical exam shall be of 3 hours duration.
- ii) The Practical Record/ Laboratory Manual of every student shall carry a certificate as shown below, duly signed by the teacher-in-charge and the Head of the Department.
- iii) If the student fails to submit her certified Practical Record/ Laboratory manual duly signed by the Teacher-in-Charge and the Head of the Department, she shall not be allowed to appear for the Practical Examination and no Marks shall be allotted to the student.
- iv) The certificate template shall be as follows:

### **C E R T I F I C A T E**

Name of the College / Institution \_\_\_\_\_

Name of the Department: \_\_\_\_\_

This is to certify that this Practical Record/ Laboratory Manual contains the bonafide record of the Practical work of Kumari / Shrimati \_\_\_\_\_

\_\_\_\_\_ of \_\_\_\_\_ Semester \_\_\_\_\_ during the academic year \_\_\_\_\_. The candidate has satisfactorily completed the experiments prescribed by Rashtrasant Tukdoji Maharaj Nagpur University for the subject \_\_\_\_\_

Dated :

Signature of the teacher who taught the examinee

1. \_\_\_\_\_  
2. \_\_\_\_\_

Head of the Department

## **Appendix: C**

### **Absorption / Matching Scheme**

- a) While switching over to semester pattern, the failure students of annual pattern will be given total five (three plus two) chances to clear each examination.
- b) After availing five chances for clearing the examination as per annual pattern, no examination would be held for annual candidates.
- c) The candidates who have cleared first year annual pattern examination shall get admission to third semester directly. However, candidates who are allowed to keep term will not be eligible for admission to third semester unless they clear all the papers and practicals of first year annual pattern examination.
- d) The candidates who have cleared second year annual pattern examination in the subject shall get admission to fifth semester directly. However, candidates who are allowed to keep term will not be eligible for admission to fifth semester unless they clear all the papers and practicals of second year annual pattern examination.
- e) For other statutory university candidates with similar yearly pattern programme, point No. 26(b) and (c) shall be applicable.
- f) The guidelines of awarding internal marks / practical marks/ theory marks/ mark list (if any and if required) shall be as per guideline given in the **Appendix-B**.
- g) For other statutory university candidate with semester pattern B.Sc. (Home Science) programme- the candidate shall be admitted to the next higher semester provided that candidate shall have cleared previous semester and R..T.M. Nagpur University committee constituted from time to time for the purpose shall be scrutinised and clear the case on the basis of subject and syllabus contents of her previous semester examination of the other statutory university.
- h) Those student who fail to clear the examination within the available chances (three + two) would be bound by this absorption/matching scheme and would be required to take fresh admission in the semester pattern course.

### **Guidelines**

1. Students unable to clear annual pattern in five chances in Part I, II and III can take admission in corresponding semester pattern course.
2. While switching over from Annual Pattern (Old Course) to semester pattern, the candidate shall submit his original mark list of Annual Pattern (Old Course) to R.T.M. Nagpur University, for issuance of new mark list of semester pattern course.

3. As per the requirement and if necessary, while switching over from Annual Pattern (Old Course) to semester pattern course, the university shall issue semester pattern course mark list in proportion of marks obtained in the Annual Pattern (Old Course).
  4. As soon as the candidate enters in the semester pattern course from the Annual Pattern (Old Course) as per the given absorption / matching scheme and successfully complete the semester pattern course, the university shall award revised mark list as per the semester pattern course for particular semester.
  5. In case of any difference in minimum passing marks in the Annual Pattern (Old Course) and in the semester pattern course, the university shall convert marks proportionately for issuance of mark list in the semester pattern course.
  6. During switching over from annual Pattern to semester pattern, the candidate shall be awarded proportionate marks by the university.
-

**B.Sc. HOME SCIENCE**

**SEMESTER –I**

**B.SC. HOME SCIENCE SEMESTER –I**  
**PAPER-I**  
**Fundamentals of Food Science and Nutrition-I**  
**(1T-1)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**Objectives :-**

1. To understand the function of food and the role of various nutrients, their requirements and effect of deficiency and excess.
2. To promote basic knowledge pertaining to various food groups and nutrients.
3. To make students familiar with the different methods of cooking, their advantages and disadvantages.
4. To develop ability to improve the nutritional quality of food.

**COURSE CONTENT**

**THEORY**

**UNIT- I**

• **INTRODUCTION TO FOOD AND NUTRITION**

1. Basic terms used in Food and Nutrition. Definitions-Foods, Nutrition, Optimum nutrition, Nutritional status, Nutrients and Health.
2. Functions of food-Physiological, psychological and social
3. Characteristics of basic food groups and their contribution to the diet.
4. Nutrients and their type (Macronutrient / Micronutrient)
5. Scope of Nutrition
6. Specific dynamic action of food (SDA)
7. Protein sparing action of carbohydrates.

**UNIT II**

**BALANCED DIET AND RDA**

• **Balanced Diet**

1. Definition.
2. Concept of Balanced diet.
3. Factors affecting balanced diet.

• **THE RECOMMENDED DIETARY ALLOWANCES(RDA)**

1. Definition of RDA, Recommendations set-up, Reference Person and Recommended Dietary Allowances for Indians
2. Uses of Recommended Dietary Allowances (RDAs)
3. Food value Table

**Unit III-**

**Macronutrients**

- **Nutrients**
  1. Protein- Definition, classifications, functions, sources, Digestion and absorption and deficiency states.
  2. Fats - Definition, classifications, functions, sources, Digestion and absorption and deficiency states.

## **UNIT- IV**

- **Fat Soluble Vitamins and Minerals**

1. **Fat Soluble Vitamins :**Functions, Sources and Deficiency of:
  - a. Fat Soluble Vitamins -1) Vitamin A 2) Vitamin D 3) Vitamin E 4) Vitamin K
2. **Minerals:** Functions, Sources and Deficiency of :
  - b. Major Mineral -1) Calcium 2) Phosphorous 3) Iron 4) Iodine.

### **INTERNAL ASSESSMENT (Refer Direction)**

#### **PRACTICALS**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

1. Food Presentation and Table Setting.
2. Preparation of Ingredients : Pre-preparation, methods of mixing, methods of cooking.
3. Simple cooking- preparation, serving, calculation of cost and yield
  - a. Appetizers : Soups ( any 2 ).
  - b. Starters: a) Paneer Preparations b) Samosa c) Kabab d) Cutlet (any 2).
  - c. Salad : a) Sprouted b) Vegetable c) Fruits ( any 2 ).
  - d. Raita: (any 2 ).
  - e. Snacks : Pakoras, Namkin, Sandwiches, Idli, Dhokla (any 2 )

#### **Books Recommended:-**

1. **Nutritive Value of Indian Foods:** *Gopalan C, Rama Shastri & Balasubramanin S.C.*, National Institute of Nutrition, 1993
2. **Food Science, Chemistry and Experimental Foods:** *Dr.M.Swaminathan*,The Bangalore Printing and Publishing Co. Ltd. 1995.
3. **Essentials of Food and Nutrition,** Vol.I (Fundamental aspects): *Dr. Swaminathan*, 2<sup>nd</sup> edition BAPPCCO, 1985.
4. **Applied Nutrition:** *R. Rajlakshmi* Oxford & IBH Pub. Co.pvt Ltd,3<sup>rd</sup> edition, 1981.
5. **Foods and Nutrition:** *The Educational Planning Group, Delhi*, Arya Publishing House. 3<sup>rd</sup> edition, 1991.
6. **Food Chemistry:** *Meyer, L.H.* CBS Publishers & Distributors, Delhi, 1987.
7. **Scope manual on Nutrition:** *Latham M.C., McGandy, McCann M.B.& Stare F.J.* Published by the Upjohn Co, Kalamazoo, Michigan, 2<sup>nd</sup> edition. The Upjohn Co, Kalamazoo, Michigan 1972.
8. **Every Day Indian Processed foods:** *K.T. Achaya*, National Book Trust, India, 1984.
9. **The book of Ingredients:** *Philip Dowell & Adrian Bailey, Michael Joseph, Michael Joseph, Ltd*, 1980.

10. **Nutrition an integrated approach** : Pike Ruth L and Brown Myrtle L. 1970 :: Wiley Eastern Pvt Ltd.
11. **Nutrition Science**: B. Srilakshmi 4th Edition. New Age International Ltd.
12. **Fundamentals of Foods, Nutrition and Diet Therapy** :S.R Mudambi and M.V.Rajgopal. New Age International Ltd.
13. **Modern Cookery**: Thangam Phillip

**B.Sc HOME SCIENCE SEMESTER - I**  
**PAPER -II**  
**Fundamentals of Human Development**  
**(1T-2)**

Total Marks	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**Objectives :**

1. To make the students aware of science of Human Development.
2. To make student aware of methods of studying human behaviour.

**Theory :**

**Unit I –**

1. What is Human Development? Definition of HD, why do we need to study HD?
2. Brief history and interdisciplinary nature
3. HD as a scientific discipline
4. Scope of the subject
5. Opportunities for roles and employment
  - researcher : on issues related to HD
  - educationist : ranging from pre-school to University
  - planner of policies or programs related to child and family welfareimplementing interventions for different aspects related to HD (include special educators, personnel in agencies catering to all age groups i.e. from crèches to old homes)
6. Settings available
  - Early child hood care & Education – Creche, pre-school centres, day care centres, hobby centre, early stimulation programme
  - ICDS – anganwadi
7. Family & Child Welfare Programmes
8. Children with special needs.

**Unit II – Growth & Development**

1. Meaning of growth & development, Principles of growth & development
2. Domains of development
3. Stages of development
4. Context of development
  - a) Genetic inheritance : introduction to genes and number of chromosomes, Genotype and Phenotype.
  - b) Context of development: Family, SES, gender and culture (Bronfenbrenners contextual view)
5. Needs & Rights of children.

### **Unit III :- Prenatal development –**

- Conception & stages, Factors influencing
- Complications / hazards during pregnancy
- Prenatal care, child birth
- At risk Babies
- Child friendly hospitals.

### **Unit IV – Neonate**

- Physical characteristics.
- Abilities – sensory & perceptual
- Adjustments & reflexes
- Care of the newborn
- Immunization.

### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **Practicals**

#### **1. Methods of child study –**

- Anthropometry, Observation, Interview, Questionnaire, Case study, Projective, Psychological tests, Sociometry, Longitudinal and cross sectional approach

#### **2. A survey of cultural practices related to pregnancy**

#### **3. Plan & develop activities to facilitate development in different domains and submit a flip / album of activities.**

### **References :**

- Santrck, J.W. (2006). Child development New York : Mc Graw Hill.
- Swaminathan, M. (1998), The first five years : A critical perspective on early childhood care and education in India. New Delhi : Sage .

**B.Sc. HOME SCIENCE SEMESTER – I**  
**PAPER – III**  
**Fundamentals of Textile & Clothing**  
**(1T-3)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**OBJECTIVES :**

1. To get acquainted with basic knowledge of textile fibers.
2. To acquire knowledge of various principles of clothing constructions, and their application.

**Unit I :**

1. Scope of textile and Importance of clothing :.
2. Classification of textile fibers, General and essential properties of textile fibers
3. Manufacturing process of natural fibers.;-Cotton, silk, wool ,jute.
4. Physical and chemical properties of natural fibres

**Unit II :**

1. Manufacturing process, of man made fibers :- viscose rayon, nylon, polyester Acrylic.
2. Physical and chemical properties of man made fibres
3. Latest fibres :- Introduction and use of - Organic cotton , Bamboo , Soy, Lyocel, Metallic, Lycra (spandex)

**Unit III :**

1. Factors affecting clothing : Age, Sex, Cultural influence, Occupation, Economic Status, Social status, Regional beliefs.
2. Introduction to Tools for pattern making and Garment construction- Measuring tools, marking tools, Cutting tools, sewing tools, Pressing tools,
3. Sewing machine –parts, functions, care
4. Types of sewing machines and their uses (over lock ,embroidery, computerized, industrial)

## **Unit IV : Clothing**

1. General principles of clothing construction .Process of Taking body measurements for different garments,
2. Importance of drafting method .
3. Preparation of Cloth for clothing construction. Cutting & stitching according to design and textures of fabric (plaids, stripes, border and bold designs).

**INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

## **PRACTICALS**

1. Demonstration of taking body measurements.
2. Drafting, cutting & stitching of ;-Apron, , Bloomer, Baby Frock
3. Embroidery album Decorative stitches - chain, herringbone, stem, running, lazy-daisy, satin, French knot, bullion stitch, buttonhole(Make 4 samples of combination of 2 decorative stitches)
4. Introduction to a sewing machine with a demonstration and practice of learning the running of sewing machine on paper on straight lines, curved lines and corners

## **References:**

- Deulkar Durga - Household Textile and Laundry Work, Orient Longman, Delhi.
- Dantyagi S. - Fundamentals of Textile and their care. Orient Longman, Delhi.
- Dorling Kindersley- The complete Book of Sewing, London, New York.
- Dorothy Siegart, Lyle-Modem Textiles, John Wiley and Sons.Inc New York
- Doongaji. S and Deshpande R - Basic Process of Clothing Construction.
- Erwin, Mabel and kinchen- Clothing for Modern ,Mac Milan publishing, New York.
- Fabrics science by Joseph Puzzuto
- Modern textiles by Dorothy Siegert Lyle
- Understanding fabric from fiber to finished cloth by Debbie and Giollo
- Understanding textiles by Phyllis G. Tortora and Billie J Collier
- Corbman,P.B., Textiles-Fibre to Fabric, Gregg Division/McGraw Hill Book Co.,US, 1985.
- Joseph M.L.,Essentials of Textiles (5<sup>th</sup> Edition), Holt, Rinehart and Winston Inc.,Florida, 1988.

**B.Sc. HOME SCIENCE SEMESTER – I**  
**Paper – IV**

**(Fundamentals of Family Resource Management)**

**(1T-4)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**Objective :**

- 1) To develop good taste through the study of basic elements and principles of design
- 2) To develop aesthetic sense and to be good art consumer

**COURSE CONTENT: Theory**

**Unit I – Introduction to Foundation of art**

- 1) i) Introduction ii) Meaning of art
- 2) Elements of art
  - a) Line b) Form c) Colour d) Texture e) Space f) Light g) Pattern h) Idea
- 3) a) Meaning of interior decoration
  - b) Essential factors of interior decoration
  - c) Importance to interior decoration

**Unit II – Design in current life style**

- a) Aesthetic sense and its importance
- b) Concept of design
- c) Objectives to design – i) Beauty ii) Expressiveness iii) Functionalism
- d) Elements in design
- e) Design and principles of art

**Unit III - Design in everyday life**

- a) Importance of good taste
- b) Types of design –

- i) Structural    ii) Decorative    iii) Naturalistic
  - iv) Stylized    v) Geometric    iv) Abstract
  - vii) Modern    viii) Traditional
- c) Judgment of a good design

#### **Unit IV – Principles of Design in Interiors**

- a) Harmony
    - i) Definition and importance
    - ii) Harmony of line and shape
    - iii) Harmony of Texture
    - iv) Harmony of idea
    - v) Harmony of colour
    - vi) Application in Interior decoration
  - b) Balance –
    - i) Definition and Importance
    - ii) types of Balance – Formal, Informal, Radial
    - iii) Balance in interior & exterior decoration
  - c) Rhythm –
    - i) Definition and importance
    - ii) Methods of obtaining rhythm
    - iii) Application in interior decoration
  - d) Proportion –
    - i) Definition and importance
    - ii) To gain interest through
      - a) Proportion and space
      - b) proportion and lines
      - c) Proportion and scale
- Emphasis –

i) Definition and importance

ii) What to emphasize

iii) How to emphasize

iv) How much to emphasize

v) Where to emphasize

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **Practical**

Experiment No. 1 – Line direction

a) Vertical    b) Horizontal    c) Zigzag    d) Diagonal    e) Curved

Experiment No. 2- Types of design

i) Structural ii) Decorative

No. 3 - Naturalistic and stylized

No.4 - Geometric and Abstract

No.5 - Modern and Traditional

No.6 - Types of Balance

No.7 - Ways & of obtaining rhythm

No.8 - Harmony of line and shape

No.9 - Proportion to produce change in appearance

No.10 – How to Emphasize

### **ACTIVITIES**

Accessories in interiors (Any one)

a) Greeting Cards    b) Macramé work

c) Door Mats    d) Roti Rumal

e) Ceramic Work

### **Books Recommended**

1) Goldstein H/ Goldstein v – ‘ Art in Everyday Life’ Macllian co, New York 4<sup>th</sup> Edition

2) Mann M- Home Furnishing, weley Easterly Pvt Ltd.

3) Sundaraj ‘Text Book of Household arts’ orient long man, Bombay

**B.Sc. HOME SCIENCE SEMESTER – I**  
**PAPER - V**  
**Fundamentals of Home Science Extension**  
**(1T-5)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**Objectives :-**

- 1) To understand meaning & need of Home Science extension
- 2) To understand meaning and importance of Rural Sociology.
- 3) To know the Society in respect of Social Problems.

**Theory:**

**Unit – I**

1. **Education** :- : Meaning & definitions of education, concept, need, types of education - formal, informal & non-formal education, variation between formal & non-formal education.
2. **Extension education**:-  
Meaning, definitions, origin of extension education, objectives, principles, fields & essential links in the chain  
of Rural Development.

**Unit – II**

3. **Home Science**.-Meaning, Definitions of Home Science, Philosophy of Home Science objectives of Home Science, Scope of Home Science, fields, Characteristics of Home Science in Colleges & Universities.
4. **Home Science Extension** :-Meaning & Definitions of Home Science Extension, Concept of Home Science Extension, Philosophy, Objectives and Characteristics of Home Science Extension.

**Unit- III**

5. **Rural Sociology** :-Meaning of sociology and Rural Sociology, Scope of Rural Sociology, Elements of Rural Sociology in India, Importance of the Study of Rural Sociology.
6. **Rural Society** :-Meaning of Rural Society, Importance of Rural Society, Characteristics of Rural Society, rural social groups,

Classification of Social groups, Formal & informal institutions in Rural Society.

#### Unit – IV

7. **Social Problems** :-Meaning & Definitions of social problems, Importance of knowledge of Social problems, Difference between urban and rural social problems.
8. **Poverty and Rural Social Problems** -:Meaning and causes of poverty, Problems of Over Population, Caste tension, Problem of Unemployment, Poor Health & sanitation. Problems of tribals and its solutions.

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

#### Practical

1. Writing of a circular letter to communicate effectively to masses.
2. Preparation of extension bulletin on any home science.
3. Handling and operation of camera for extension photography.
4. Preparation and presentation of charts.
5. Collection and use of photographs on development aspects.

#### Books Recommended :

1. Directorate of extension : Extension Education in Community Development.
2. Supe. S. V. An Introduction to Extension Education – Oxford Publishing Company,  
New Delhi & Kolkata.1999.
3. Chandra.A., Shah. A. and Joshi. V.: Fundamentals of teaching Home Science,  
Sterling Publishers,  
New Delhi, 1989.
4. Devdas. R. P., Methods of teaching Home Science, National Council of  
Education.1978.
5. Singh. K., Rural Sociology, Prakashan Kendra, Lucknow.
6. Dahama. O. P. and Batnagar O. P. Education & Communication for Development,  
Oxford & IBH Publishing Co., New Delhi, 1977.

## **B.Sc. HOME SCIENCE SEMESTER -I**

### **PAPER -VI**

#### **Ecology and Environment -I**

**(1T-6)**

<b>Total Marks</b>	<b>50</b>
Theory	40
Internal Assessment	10
Practical	-

#### **OBJECTIVES:**

1. To get acquainted with the physical environment and its components
2. To know the methods to protect the environment and conserve natural Resources.

#### **Theory:**

#### **UNIT -I:**

#### **ECOSYSTEM**

1. Ecosystem – Definition, components and types.
2. Ecology- Definition, types, Detail structure of grassland and pond ecosystem
3. Food chain, food web and ecological pyramids

#### **UNIT -II**

#### **ENVIRONMENT**

1. Definition, elements of environment (Atmosphere, Hydrosphere, Lithosphere)
2. Biogeochemical cycles – oxygen cycle, carbon cycle, Nitrogen and Hydrological cycle.

#### **UNIT- III**

#### **NATURAL RESOURCES**

1. Definition, types, renewable & Non- Renewable resources
2. Conservation of wild life, forest resources, Afforestation , water management
3. Study of National parks & sanctuaries – Tadoba, Kanha, Nagzira, Bhar

#### **Unit – IV**

#### **POLLUTION**

1. Definition, sources, prevention and control measures of Air, Water, Noise, Soil and Radioactive Pollution. Pollution control through various laws.
2. Acid rain, green house effects, Ozone depletion and global warming.
3. Toxic effects of heavy metals – lead. Chromium and mercury.

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

**Practicals:**

1. Determination of Hydrogen Ion Concentration (pH) of Water and Wastewater.
2. Detection of dissolved oxygen in a given water sample by Wrinkler's method
3. Estimation of Acidity of Water
4. Estimation of Chlorides of Water
5. To prepare plan and layout of a garden.

***Books Recommended:***

1. Environmental Biology by P.D. Sharma
2. Ecology & Environment by P.D. Sharma
3. Environmental Pollution by S.S. Dara

**B.Sc. HOME SCIENCE –SEMESTER I**  
**Paper VII**  
**BASIC CHEMISTRY-I**  
**(1T-7)**

<b>Total Marks</b>	<b>50</b>
Theory	40
Internal Assessment	10
Practical	-

**COURSE CONTENT : THEORY**

**UNIT-I**

- (a) Water:** Sources, impurities, hard and soft water, hardness, temporary and permanent hardness, disadvantages of hard water for domestic purpose,
- (b)** Methods of purification of water for domestic purpose (i) Screening, ii) sedimentation, iii) coagulation, iv) gravity sand filter and pressure filtration and v) sterilization: boiling, chlorination (chlorine gas, bleaching powder, chlorine tablet and high test hypochlorite), ozonization, aeration and ultraviolet radiation

**Unit-II**

- (a) Alloy:** Definition, Classification of alloy (ferrous and Non-ferrous), purpose of making an alloy
- (b)** Effect of alloying various elements on properties of steel, composition and uses of stainless steel and brass.

**Unit-III**

- a)** **Solutions:** Types of solutions, different ways of expressing concentration of solution (**equivalent weight, molecular weight, normality and molarity**)
- b)** **Physical Properties of Liquids:** Surface tension (definition, determination of surface tension by Stalagmometer method). Viscosity (definition, determination by Ostwald's Viscometer).

**Unit-IV**

- (a) Colloids:** Definition, types of colloidal systems, Types of colloidal solution, methods of preparation, properties (Tyndall Effect, Brownian Movement, Electrophoresis, Electro-osmosis) and colloids in daily life (applications)

**(b) Emulsion and gel:** definition, types, methods of preparation, properties and their applications.

**INTERNAL ASSESSMENT** (Refer Direction)

Total Marks	10
-------------	----

**Practicals:**

**A) Volumetric analysis:**

1. Single acid base titration, Determine the Normality and weight per liter.
2. Determination of total and permanent hardness of water by EDTA titration.

**B) Physical Experiments .**

- 1) Determination of viscosity of given liquid by Ostwald's Viscometer.
- 2) Determination of Surface tension of given liquid by Stalagmometer.
- 3) Preparation of colloidal solution of starch.

**BOOK RECOMMENDED:**

1. Text-Book of organic Chemistry: B; S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
2. Text Book of Physical Chemistry: B.S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
3. A Text Book of Basic and Applied Chemistry, P.C. Jain and Monica Jain.
4. Polymer Science by V.R. Gowarikar, Wiley Ester Ltd. 1987.
5. Text Book of Organic Chemistry by J. L. Finar, Longman Publication.

## B.Sc. HOME SCIENCE SEMESTER I

### PAPER -VIII Applied Physics and Basic Computer I (1T-8)

Total Marks	50
Theory	40
Internal Assessment	10
Practical	-

**Objectives:** To refresh concepts in Physics and Computers.

#### Unit-I

**Measurements and units:** Definition of Physics, need of physics, Physical quantities, Necessity of measurement of quantities, FPS, CGS, MKS and SI systems of units (Main features of each system of units and comparison of these systems of units), necessity of a SI system of units. Concept of least count of a measuring instrument, significant figures. Concept and definition of scalar and vector quantities.

#### Unit- II

**Fundamental and derived quantities:** Concept of fundamental and derived quantities. Definitions of : Distance, displacement, area, volume, mass, density, speed, velocity, momentum, acceleration, force, work done, pressure, kinetic energy, potential energy, temperature, potential difference, current, resistance, power (electrical and mechanical). SI and CGS units of these quantities. Classification of these quantities as scalar and vector quantities.

#### Unit- III

**Mechanics:** Statements of Newton's laws of motion, and two examples each. Definition of uniform circular motion. Concept, definition and examples of centripetal force and centrifugal force.

Concept and definition of friction, types of friction (static and dynamic), friction as an advantage and disadvantage (at least five situations), measures to minimize undesired friction (use of lubricants, washers, ball bearings, surface coating, surface polishing, design modification etc.).

#### Unit- IV

**Computer Basics:** Characteristics of computers, Uses of computer in various fields, basic components of a computer system (block diagram), working of each block. Unit of memory (Bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte). concept of software and hardware.

**INTERNAL ASSESSMENT** (Refer Direction)

Total Marks	10
-------------	----

**Practicals:**

1. Use of Vernier Calipers to determine dimensions of a given object.
2. Use of Screw Gauge to determine dimension of a given object.
3. Comparison of measurements with Scale, Vernier Callipers and Screw Gauge.
4. Determination of density of a solid object.
5. Use of Travelling Microscope to determine inner diameter of a Capillary tube.
6. Determination of coefficient of Static Friction between two surfaces in contact.
7. Use of keyboard as an input device for computer to enter text in note pad. Save and print the file.
8. Use of mouse as an input device for computer to draw different shapes in ‘Paint’. Save and print the file.

**Reference Books:**

1. Principles of physics (vol. I & II) – Halliday & Resnik
2. Principles of physics – Subramanyam, Brijwal
3. How things work (vol. I & II ), INDUS (Harper Collins India)
4. Elements of Computer Science, S. K. Sarkar, A. K. Gupta, S. Chand & Co., New Delhi
5. Fundamental of computers E. Balguruswamy, Mc Graw Hill Education Pvt. Ltd. New Delhi
6. Computer fundamental (concepts, system & application) Pradeep K. Sinha, Priti Sinha, Sixth edition 2011, B.P.B . Publication
7. Comdex computer course, Vikas Gupta, PM Publication, New Delhi

**B.SC HOME SCIENCE SEMESTER - I**  
**PAPER - IX**  
**English and Communication Skills-I**

**(1T-9)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20

**Objectives :**

1. To prepare the students to communicate effectively and fluently in English.
2. To enable students listening, speaking reading and writing.
3. To strengthen grammatical accuracy
4. To prepare the students to deal with customers, professional, counselors in correct grammatical, idiomatic English.
5. To provide personality development training through situational role play, interview techniques, group discussions, seminar presentation etc.

**Theory :**

**Unit I :**

**1.Listening Skills**

- a. Importance of Listening Skills
- b. Developing Listening Skills

**2.Business Proposalsa.**

- a. The terminology used for formal commercial dealings like beauty parlour, boutique, diet counseling, Nursery and KG,
- b. Drafting Business Proposals (To draft a proposal for setting up a new venture or new business )
- c. Written Communication with banks, applying for loans and or extension of credit, etc.

d. Activities related to Listening Skill

Situational listening Skills (Meeting, Dialogue, Seminars etc) To make a proposal

**Unit II**

2. Voice training and expression

(*Effective Public Speaking*)

2. Paragraph writing on any given topic

3. Articles

**Unit III**

1. Correction of Errors

2. Precis Writing

3. Comprehension Passage

4. Active and Passive Voice

5. *Goal Setting*

**Unit IV**

1. Preposition

2. Advertisement Copy

3. Publicity Handouts

4. *Time Management*

5. Official/ Business Letter writing

6. Sales Letter

7. Enquiry Letter

8. Quotation Letter

9. Complaint Letter

10. Adjustment Letter

11. Letter to the editor of a newspaper

12. E-mail writing , Adding a Question Tag

**Internal Assessment (IA):**

**Total Marks : 20**

a) Situational listening Skills (Meeting, Dialogue, Seminars etc)

b) To make a proposal

c) Three minutes Presentation

d) Paragraph writing

e) Precis Writing

f) Comprehension Passage

g) Grammar Exercise h) Advertisement Copy i) Letter writing

**Reference Books:**

1. Professional Communication Skills : By Pravin S.R.Bhatia, A.M Sheikh: S.Chand and company
2. English Grammar Composition and Effective Business Communication By M.A. Pink, S.E.Thomas : S.Chand
3. You can Win Shiv Khera
4. 7 Habits of Highly effective people :Steven Corey
5. Enjoying Everyday English ,A.Rama Krishna Rao. Sangam Publication
6. Applied English Grammar and Composition Dr. P.C.Das New Central Book Agency(P) Ltd
7. Malgudi Days by R.K. Narayan

**B.Sc. HOME SCIENCE**

**SEMESTER –II**

**B.Sc HOME SCIENCE SEMESTER -II**  
**PAPER-I**  
**Fundamental of Food Science and Nutrition-II**  
**(2T-1)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 +20 = 100
Practical + IA	40+10 = 50

**Objectives :-**

1. To understand the function of food and the role of various nutrients, their requirements and effect of deficiency and excess.
2. To promote basic knowledge pertaining to various food groups and nutrients.
3. To make students familiar with the different methods of cooking, their advantages and disadvantages.
4. To develop ability to improve the nutritional quality of food.

**COURSE CONTENT**

**THEORY**

**Unit I**

**Carbohydrates and Fibre**

1. Carbohydrates – Definition, classifications, functions, sources, Digestion and absorption and deficiency states.
3. Importance in disease prevention.

**Unit II**

**Vitamins**

1. Water Soluble Vitamins :Functions, Sources and Deficiency of :  
i) Thiamine (B<sub>1</sub>) ii) Riboflavin (B<sub>2</sub>) iii) Nicotinic acid (B<sub>3</sub>) iv) Pyridoxine (B<sub>6</sub>)  
v) Biotin vi) Folic Acid vii) Cyanocobalamin (B<sub>12</sub>) viii)Vitamin C.

**Unit III**

**Minerals and Water**

**1. Minerals Functions, Sources and Deficiency of**

Trace element- 1) Sodium 2) Potassium 3) Magnesium 4) Zinc

**2. Water** - Functions of water in human body, water balance, sources of water in human body, effect of dehydration and its prevention.

**Unit IV**

**Energy and Methods of Cooking**

1. **Energy** : Definition and factors affecting BMR .Units of Energy.  
Energy measurement of food (Bomb calorimeter).

## 2. Methods of Cooking

1. Objective of cooking food
2. Different cooking methods, different cooking media
3. Effect of different methods of cooking on nutrients.

### INTERNAL ASSESSMENT (Refer Direction)

Total Marks	20
-------------	----

### PRACTICAL :

Simple cooking- preparation, serving, calculation of cost and yield.

- a) Cereals – Plain Rice, Pulao, Sweet Rice Masale Bhat (any 2)
- b) Chapati, Puri, Paratha, Missi Roti, Puran Poli, Bhakri ( any 2).
- c) Pulse Preparation – Whole, Dehusk and Sprouted ( any 2 ).
- d) Vegetable Preparation- Dry Curries and Baked ( any 2 ).
- e) Fruit Preparation – Fresh, Dried Baked and Steamed ( any 2).
- f) Milk Preparation – Porridge, Desserts, Curds, and Paneer Preparation ( any 2 ).
- g) Egg. Preparation – Boiled, Fried, Poached and Custard ( any 2 )

Total Marks	40+10
Presentation	10
Cooking	10
Sensory Evaluation	10
Record	10
IA	10

### INTERNAL ASSESSMENT

Any one of the following

Total Marks	10
-------------	----

1. Market survey of the Food Commodities as per Food Groups and their cost.
2. Latest Kitchen appliances in the market-their use & upkeep (any 5).
3. Scrap Book: Related to food groups, Sources, Deficiencies of Various nutrients.
4. Canteen.

### Books Recommended:-

1. **Nutritive Value of Indian Foods:** *Gopalan C, Rama Shastri & Balasubramanin S.C., National Institute of Nutrition, 1993*
2. **Food Science, Chemistry and Experimental Foods:** *Dr.M.Swaminathan,The Bangalore Printing and Publishing Co. Ltd. 1995.*
3. **Essentials of Food and Nutrition,** Vol.I (Fundamental aspects): *Dr. Swaminathan, 2<sup>nd</sup> edition BAPPCCO, 1985.*
4. **Applied Nutrition:** *R. Rajlakshmi Oxford & IBH Pub. Co.pvt Ltd,3<sup>rd</sup> edition, 1981.*
5. **Foods and Nutrition:** *The Educational Planning Group, Delhi, Arya Publishing House. 3<sup>rd</sup> edition, 1991.*
6. **Food Chemistry:** *Meyer, L.H. CBS Publishers & Distributors, Delhi, 1987.*
7. **Scope manual on Nutrition:** *Latham M.C., McGandy, McCann M.B.& Stare F.J. Published by the Upjohn Co, Kalamazoo, Michigan, 2<sup>nd</sup> edition. The Upjohn Co, Kalamazoo, Michigan 1972.*

**B.Sc HOME SCIENCE SEMESTER - II**  
**PAPER -II**  
**Development In Early Years**  
**(2T-2)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 +20= 100
Practical + IA	40+10= 50

**Objectives :**

1. To understand growth and development during infancy & early childhood
2. To study the factors influencing development during infancy and early childhood years
3. To understand development in key areas – physical, motor, cognitive language, social & emotional development .

**Theory :**

**Unit I** – Introduction to the early years :

1. Significance of the early years
2. Concept of developmental tasks & milestones
3. Play - meaning and importance and types of play
4. Infancy – Physical growth and development – body size, skeletal growth factors influencing and facilitating motor development.

**Unit II** - Infancy :- Socio – Emotional, Cognitive & Language Development

1. Socio – emotional development – family, socialization, attachment, infant emotions, influences on social – emotional development
2. Cognitive development – sensory motor development, factors influencing cognitive development
3. Language development – Language acquisition during infancy,
4. Factors influencing language development, facilitating language development.

**Unit – III** Early Childhood : Physical motor, Social – Emotional development.

1. Physical growth and development – body size, skeletal growth, physiological changes, factors influencing and facilitating physical growth
2. Motor development – gross and fine motor development, factors influencing and facilitating motor development.
3. Social and emotional development – relationships with family , peers teachers
4. Self concept, self esteem and gender identity.

**Unit IV** : Early Childhood : Cognitive and Language development.

1. Cognitive development :- Characteristics and accomplishments, factors influencing cognitive development

2. Language development – Characteristics and accomplishments, factors influencing and facilitating language development ,Early Childhood care and education.

**INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

**Practical :**

<b>Total Marks</b>	<b>40+10</b>
Planning of activities for nursery class	10
Preparation of teaching aid	10
2 Questions	05
Activities for Stimulating Development	05
Record Book	10
Internal Assessment	10

1. Visit to nursery school to observe infrastructural set up , teaching methods and activities
2. Preparation of teaching aids for nursery school children (4 teaching aids).
3. Preparation of a creative activities album :
4. Painting – Finger, stencil, blow, string, splatter, single / multiple water wash, rag, sponge, cotton, large brush etc.
5. Printing : Block, cork, vegetables, cord, leaf, finger, palm, thumb foot printing
6. Activities with crayon & chalk crayon, wet chalk drawing
7. Modelling & Sculpture – Clay, dough, Plasticine
8. Paper activities –
9. Paper tearing, crumpling, twisting, collage, mosaic, paper cutting, pasting, origami.
10. Participation in Nursery school organization.

**INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

**1 . Preparation of workbook on (any 0ne) :**

- Early childhood centre
- Developmental task
- Immunization
- Needs & Rights of children
- Family and child welfare programmes
- Care during pregnancy

**References :**

1. Bee H., (1995). The Developing Child> Harper Collins College Publishers
2. Berk, L. (2006).Child Development, New York : Allyn & Bacon.
3. Cole, M. & cole, S.R. (1996). The Development of children W.H.
4. Freeman and company.
5. Santrock (2006). Child Development . New York : Mc. Graw – Hill

**B.SC. HOME SCIENCE SEMESTER – II**  
**PAPER – III**  
**SEWING TECHNIQUES**  
**(2T-3)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical +IA	40 +10

**OBJECTIVES:**

1. To understand the importance and necessity of various construction techniques for different fabrics, and to acquire the skills to apply those construction techniques in a sample form
2. To acquire knowledge and skill regarding stitching techniques for various garment components such as plackets, pockets, cuffs, collars, and fasteners which are ultimately used for stitching of any garments

**Unit I :**

1. Types of Yarn – Simple, novelty, textured yarns. Yarn twist,
2. Spinning Process- Mechanical- Ring spinning, Open-end spinning.
3. Chemical spinning – Dry, wet, melt.
4. Blends : Reasons for blending, methods of blending,

**Unit II**

1. Introduction to Seams –Plain ,French, Lapped Flat fell, double channel, Tucks – Pin cord cross shell ,blind
2. Tucks-Pin ,Cord Shell,Cross
3. Pleats – Knife, box, inverted , stitch down. ,Gathers – Machine ,and hand.

**Unit III :**

1. Trimmings : Types and uses of -Belts, Bows, Ties, Fringes, Frills, Flounces
2. Types of –Yokes ,Collars ,Pockets, Cuffs and Sleeves
3. Types of Fasteners –Zipper, Buttons, Hooks and loops, Velcro.

**Unit IV :**

1. Fashion accessories –Types and uses of-- Head gears, Foot wear, Hand bags, Types and use of jewelry
2. Surface ornamentation –Types and application of- Appliqué, Quilting, smocking, ribbon work, embroidery

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

## PRACTICALS

Total Marks	<b>40+10</b>
DraftingP	10
Stitching <sup>I</sup> - a	15
Sample c	05
Record t	10
IA	10

1. Make samples of
  - i. Surface ornamentation- Appliqué, Quilting, smocking,
  - ii. Drafting cutting and stitching of :-Baba suit, Romper, Saree Petticoat
  - iii. Make any one fashion accessory-Head gears, Hand bags,T Jewelry,
  - iv. Plain seam and seam finishes – Pinking, Turned and Stitched, Edge stitched, overcast finish, overlocked, piped finish
  - v. French seam, run-n-fell seam, lapped seam, top stitching, piped seam

## INTERNAL ASSESSMENT

Total Marks	<b>10</b>
-------------	-----------

1. Preparation of sample book based on trimmings, fasteners.
2. Preparation of Charts/ Assignments.

## REFERENCE BOOKS:

1. Aswani K.T. Fancy Weaving Mechanism, Mahajan Books, Ahmedabad.
2. Deulkar Durga - Household Textile and laundry work, Atmaram and sons, Delhi,
3. Dongorkemy Kamala S.- The Romance of Indian Embroidery, Thakur and Co. Bombay.
4. Dorothy Siegart, Lyle - Modern Textiles, John Wiley and Sons. Inc New York.
5. Nisbet H. - Grammer of Textile Design, Taraporwala and Sons, Bombay
6. Pandit Savitri - Indian Embroidery, its variegated charms.
7. Complete Guide to Sewing-Readers Digest, The reader's digest association, 1976
8. Complete Book of Sewing, Alison Smith Dorling Kindersley, 1999
9. Singer Sewing Book, Gladys Cunningham, The Singer Company

**B.Sc. HOME SCIENCE SEMESTER II**  
**PAPER – IV**  
**Interior Decoration & Design**  
**(2T-4)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 +20 = 100
Practical + IA	40+10 = 50

**Objective:**

- 1) To develop skill in using colors to create different effects in space, with the use of various color schemes.
- 2) To leave techniques of using color in different media
- 3) To give knowledge of flowers / floral decoration and arrangement

**COURSE CONTENT: Theory**

**Unit I – Importance of colour in Interior Decoration**

Detail Study of Prang colour system:

- a) Characteristics or dimensions of colour
  - i) Hue ii) Value iii) Intensity
- b) Classification of color
  - i) Primary ii) Secondary iii) Intermediate iv) Tertiary
  - iv) Quaternary v) Neutral
- c) Warm & cool colours
- d) Advancing & Receding colours
- e) Colour wheel

**Unit :- II**

**Colour Schemes:**

- a) Related colour scheme: i) Monochromatic ii) Analogous
- b) Contrast colour scheme: i) Complementary ii) Double complementary
  - iii) Split complementary iv) Triad v) Neutral
- c) Colour schemes for different rooms
  - i) Kitchen and dinning
  - ii) Drawing room /Living room
  - iii) Bed room

**Unit III –**

**Decorating Interior & Exterior:**

- 1) Floral Decoration: i) Definition and importance ii) Objectives iii) Material required
- 2) i) Elements of Art in flower Arrangement. ii) Principles of Art in Flower arrangement.
- 3) Use of Flower arrangements: i) Personality ii) Occasion iii) Placement in rooms
  - iv) Flowers as gift v) Bouquet: i) Spray of flowers ii) Potted

**Unit IV – Types of flower arrangement**

- 1) a) Traditional b) oriental / Japanese c) Modern d) Floating e) Miniature b) Dry
- 2) Artificial flower arrangement :
- a) Artificial flower making b) Material required for artificial flower arrangement
- 3) Do's & Don'ts in flower arrangement

## INTERNAL ASSESSMENT (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### Practical's

- 1 – Classes of colors
  - i) Primary ii) Secondary iii) Intermediate
  - 2 - Colour Wheel
  - 3 - Warm & cool colours
  - 4 - Value Scale
  - 5 - Monochromatic colour scheme
  - 6 - Analogus colour scheme
  - 7 - Complementary colour scheme
  - 8 - Double complementary colour scheme
  - 9 - Triad colour Scheme
  - 10 - Types of flower decoration / Arrangement
- i) Single stick      ii) Small Bunch      iii) Miniature   iv) Modern

<b>Total Marks</b>	<b>40+10</b>
Classes of Colours	10
Colour Scheme	10
Flower decoration	10
Record	10
IA	10

## INTERNAL ASSESSMENT

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

Accessories in interior (Any two)

- 1) Accessories in home decoration (Creative Art)
- 2) Floral Carpets
- 3) Artificial Flowers
- 4) Rangoli-Using various types of materials

Note-Workshop to be conducted to teach new articles

### Books Recommended

- 1) Goldseiu H. & Goldstaia V – ‘Art in Every day life’, Machllian co, New york 4<sup>th</sup> Edition
- 2) Mann M- ‘Home Management Kalyani Publishers, New Delhi
- 3) Soundaraj S - ‘Text book of House hold Arts’, orient Longman, Bombay
- .

**B.Sc HOME SCIENCE SEMESTER II**  
**PAPER - V**  
**Social Survey and Community Development**  
**(2 T-5)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	$80 + 20 = 100$
Practical + IA	$40 + 10 = 50$

**OBJECTIVES :**

1. To impart knowledge of community development.
2. To develop awareness regarding community development programmes.
3. To assess the methods of social and social research.
4. To gain the knowledge about gender and development.

**Theory :**

**UNIT - I**

1. History of Community Development :  
Definition, objectives of community development programme, essential elements of community development, limitations of community development, Similarities and dissimilarities between community development and extension education.
- 2 Elements of community development :  
Role of community development worker, major elements involved in India's community development and extension process, difference between an extension worker and a community development worker.

**UNIT – II**

1. Community development programmes :
  - a) Shriniketan rural reconstruction
  - b) Gurgaon experiment
  - c) Marthandum project
  - d) Gandhian constructive programme
2. History of extension activities :
  - a) Etawah pilot project
  - b) Indian village service
  - c) Firka development scheme
  - d) Nilokheri experiment

**UNIT - III**

1. Social Survey :  
Definition, importance of social survey, types of social survey, steps involved in social survey, variation between social survey and social research.
2. Social Research :  
Definition, importance of social research, tools of data collection- questionnaire, observation, interview and schedule methods

**UNIT - IV**

1. Gender and Development :  
Sex ratio, Human resource development index, Barriers to women's access to inputs and services related to legal rights, employment and equal pay.
2. Poverty Alleviation Programmes : Efforts taken by Government agencies for eradication of poverty - a) National Rural Health Mission b) Integrated Child Development Services c) Efforts by Department of Women and Child Development

#### **INTERNAL ASSESSMENT (Refer Direction)**

##### **Practicals :**

1. Framing of questionnaire to collect data on any developmental issue.
2. Preparation of handmade slides.
3. Handling and operation of slide projector for projection of slides.
4. Preparation of news story.
5. Preparation of 10 Pages album on rural development.

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

<b>Total Marks</b>	<b>40+10</b>
Writing	10
Teaching Aid	10
Presentation	10
Record	10
IA	10

#### **INTERNAL ASSESSMENT**

1. **Report on socioeconomic survey of 5 families in rural /slum area**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

##### **Books Recommended :**

1. Directorate of extension : Extension Education in Community Development.
2. Supe. S. V. An Introduction to Extension Education – Oxford Publishing Company, New Delhi & Kolkata.1999.
3. Chandra. A., Shah. A. and Joshi. V.: Fundamentals of teaching Home Science, Sterling Publishers, New Delhi, 1989.
4. Devdas. R. P., Methods of teaching Home Science, National Council of Education.1978.
5. Singh. K., Rural Sociology, Prakashan Kendra, Lucknow.
6. Dahama. O. P. and Batnagar O. P. Education & Communication for Development, Oxford & IBH Publishing Co., New Delhi, 1977.

**B.Sc. HOME SCIENCE SEMESTER –II**  
**PAPER –VI**  
**Ecology & Environment - II**  
**(2T-6)**

<b>Total Marks</b>	<b>75</b>
Theory + IA	$40 + 10 = 50$
Practical + IA	$20 + 5 = 25$

**Theory:**

**UNIT – I GARDENING**

1. Definition, types of garden, Importance of garden, Nursery Development and entrepreneurship and its importance. Common diseases and pests in garden plants and their control.
2. Ornamental garden – definition, important parts of garden, plan and layout of ornamental garden.
3. Kitchen garden – Definition, cultivation techniques of Brinjal, Tomato, chilli, cauliflower.

**UNIT –II PLANT PROPOGATION**

1. Definition, various methods used in plant propagation for some garden plants.
2. Garden Implements and accessories, Budding, Grafting and layering methods, selection of plants and their certification.
3. After care of budded and grafted plants. Fertilizers used in garden.

**UNIT- III MUSHROOM CULTIVATION**

1. Introduction of mushroom, types suitable for cultivation. Preparation and culture of spawn.
2. Cultivation technique of oyster Mushroom, cultivation technique of white Button Mushroom, cultivation technique of Paddy Straw Mushroom.
3. Economic importance of Mushroom cultivation as a small scale industry.

**UNIT – IV VERMICULTURE & VERMI COMPOSTING**

1. Introduction of earthworm, distribution and ecology
2. Vermiculture, food habits and uses of earthworm
3. Vermicompost, chemical composition of worm cast, economic importance of Vermiculture

**INTERNAL ASSESSMENT** (Refer Direction)**Practicals**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

1. Study of garden implements and accessories
2. Potting
3. Methods of plant propagation:
  1. Budding
  2. Grafting
4. Study and identification of common garden flowers and vegetables seeds.
5. Use of common fungicides and insecticides in garden
6. Detection of free Co<sub>2</sub> in given water sample
7. Detection of hardness of given water sample

<b>Total Marks</b>	<b>20+5</b>
Experiment	05
Spotting	05
Propogation	05
Record	05
IA	05

**INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>05</b>
--------------------	-----------

Survey on Study of Ecosystem: Types of Plants, or Types of insects available in your surroundings.

**Books Recommended:**

1. Plant propogation (New age International Publisher) by M.K. Sandhu
2. Mushrooms for livelihood ( Kalyani Publisher) by Dr. Vijay Khader's
3. Plant Nursery Management: How to start and operate a Plant Nursery –Ray P.K.
4. The complete technology Book on Vermiculture & Vermicompost –NPCS Board of Consultants & Engineers
5. How to start a Worm farm:Guide to Vermiculture, Vermicomposting and worm farming –Solucinous Tainas

**B.Sc. HOME SCIENCE - SEMESTER II**  
**Paper VII**  
**BASIC CHEMISTRY-II**  
**(2T-7)**

<b>Total Marks</b>	<b>75</b>
Theory + IA	$40+10=50$
Practical + IA	$20+5=25$

**COURSE CONTENT**

**THEORY**

**Unit-I**

- a) **Fuels:** Definition, classification, characteristics of good fuel, calorific value, preparation of Gobar gas.
- b) Crude petroleum and its refining by fractional distillation, cracking of petroleum, composition and application of LPG, Precautions while using LPG

**Unit-II**

- a) **Acid and base:** Concept of acid, base and salt, (Arrhenius theory and Lowry and Bronsted Theory), Conjugate pair, neutralization reaction.
- b) pH and pH scale, (Numerical on pH scale) Buffer solution and its applications in everyday life.

**Unit-III**

- a) **Organic Compounds:** Definition, saturated and unsaturated hydrocarbon, classification of organic compounds based on their structure and functional groups. Definition of alkane, alkene and alkyne with examples.
- b) Homologous series, IUPAC nomenclature of alkane, Laboratory preparation, chemical properties and uses of methane and ethylene.

**Unit-IV**

- a) **Corrosion:** Definition, atmospheric corrosion (Corrosion by oxidation and by other gases). Factors causing atmospheric corrosion,
- b) Methods for protection of metals from corrosion (Galvanizing, tinning and electroplating).

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

**Practical**

<b>Total Marks</b>	<b>20 + 5</b>
Practical A	05
Practical B	05
Record	05
Viva Voce	05
IA	05

**Practical A**

1. Titration of strong acid vs strong base(Acid-base double titration)
2. Determination of pH of different solutions by using pH meter/ pH paper.

**Practical B**

1. Detection of functional groups- Acids, Alcohols, Aldehydes and Ketones.
2. Preparation of acidic and basic buffer solution.

**INTERNAL ASSESSMENT**

Total Marks	05
-------------	----

1. Assignment book/ workbook for topics from syllabus (all four units)

**BOOK RECOMMENDED:**

1. Text-Book of organic Chemistry: B; S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
2. Text Book of Physical Chemistry: B.S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
3. A Text Book of Engineering Chemistry, S.S. Dara and Suresh Umare, S. Chand Publication, New Delhi.
4. A Text Book of Basic and Applied Chemistry, P.C. Jain and Monica Jain.
5. Polymer Science by V.R. Gowarikar, Wiley Ester Ltd. 1987.
6. Text Book of Organic Chemistry by J. L. Finar, Longman Publication.

**B.Sc. HOME SCIENCE SEMESTER II**  
**PAPER -VIII**  
**Applied Physics and Basic Computer - II**  
**(2T-8)**

<b>Total Marks</b>	<b>75</b>
Theory + IA	$40 + 10 = 50$
Practical +IA	$20 + 5 = 25$

**Objectives:** To revise concepts in Physics (Electricity, Optics) and Computers.

**Theory:**

**Unit-I**

**Basic Electricity:** Concept of electric charge, electric field, potential difference, current, resistance and statement of Ohm's law. Laws of series and parallel combinations of resistances (numericals based on Ohm's law and series and parallel combination of resistances) Examples of good and bad conductors of electricity.

**Unit-II**

**Light - I:** Nature of light as an electromagnetic wave, primary colors, velocity and wavelength of light, colors of objects. Concept of reflection, refraction of light and laws of reflection and refraction of light. Concept of dispersion of light in prism, Concept and definitions of refractive index of a material (discuss any two definitions), concept of transparent, translucent and opaque materials with three examples each.

**Unit-III**

**Light - II:** Definition of lens, types of lens (convex, concave), concept of focus and focal length of lens, application of convex and concave lens, concept of power of lens and diopter.

**X-Rays:** Definition of x-rays, production, properties and their applications.

Definition of radioactivity: properties of  $\alpha$ ,  $\beta$  and  $\gamma$  rays. Applications of radioactivity.

**Unit-IV**

**Computer Hardware:** Concept of Mother Board, Computer Memory: RAM, ROM, Cache, External memory devices: Hard Disk (magnetic disk), CD, DVD, Pen drive/flash drive. Printers: principle and working of impact printers (dot matrix) and non impact printers (Inkjet and LASER printer). Scanner (principle and working), Concept of USB and HDMI ports

**INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

**Practicals**

1. Measurement of Voltage at various points in a given DC electric circuit using dc voltmeter.
2. Measurement of Voltage at various points in a given DC electric circuit using multi-meter.
3. Verification of values of given resistances by using multi-meter.
4. Experimental verification of Ohm's Law.
5. Experimental verification of series and parallel combination of resistances using multi-meter.
6. Determination of refractive Index of a material of glass slab.
7. Determination of Focal Length of a given convex lens.
8. Determination of refractive index of a material of a prism.
9. Scan a document, save it in JPEG (Joint Photographic Experts Group) format and print it.
10. Scan a document, save it in PDF (Portable Document Format) and print it.

<b>Total Marks</b>	<b>20 + 5</b>
Experiment	10
Viva	05
Record	05
IA	05

**INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>05</b>
--------------------	-----------

1. Assignment book/ workbook for topics from syllabus (all four units)

**Reference Books:**

1. Principles of physics (vol. I & II) – Halliday & Resnik
2. Principles of physics – Subramanyam, Brijwal
3. How things work (vol. I & II ), INDUS (Harper Collins India)
4. Electrician Theory, A. K. Mittal, Arihant Publication, Merath.
5. Basic Electrical Engineering, M. L. Anwani, Dhanpat Rai & Co. (P) Ltd.
6. Elements of Computer Science, S. K. Sarkar, A. K. Gupta, S. Chand & Co., New Delhi
7. Fundamental of computers E. Balguruswamy, Mc Graw Hill Education Pvt. Ltd. New Delhi
8. Computer fundamental (concepts, system & application) Pradeep K. Sinha, Priti Sinha, Sixth edition 2011, B.P.B . Publication
9. Comdex computer course, Vikas Gupta, PM Publication, New Delhi.

**B.Sc. HOME SCIENCE SEMESTER - II**  
**PAPER - IX**  
**English and Communication Skills- II**

(2T-9)

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20

**Objectives :**

1. To prepare the students to communicate effectively and fluently in English.
2. To enable students listening, speaking reading and writing.
3. To strengthen grammatical accuracy
4. To prepare the students to deal with customers, professional, counselors in correct grammatical, idiomatic English.
5. To provide personality development training through situational role play, interview techniques, group discussions, seminar presentation etc.

**Theory :**

**Unit I :**

- 1) Bio-data /Resume
- 2) Job Application
- 3) Tenses
- 4) Direct and Indirect Speech

**Unit II :**

- 1) Technical report writing  
    Official Report Writing
  - Report on College Gathering
  - Newspaper Report
- 2) Stress Management

**Unit III :**

- 1) Dialogue writing
- 2) Group Discussion
- 3) Role Playing
- 4) Degrees of Comparison
- 5) Transformation of Sentences
- 6) Health and Hygiene

**Unit IV :**

- Creating a write up for an event:
- 1) Notices
  - 2) Press no
- Professional Manners and Etiquettes
- 1) Personal Interview Techniques
  - 2) Meeting Agendas and

- 3) Minutes writing
- 4) Simple, Compound, Complex Sentences

<b>INTERNAL ASSESSMENT :</b>	<b>Total Marks - 20</b>
------------------------------	-------------------------

- a) Writing a Bio-data and Job Application
- b) Grammar exercise
- c) Report Writing
- d) Dialogue writing
- e) Group Discussion
- f) Role Playing
- g) Notices/Press Notes
- h) Mock personal interviews
- i) Mock Professional situations
- j) Grammar exercise

**Reference Books:**

1. Professional Communication Skills : By Pravin S.R.Bhatia, A.M Sheikh: S.Chand and company
2. English Grammar Composition and Effective Business Communication By M.A. Pink, S.E.Thomas : S.Chand
3. You can Win Shiv Khera
4. 7 Habits of Highly effective people :Steven Corey
5. Enjoying Everyday English ,A.Rama Krishna Rao. Sangam Publication
6. Applied English Grammar and Composition Dr. P.C.Das New Central Book Agency(P) Ltd
7. Malgudi Days by R.K. Narayan

**B.Sc. HOME SCIENCE**

**SEMESTER –III**

**B. Sc. HOME SCIENCE SEMESTER III**  
**PAPER - I**  
**Nutrition for Life Span**  
**(3T-1)**

Total Marks	100
Theory	80
Internal Assessment	20
Practical	-

**OBJECTIVE:**

- 1) To learn Principles of Meal Planning
- 2) To plan and calculate balanced diets for family members

**COURSE CONTENT: THEORY**

**UNIT-I**

**Family Meal Management:**

**I Meal Planning:**

- 1) Use and importance of RDA and Food Value Tables in meal
- 2) Principles, Objectives & Advantages of Meal Planning
- 3) Planning of balanced diet based on the following factors;
  - a) The nutritional needs of the family members-RDA for various age groups.
  - b) Sensory factors- eye appeal taste, aroma, flavour, texture, temperature, etc.
  - c) Other factors- availability of foodstuff, tradition, culture, religion, likes and dislikes, food fads and fallacies.

**II Diet planning with reference to special individual requirements:**

- 1) Nutrition during adulthood : Balance diet for Adult Man, Women. Dietary guidelines for Adults(Reference Man / Reference Woman)

**UNIT II**

1) Nutrition for Mother:

- A. Nutrition during pregnancy: a) Desirable weight gain b) Nutritional requirements c) Diet during normal pregnancy.
- B. Nutrition during lactation: a) Nutritional Requirement b) Diet during Lactating Period.

**UNIT - III**

**Family Meal Management :**

Nutrition for specific age groups:

1. Nutrition during infancy: a) Nutritional requirements b) Types of milk fed to infants c) Advantages of Breast Feeding d) Bottle feeding e) Weaning and Supplementary foods

2) Nutrition during :

1. Preschool age.
  2. School going children
- a) Nutritional requirements
  - b) Establishment of good food habits

**UNIT - IV : .**

1) Nutrition during Adolescence

- a) Nutritional requirements
- b) Establishment of good food habits

2) **Geriatric nutrition (age over 60 years):**

- a) Changes occurring during Ageing.
- b) Nutritional requirements
- c) Diet during old age.

**INTERNAL ASSESSMENT** (Refer Direction)

**PRACTICAL**

Total Marks	20
-------------	----

- 1) Calculation of nutrients present in different recipes (any 2)
- 2) Calculation of cost and amount of food to get specified amount of calories (any2)
- 3) Conversion of Weights and volumes of raw foods to cooked food (any 5)
- 4) Conversion and Weight of portion of food containing same level of a nutrient energy, proteins, iron, calcium.
- 5) Weights and Measures - Standard and household measure for raw and cooked food.
- 6) Meal Planning for various groups:
  - a) Planning and Calculation of a whole days model meal for
    - i) Adult Man ii) Adult Woman
    - iii) Pregnant women iv) Lactating woman v) Infant (10 to 12 months)
    - vi) Preschooler (2-6 years) vii) School Child (6-10 years)
    - viii) Adolescent Boy ix) Adolescent Girl x) Old Person

**References**

- 1) **Nutritive Value of Indian Foods:** *Gopalan C, Rama Sastri & Balasubramanian S.C.* National Institution,1993.
- 2) **Understanding Nutrition:** *Whitney E.N. & Rolfe S.R.* 8<sup>th</sup> Edition West/ Wordsworth.1999

- 3) **Dietetics:** *B Srilakshmi*, New Age International (P) Ltd., Publishers 3<sup>rd</sup> Edition, 2000
- 4) **Nutrition and Dietetics :** *Shubhangini A.Joshi* , Tata McGraw Hill Publishing Co. Ltd., New Delhi,1992
- 5) **Nutritional Research:** Current Scenario and Future Trends Editor: *K, Krishnaswamy*, Oxford and IBH Publication Co. Pvt. Ltd., 2000
- 6) **Nutritional Problems of India:** *Shukla P.K.*, Prentice Hall of India Pvt. Ltd., Delhi1982
- 7) **The Science of Food:** An Introduction to Food Science, Nutrition and Microbioloy: *Gaman P.M. & Sherrington K.B.* 2<sup>nd</sup> Edition. Pergamon Press, 1989.

**B.SC HOME SCIENCE SEMESTER - III**  
**PAPER -II**  
**Development in Late Childhood and Adolescence**  
**(3T-2)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**OBJECTIVES :**

- To understand development in late childhood and adolescence
- To study significant changes during late childhood to adolescence
- To gain knowledge of issues concerning late childhood and adolescence.

**Theory :**

**Unit – I Late Childhood :- Physical – motor & social – emotional**

**development.**

- Development tasks of late childhood physical development – Changes in body size, nutrition and health, physical fitness
- Motors Skills, Factors influencing
- Changes in emotional development, understanding emotions and emotional self regulation
- Changes in self – concept, self understanding, development of self- esteem, industry vs inferiority
- Relationships with family peers, teachers
- Influence of school and media.

**Unit II - Late Childhood : Cognitive and language.**

- Cognitive development - theoretical perspectives on cognitive development (Piagets and Vygotsky) factors influencing cognitive development
- Intelligence and creativity, influences on intelligence and creativity
- Development of language in late childhood, bilingualism / Multilingualism, influences on language development
- Moral development – Perspectives on morality, influences on moral reasoning and behaviour.

### **Unit III - Early adolescence / Puberty (12-16 Years)**

- Puberty – Sub stages of puberty, primary sex characteristics
- and secondary sex characteristics, effects of puberty changes,
- sex education
- Adolescence :- Development tasks and theoretical perspectives.
- Physical and physiological changes .

### **Unit IV – Adolescence : Cognitive, Language & Moral Development.**

- Perspective on cognitive development
- Development of intelligence and creativity
- Adolescent language
- Self and Identity at adolescence
- Family relationships – parents, grandparents & significant others
- Peer relationships.

### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **Practical**

- Studying various issues related to late childhood and adolescence using multiple methods
- Case profile of late child or adolescent in different socio-cultural contexts
- Analysis of images of children and adolescents in media
- Psychological tests (vocational interest, emotional maturity and adjustment inventory)
- Exercises on life skill development.

### **References :**

- Berk, L.E. (2007). Development through the life span (4<sup>th</sup> ed) Allyn & Bacon :
- Rice, E.P., (1999). The Adolescent : Development, Relationships & culture (9<sup>th</sup> ed). Allyn & Bacon, Boston
- Santrock, J.B., (2006). Lifespan Development (10<sup>th</sup> ed) . Mc. Graw Hill.Sharma N.(1999). Understanding adolescence. New Delhi : NBT

## **B.Sc. HOME SCIENCE SEMESTER – III**

### **Textile Design**

#### **PAPER – III**

**(3T-3)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

#### **Objectives**

1. To acquire knowledge of various methods of fabric construction.
2. To develop creativity in designing for prints.
3. To impart knowledge of traditional textiles of India.
4. Create awareness of different dyeing and printing techniques.

#### **Theory**

##### **Unit I :**

- 1 Design – Types, design development, motif, pattern and layout, design manipulation, inspiration from nature and history. Types of motifs from India, China, Japan ,
- 2 Elements of design and their effects- Line, shape, Color and Texture.
- 3 Principles of design and their effects- Proportion, Balance, Emphasis, Rhythm,
- 4 .Develop designs for saree, Dress material and dupatta, bedcover, curtain by using different designs.

##### **Unit II :**

- 1 Methods of fabric contractions : Weaving, - handloom, its parts and operation. Types of weaves, basic weaves, decorative weaves.-Dobby,Jacquard pile, Swivel,Lappet Double cloth
- 2 Introduction to Knitting – Classification, difference between warp and weft knitting, Basics of warp and weft knitting, ,uses, advantages and disadvantages, Non wovens : Bonded fabric, Felt -types and manufacturing process and their uses. Other methods of fabric constructions – Netting, lace making, braiding.

##### **Unit III :**

1. Finishes, Importance of finishes : General finishes – Scouring, bleaching, singeing, sizing, mercerizing, tentering, calendaring.
2. Special finishes: Special calendaring, napping, flame proofing, water proof and water repellency, shrinkage control, permanent press, wrinkle resistances.

##### **Unit IV :**

1. Regional embroidery : History, stitches, colour, material , threads and stitches used in Kantha of Bengal, Chamba of Himachal Pradesh, Kasuti of Karnataka, Kashida of Kashmir.
2. Phulkari of Panjab, Chikankary of Uttarpradesh, Manipuri from Manipur, Kathiyawadi of Gujarat

### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **Practical**

1. Make an embroidery album of Kantha of Bengal, Chamba of Himachal Pradesh, Kasuti of Karnataka, Kashida of Kashmir.,Phulkari of Panjab,Chikankari of U.P Manipuri, Kathiawadi of Gujarat
2. Develop designs for saree, Dress material and dupatta, bedcover, curtain by using different design with different colours.

### **BOOKS RECOMMENDED**

- Chattopadhy, K., Handicrafts of India, All India Handicrafts Board, New Delhi, 1975.
- Ikat textiles of India Chelna Desai, Chronicle Books, San Francisco, 1988
- Silk Brocades Yashodhara Roli & Janssen BV, New 2003
- Hand-woven Fabrics of India, Jaslen Dhamija and Jyotindra Jain, Mapin Publishing Pvt. Ltd. Ahmedabad, 1989
- Tie-Dyed textiles of India, Veronica Murphy & Rosemary Crill, Victoria & Albert Museum, London, 1991
- Traditional Indian costumes and Textiles, Parul Bhatnagar, Abhishek Publication, Chandigarh, 2004
- Designs for a life time Usha Shrikant, Samata Entreprise,Mumbai, 2002
- Marsh, J.T., An Introduction to Textile Finishing, B.I. Publishers, 1979
- Corbman,P.B., Textiles-Fibre to Fabric, Gregg Division/McGraw Hill Book Co.,US, 1985
- Potter MD and Corbman BP. Textiles: Fibres to Fabric – Published by McGraw Hill Inc. U.S.A
- Usha Shrikant - Ethinic Embroidery of India, Samaia Enterprises , Mumbai. William Watson - Textile Design and colour, Longman Green and Co. London.

**B.Sc. Home Science Semester III**  
**PAPER – IV**  
**Housing and Interior Designing**  
**(3T-4)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**Objectives**

- 1 To develop understanding regarding housing needs, Principles, Planning of house
- 2 To experiment with space, Preparing house plans .
- 3 To develop graphic skills to express ideas in design, forms, knowledge of landscaping and economic use of space.

**COURSE CONTENT:**            **Theory**

- Unit I**
- a) Concept of Housing
  - b) Importance of Housing
  - c) Family Housing Needs – (i) Protection (ii) Economic Needs (iii) Affectional (iv) Social (v) Standards of Living (vi) Housing Goals (vii) Style (viii) Function (ix) Occupation (x) Physical and Mental Health
  - d) Selection of Site for House -(i) Physical features (ii) Type of soil (iii) Hygienic Conditions (iv) Practical convenience (v) Legal point of view (vi) Economic Conditions
  - e) Principles of house planning - (i) Orientation (ii) Aspect (iii) Prospect (iv) Privacy (v) Grouping (vi) Roominess (vii) Furniture (viii) Sanitation (ix) Circulation (x) Economy

**Unit II**    a) Factors affecting house planning: (i) Income (ii) Occupation (iii) Size of the family(iv) Socio-economic status of the family

- b) Study of various rooms in the house with respect to:
- (i) Living area: (a) Verandah (b) Drawing room
- (ii) Sleeping area: (a) Bedroom (b) Guestroom

(iii) Service area: (a) Staircase (b) Toilet (c) Dining room

(d) Store room

(e) Kitchen-Types of kitchen: (a) One wall

(b) Two wall (c) U-shape (d) L-shape

(f) Storage facility in different rooms

### **Unit III- Arrangement of Furniture**

1.a) Selection of furniture: (i) Expressiveness (ii) Styles (iii) Beauty (iv) Utility (v) Comfort  
(vi) Flexibility (vii) Durability (viii) Cost

b) Material Required for construction: (i) Wood (ii) Metal and alloy (iii) Plastic (iv) Glass  
(v) Willow, ratton, cane.

c) Care of furniture

2. (a) application of art elements and principles in arrangement.

(b) Various kinds of Architectural symbols used in scale drawing.

(c) Arrangement in different rooms- (i) Living (ii) Dining (iii) Bedroom

**Unit IV** (a) Bonsai- (i) History (ii) Preparation of soil (iii) Selection of plants (iv) Potting  
and repotting (v) Different styles (vi) Selection of containers (vii) Care

(b) Landscaping- (i) Importance (ii) How a professional landscape design can enhance home

(iii) Selecting landscape plants (iv) Selecting landscape structures/materials

(v) Installing driveways and walkways (vi) Lighting (Outdoors) (vii) Garden ornaments

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **Practical**

Exp. No. 1: Symbols of various kinds of furniture used in scale drawing.

Exp. No. 2: Arrangement of furniture with the help of symbol in Drawing room.

Exp. No. 3: Arrangement of furniture with the help of symbol in Bed room.

Exp. No. 4: Cleaning of different metals copper, silver, iron, bras, aluminium.

Exp. No. 5: Care and cleaning of furniture

Accessories in Home Decoration (any two)

1) Articles made out of low cost / waste material

(a) Fabric painting, oil, water, nib, knife, sand, glass, stain glass etc.

(b) Wax work / candles etc.

2) Preparation of bonsai.

3) Visit to Landscape /rock garden.

### **Books Recommended:**

1. Agan T. C. - 'The House' Oxford and I. B. H. publishing Co.

2. Ann Reilly; Susan A. Roth - 'The Home Landscape', Home planners Inc. Tucson,  
Arizona.

3. Deshpande R. S. – ‘Modern Indian Homes in India’, United Book Corporation, Poona, 2<sup>nd</sup> Edition.
4. Deshpande R. S. – ‘Build your own Home’, United Book Corporation, Poona, 4<sup>th</sup> Edition.
5. Deshpande R. S. –‘Low Cost Housing’, United Book Corporation, Poona, 4<sup>th</sup> Edition.
6. Goldstin H. / Goldstein V. – ‘Art in Everyday Life’ MacMillan Co., New York, 4<sup>th</sup> Edition.
7. Pak – Tin & Helan Yeap – ‘Feng Shui – Health Harmony’ B.Jain Publishers Pvt Ltd., New Delhi, 1998.
8. Rutt A. – ‘Home Furnishing’, Wiley Eastern Pvt.Ltd., New Delhi, 2<sup>nd</sup> Edition.
9. Shrivastav – ‘Remedial Vastu Shastra’, Manoj Publication, Delhi, 2001.

**B.Sc HOME SCIENCE SEMESTER - III**  
**PAPER – V**  
**Extension Communication Techniques**

(3T-5)

Total Marks	100
Theory	80
Internal Assessment	20
Practical	-

**Objectives:**

1. To impart knowledge of extension teaching.
2. To develop awareness about extension learning.
3. To assess the extension teaching methods and approaches.
4. To gain the knowledge about art of presentation and devices useful in effective communication.

**Theory:**

**UNIT - I**

1. Extension teaching :

Definition of extension teaching, steps involved in extension teaching, factors contributing to extension teaching, principles of extension teaching and desirable traits of a teacher for effective extension work.

2. Extension teaching process :

Teaching plan, Role of teacher in different levels, functions of teaching in extension education.

**UNIT - II**

3. Extension learning process:

Definition of extension learning, Learning experience, Laws of learning, principles of learning, factors affecting learning, ideal learning situation to achieve success.

4. Psychology of learning :

Types of learning, Group psychology and its effect on learning, Principles of group dynamics, Psychological factors in adult learning.

**UNIT - III**

5. Extension teaching methods :

Meaning, importance, functions, classification of various extension teaching methods, factors to be considered in selection and use of extension teaching methods.

6. Approaches in Extension :

Meaning, Strong and weak points of interpersonal, group and mass approach.

- a) Interpersonal approach : Home visit, office call, personal letter and telephone call.
- b) Group approach : Demonstrations, field trips, group discussions.
- c) Mass approach : Campaign, Exhibition, Television, Radio.

## UNIT IV

7. Art of Presentation :

Meaning, five basic steps of presentation and equipment of campaign work.

8. Selection of teaching aids : Selection, preparation and use of various teaching aids.

Devices useful for effective communication: Over Head projector, opaque projector, DVD, LCD,

### INTERNAL ASSESSMENT (Refer Direction)

Total Marks	20
-------------	----

#### Practicals

- 1) Preparation and presentation of flannel cutouts for effective communication.
- 2) Method demonstration for communication.
- 3) Preparation of Poster on home science aspects.
- 4) Handling and operation of opaque projector for teaching.
- 5) Study of Mahila Mandal or Mahila Bachat Ghat (SHG) to analyze working pattern, and submission of report.

#### Books Recommended :

1. Supe. S. V. An Introduction to Extension Education – Oxford Publishing Company, New Delhi & Kolkata.1999.
2. Dahama. O. P. and Batnagar O. P. Education & Communication for Development, Oxford & IBH Publishing Co., New Delhi, 1977.
3. Reddy Adivi. A. Extension Education, Shree Laxmi Press, Bapatla, Guntur, A.P.
4. Singh J. K., Mass Media and Information Technology, Mangaldeep Publication, Jaipur.
5. Kumar K. J. L., Mass Communication in India, Jaico Publishing House, Mumbai.
6. Audio Visual Aids for Co-operative Education and Training, FAO Publications.

**B.Sc. (HOME SCIENCE) SEMESTER- III**  
**PAPER VI**  
**Applied Physiology- I**  
**(3T-6)**

Total Marks	50
Theory	40
Internal Assessment	10
Practical	-

**Objectives :**

1. To understand the structure and function of various organs of human body.
2. To promote the basic knowledge of first aid.

**UNIT-I**

1. Animal Cell- Definition, structure & function in brief.
2. Tissue- Classification, Definition and function.

**UNIT-II**

1. Locomotor System- Definition, classification and functions of bones, types of joints.
2. Sense Organs- Definition, structure and functions of eye, ear, tongue, nose and skin.

**UNIT-III**

1. The Blood-
  - a. Definition, composition and functions of blood.
  - b. Clotting of blood.
  - c. Common blood groups, 'Rh' factor and its importance.
2. Lymphatic system- Structure & functions of organs of Lymphatic system, lymph.

**UNIT-IV**

1. Nervous system- Definition, structure and functions of Central Nervous System.
  - i. The synapse and neurotransmitters.
  - ii. Functions and Autonomic Nervous System and Peripheral Nervous System.
2. First Aid- Definition of First Aid, First Aid Kit, Importance of First Aid. First Aid in some accidental conditions- Snake bite, Dog bite, Drowning, Burns, Electric Shock.

**INTERNAL ASSESSMENT (Refer Direction)**

Total Marks	10
-------------	----

**PRACTICALS**

1. Study of Microscope.
2. Identification of bones, their joints and its classification.
3. Application of Triangular Bandage and Roller Bandage.
4. Artificial Respiration.

**REFERENCES-**

1. Community Health and Nursing- Basavan Phappa B.T.
2. Practical Pathology- Chaturvedi O.U.
3. Human Anatomy- Chaurasia
4. Medical Physiology- Guyton
5. Hygiene and Public Health- Ghosh P.

6. A.B.C. of Nursing in the Home- Gravelious E.M.
7. Manual of First Aid- Gupta
8. Nursing- George
9. Anatomy and Physiology for Nurses- Jain A.K.
10. Practical Guide to First Aid- Keech P.
11. Anatomy and Physiology for Nurses- Pearce
12. Essentials of Community Health Nursing- J.E. Park
13. Practical First Aid- Park
14. Home Nursing- Prabhu V.
15. Anatomy for Nurses- Prasad
16. Anatomy and Physiology in Health and Nurses- Ross & Wilson

## B.Sc. HOME SCIENCE SEMESTER III

### PAPER –VII

#### APPLIED CHEMISTRY-I

(3T-7)

Total Marks	50
Theory	40
Internal Assessment	10
Practical	-

### THEORY

#### Unit-I

- a) **Carbohydrates:** Definition, classification, open chain structure of glucose and fructose,
- b) Manufacture of cane sugar, optical isomerism of asymmetric carbon atom, plane polarised light, dextro and leavo rotatory compounds.

#### Unit-II

- a) **Fermentation:** Definition, ideal conditions for fermentation, application of fermentation
- b) Preparation of vinegar and ethanol by fermentation process.

#### Unit-III

- a) **Oils and Fats:** Definition, difference between oils and fats, saponification value, iodine value, rancidity and hydrogenation of oils,
- b) Refining of edible oil, naturally occurring fatty acids (saturated and unsaturated), essential and non essential fatty acids. Omega names of MUFA and PUFA

#### Unit-IV

- a) **Soap and Detergents:** Definition, types of soap, Industrial method of preparation of soap, cleansing action of soap,
- b) Difference between soap and detergents, composition of detergent., Liquid detergents,

### INTERNAL ASSESSMENT (Refer Direction)

Total Marks	10
-------------	----

### PRACTICALS

#### Practical A.

- 1a Preparations of cosmetics: i) Shampoo (simple and herbal) ii) Perfumes
- b.Preparation of dyes and drug:

- 2.Methyl salicylate from salicylic acid.

- a. Orange dye from beta naphthol and aniline or p-toluidine
- b. To compare the cleansing action of detergents/ shampoo by Stalagmometer
- c. Use of physical balance.
- d. Preparation of standard solution for titration.

### **Practical B**

1. Determination of total fatty acid present in given sample of soap.
2. Determination of total alkali present in given sample of soap

### **BOOK RECOMMENDED:**

1. Text Book of Organic Chemistry: B.S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
2. Text Book of Physical Chemistry: B.S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
3. A Text Book of Engineering Chemistry, S.S. Dara and Suresh Umare, S. Chand Publication, New Delhi.
4. A Text Book of Basic and Applied Chemistry, P.C. Jain and Monica Jain.
5. Polymer Science by V.R. Gowarikar, Wiley Ester Ltd 1987.
6. Text Book of Organic Chemistry by J. L. Finar, Longman Publication,
7. Synthetic Dyes by G R Chatwal, Himalaya Publishing House, New Delhi.
8. Synthetic Drug by G R Chatwal and Anand, Himalaya Publishing House, New Delhi.
9. Organic Chemistry of Natural Products Vol. I and II, by G. R. Chatwal, Himalaya Publishing House, New Delhi.
10. Perfumes, Cosmetics, Soaps Vol. I, II and III by W. A. Poucher, Ninth Edition, Chapman and Hall Publication (1975)
11. New Cosmetic Science by Takeo Mitsui, Elsevier, 1997.

**B.Sc. HOME SCIENCE SEMESTER III**  
**PAPER –VIII**  
**Applied Physics & Computer Application -I**  
**(3T-8)**

<b>Total Marks</b>	<b>50</b>
Theory	40
Internal Assessment	10
Practical	-

**Theory:**

**Objectives:** To learn about electrical safety , Heat , Appliances and Operating systems and word processing software (MS WORD) and database creation and management software (MS EXCEL)

**Unit-I**

**Electricity and personal safety:** Concept of ac and dc voltage, frequency and voltage of ac supply in India, Electrical Safety and Precautions, Safety devices in use of electricity : fuse, earthing, earthing methods, circuit breakers, MCBs (Miniature Circuit Breakers for domestic electric supply), lightning conductor), Management of electrical hazards (shocks, burns, fire).

**Unit-II**

**Transmission of Heat:** Concept of Heat, Modes of heat transfer: conduction, convection and radiation (with at least three examples each). Concept of Temperature; Fahrenheit, Celsius and Kelvin) and Conversion of temperature among them. Examples of good and bad conductors of heat(at least three each)

**Unit –III**

**Appliances:** Principle, construction and working of: pressure cooker, thermos flask, solar cooker, Mercury thermometers (laboratory thermometer, clinical thermometer).

Heating effect of electric current, thermostatic control and automation with bimetallic strip, principle, construction and working of immersion heater, storage type geyser, and electric press.

**Unit- IV**

**Computer Applications:** Concept of operating system, important features of popular operating systems (WINDOWS, UNIX and LINUX).

**Microsoft WORD:** Applications of MS-Word, Study of different commands: Open a new document, Open a saved document, Typing text, selecting text, copy-paste, cut-paste, saving file, closing file, renaming a file, page layout (margin, orientation, page size), creating header & footer, applying fonts, font size, Bold, Italic and Underline, preview document, printing a page/printing a document.

**Microsoft EXCEL:** Applications of MS-Excel, Opening of worksheet, selecting cells, entering and editing text, entering numbers, Entering and editing formulas, inserting rows and columns in worksheet, create database.

### INTERNAL ASSESSMENT (Refer Direction)

Practicals	Total Marks	10
------------	-------------	----

1. Use of multi-meter to measure voltage and frequency of ac supply.
2. Measurement of temperature and it's inter-conversion in other scales.
3. To find the efficiency of an electric heater.
4. Calibration of bimetallic strip and verification of automation.
5. Open MS-Office, create file in MS Word and perform various operations in it
6. Open MS-Office, create file in MS Excel and enter given data in it, creating a worksheet in excel
7. Visit to science center.
8. Visit to industries making/repairing home appliances.

### Reference Books:

1. Principles of physics (vol. I & II) – Halliday & Resnik
2. Principles of physics – Subramanyam, Brijwal
3. How things work (vol. I & II ), INDUS (Harper Collins India)
4. Study of electrical appliances and devices, K. B. Bhatia, Khanna Publishers, New Delhi.
5. Electrician Theory, A. K. Mittal, Arihant Publication, Merath.
6. Basic Electrical Engineering, M. L. Anwani, Dhanpat Rai & Co. (P) Ltd.
7. Elements of Computer Science, S. K. Sarkar, A. K. Gupta, S. Chand & Co., New Delhi
8. Fundamental of computers E. Balguruswamy, Mc Graw Hill Education Pvt. Ltd. New Delhi
9. Computer fundamental (concepts, system & application) Pradeep K. Sinha, Priti Sinha, Sixth edition 2011, B.P.B . Publication
10. Comdex computer course, Vikas Gupta, PM Publication, New Delhi.
11. Operating System, Dr. S. B. Kishor, Das Ganu Prakashan, Nagpur.

**B.Sc. HOME SCIENCE**

**SEMESTER -IV**

## **B. Sc. HOME SCIENCE - SEMESTER IV**

### **PAPER - I Community Nutrition (4T-1)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical + IA	40+10

#### **OBJECTIVE:**

- 1) To prepare standardized recipes for specific age groups and calculate the nutrients
- 2) To orient students to the basic principles of nutritional assessment as applied to the study of community nutrition.
- 3) To understand the importance and of nutrition education
- 4) To develop an understanding of the role of micro-organism in food.

#### **COURSE CONTENT: THEORY**

##### **UNIT - I**

- 1) Malnutrition**
  - a) Definition and Types of malnutrition.
  - b) Causes & Symptoms of malnutrition
  - c) Commonly occurring Deficiencies of Malnutrition Diseases Generally Occurring due to Malnutrition.
  - d) Prevalence of Malnutrition in India.
  - e) Effects of malnutrition on general health, physical, mental and national development.

##### **UNIT – II**

##### **Nutritional Assessment**

- 1) Assessment of Nutritional Status:
  - a) Anthropometry.
  - b) Diet Survey
  - c) Clinical Assessment
  - d) Laboratory Method (Biochemical )

Limitations and interpretation of all the above parameters.

- 2) Role of National organizations (ICAR, ICMR, NIN, CFTRI) and International organizations (FAO, WHO, UNICEF, CARE) in Community Nutrition and Health.

##### **UNIT – III**

## **1) Nutrition Education**

**A)** Meaning, importance , objectives of Nutrition Education..

a) Methods and evaluation of Nutrition Education.

b) Problems involved in organizing Nutrition Education Programme for the community and how to solve them.

**B)** National Nutrition Programme: a) ICDS b) MDM Programme c) National Nutrition Anemia Prophylaxis Programme (NNAPP) and d)Vitamin A Prophylaxis Programme (VAPP) e) Goiter Control.

## **UNIT – IV**

### **Principles underlying Food spoilage and Food preservation : Improving Shelf Life and Nutritional Quality of Food**

**1. Food Spoilage :** Types of Food Spoilage. Food Perishability based on shelf life.

#### **2. Food Preservation**

- 1) Importance of Food Preservation.
- 2) General Principles and Methods of Food Preservation

- a) High/Low temperature (pasteurization/refrigeration/deep freezing)
- b) Drying (sun-drying / mechanical drying)
- c) Radiation
- d) Preservatives.

**3. Food Fermentation:** Role of Microorganisms as food fermenting agent for products such as Idli, Curd, Butter, Cheese & Bread. Nutritive value of Fermented foods

**4. Leavening Agent:** Microbiological Chemical and Natural Leaveners.

#### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

#### **PRACTICAL:**

- 1) Planning, Preparation and Nutritive Calculation of selected recipes for :
  - i) Weaning recipes for infants (any two)
  - ii) Nutritive Finger Foods for Preschool Child (3-6 yrs) (any two)
  - iii) Packed Tiffins (small break) for school going child (6-8 years) (any 2)
  - iv) Mini Meal for a school going child (any one)

<b>Total Marks</b>	<b>40+10</b>
Planning	10
Cooking	10
Calculation	10
Presentation	05
Record	05
IA	10

- v) Packed Lunch for Adolescents / Adults (any one)
- vi) Nutritious Recipes for Adolescent Girl/ Boy (any two)
- vii) Nutritious Recipes for Adult man/ woman (any two)
- viii) Nutritious recipes for Pregnant mother (any two)
- viii) Nutritious recipes for Lactating mother (any two)
- ix) Soft Recipes for Old Age (any two).

### **INTERNAL ASSESSMENT**

Any one of the following	<b>Total Marks</b>	<b>10</b>
1) Visit to Balwadi and conduct anthropometry and write a report.(Sample Size : 25)		
2) Visit to Schools and give nutrition education programme. (any one Class)		
3) Surveys to check the School lunches/ Mid day Meals.		
4) Conduct a Survey and maintain record of BMI (Sample size: 50)		
5) Preparation of Workbook/ Scrapbook on Food Spoilage and Food Preservation.		
6) Canteen		

### **References**

- 1) **Nutritive Value of Indian Foods:** *Gopalan C, Rama Sastri & Balasubramanian S.C.* National Institution,1993.
- 2) **Understanding Nutrition:** *Whitney E.N. & Rolfe S.R.* 8<sup>th</sup> Edition West/ Wordsworth.1999
- 3) **Dietetics:** *B Srilakshmi*, New Age International (P) Ltd., Publishers 3<sup>rd</sup> Edition, 2000
- 4) **Nutrition and Dietetics :** *Shubhangini A.Joshi* , Tata McGraw Hill Publishing Co. Ltd., New Delhi,1992
- 5) **Nutritional Research:** Current Scenario and Future Trends Editor: *K, Krishnaswamy*, Oxford and IBH Publication Co. Pvt. Ltd., 2000
- 6) **Nutritional Problems of India:** *Shukla P.K.*, Prentice Hall of India Pvt. Ltd., Delhi1982
- 7) **Food Preservation and Processing:** *M.Kalyani* Publishers, 1996,
- 8) **Food Microbiology:** *Frazier W.C. & D.C. West Hoff.* McGraw – Hill Book Co. Ltd Inc. 1981.
- 9) **The Science of Food:** An Introduction to Food Science, Nutrition and Microbiology: *Gaman P.M. & Sherrington K.B.* 2<sup>nd</sup> Edition. Pergamon Press, 1989.

**B.SC HOME SCIENCE SEMESTER - IV**  
**PAPER -II**  
**Development in Adulthood**  
**(4T-2)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical + IA	40+10

**Objectives :**

- To understand the dimensions of development in adulthood.
- To reflect on the concerns of the family and society with respect to the individual in adult hood.
- To develop awareness of diversity in adult life styles in different socio-cultural contexts.

**Theory :**

**Unit I : Introduction to Adulthood**

1. Concept and sub divisions of adulthood
2. Adult roles and expectations in different cultures
3. Diversity in adult life style.

**Early Adulthood**

1. Developmental tasks of early adulthood
2. Physical changes
3. Cognitive development
4. Psycho-social development— self, identity, marriage and family, parenthood, work and gender relations.

**UNIT II : Middle Adulthood**

1. Physical development. Changing physiology and health. Adapting to physical changes, midlife changes/crisis, menopause in women, health concerns
2. Cognitive development – attention, memory, cognitive skills in middle age, experience and expertise, adult intelligence
3. Psycho-social changes-Issues of middle age- generativity vs. stagnation, concerns in middle age, career development and planning for retirement, civic roles and responsibilities .

**Unit III : Late Adulthood**

1. Physical and physiological aspects of aging: health concerns; well-being and

- Disability
2. Cognitive changes in late adulthood- understanding dementia and other concerns of the elderly
  3. Psycho-social development- adjustment to aging, changing economic situation, occupational continuity and change, Leisure and recreation, facing death
  4. Perspectives on death.

#### **Unit IV: Elderly in India**

1. Magnitude of elderly in India
2. Problems of elderly.
3. Retirement homes
4. Policies and Programmes for the elderly.

#### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

#### **Practical :**

Total Marks	40 + 10
Psychological Testing	15
2 Questions	20
Record	05
Internal Assessment	10

1. Study of issues and concerns of individuals in different phases of adulthood using relevant methods of study.
2. Psychological tests ( personal stress inventory and personal value questionnaire)
3. Visits to settings such as homes for senior citizens
4. Case profile of an elderly.

#### **INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

#### **1 . Preparation of workbook on (any one ) :**

- Issues of adolescence
- Family relationships
- Policies and Programmes for the elderly

#### **References :**

- Lefrancois, G. R. (1996). The Life Span. Wadsworth Publication Company: USA: California.
- Rice, F. (1992). Human Development: A Life Span Approach. Prentice Hall.
- Rutter, M. and Rutter, M. (1992) Developing Minds. Challenge and continuity across the life span. London: Penguin. Santrock, J. W. (1997). Life Span Development. New York: Brown & Benchmark .

**B.SC. HOME SCIENCE SEMESTER – IV**  
**PAPER – III**  
**SURFACE ORNAMENTATION TECHNIQUES**  
**(4 T-3)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	$80 + 20 = 100$
Practical + IA	$40+10= 50$

**OBJECTIVES-**

- To provide comprehensive knowledge about the concepts of dyeing and printing of textiles.
- To foster understanding of traditional Indian embroideries-motifs used, colour combinations used etc.

**Unit I :**

1. Dyes : Classification, Natural and synthetic ,different types of dyes – direct, acid, basic, reactive, sulphur, vat, azo and natural dyes (vegetable, animal, mineral and mordents used) .
2. Dyeing- Introduction, classification, Methods of dyeing: stock, yarn, piece and union and cross dyeing ,garment dyeing ,Common dyeing defects

**Unit II :**

2. Dyeing vs. Printing
3. Styles of printing – Direct, Resist, Discharge
3. Methods of printing – Block, stencil, Roller, Screen, Rotary screen, Heat Transfer,
4. Digital, Flock
5. Common printing defects and their remedy

**Unit III :**

1. Preparation of cloth for printing, types of ingredients used in printing, types of different thickeners , After treatment of printed goods.,
2. Colorfastness: Factors affecting colorfastness, Testing Wash fastness, Light fastness
3. Paintings: Kalamkari, Madhubani, Warli.
4. Prints : Sanganeri print fabrics, bagru print fabrics

**Unit IV : Traditional textiles of India**

1. Traditional Indian Textiles -Sarees : Bandhani, Patola, Chanderi, Paithani, Dacca, Banarasi, Kanjivaram., Brocades, Kashmiri Shawls. Jamdani, Ikat Pochampalli
2. Costumes of different states of India – Maharashtra, Punjab, Gujarat, Rajasthan, Tamil nadu. West Bengal, Kashmir.

### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **PRACTICAL**

1. Dyeing with direct dyes- cotton
2. Dyeing with reactive dyes- cotton, wool, silk
3. Dyeing with acid dyes- wool, silk
4. Tie and dye technique
5. Block printing using single and double coloured blocks, various placements of blocks
6. Batik technique Make sample and article of screen, block, stencil and batik
7. Preparation of an article/garment with a combination of techniques learnt above

<b>Total Marks</b>	<b>40+10</b>
Design	15
Printing	10
Embroidery	05
Record	10
IA	10

### **INTERNAL ASSESSMENT**

- 1.Preparation of sample book based on unit IV.

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

### **BOOKS RECOMMENDED**

- 1 Potter MD and Corbman BP. Textiles: Fibres to Fabric – Published by McGraw Hill Inc. U.S.A
- 2 Usha Shrikant - Ethinic Embroidery of India, Samaia Enterprises , Mumbai.
- 3 William Watson - Textile Design and colour, Longman Green and Co. London.
- 4 Vastra shilpvigyan by Vimla Sharma. Loyal Book Depot Meerut.
- 5 Vastrashastra: Prof. Vimal Adhau Maharashtra Vidhyapeeth Granth Nirmit Mandalasathi, Vidhya Books Aurangabad.
- 6 Vastravigyan avam Paridhan - Dr. Vrunda Singh Panchsheel Prakashan Jaipur.
- 7 Vastravigyan avam Paridhan - Dr. Prarnila Verma Bihaar Hindi Granth Academy Bhopal.
- 8 Vasira Shilp Vigyan : Vimla Sharma ,.
- 9 Vastravigyan Ke Mul Siddhant- Dr. G.P. Sheeri - Vinod Pustak Mandir Agra

**B.Sc. HOME SCIENCE SEMESTER IV**  
**PAPER – IV**  
**Housing and Home Furnishing**  
**(4 T-4)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	$80 + 20 = 100$
Practical	$40 + 10 = 50$

**Objectives –**

- To gain knowledge about the role of internal amenities in contributing for satisfying family living
- To learn technique that will help one to construct some furnishing items, relative to their function and beauty.

**UNIT I - Internal Amenities**

1. Interior Decoration –I) Essential factors of interior decoration ii) Available material For decoration iv) Decoration in various rooms
2. House Drainage – i) Bath water ii) Laundry water iii) House cleaning water
3. Methods of house drainage – i) Dilution ii) Purification iii) Soakage pits.
4. Waste Disposal - Types of Refuse – i) Dry ii) Solid iii) Liquid
5. Methods of waste disposal –i) Tipping or dumping ii) Taking in to the sea  
iii) Compost formation iv) Burning v) Conservancy system

**UNIT II - Lighting and Furniture**

- (A) Natural Lightning
- (B) Artificial Lightning: (i) Candles (ii) Oil Lamp (iii) Kerosene Lamp (iv) Gas Lighting (v) Electric Lighting
- (C) Principles of Lighting: (i) Intensity (ii) Steady (iii) Glare (iv) Color (v) Safety (vi) Economy
- (D) Types of Lighting: (i) Direct (ii) Semi-direct (iii) Indirect (iv) Semi-indirect

**Unit III**

- a) Different symbols used in house plans
- b) House plans for different income levels- (i) Higher (ii) Middle (iii) Lower
- c) Vastushastra- (i) Importance (ii) Placements of rooms (iii) Location of well (iv) Placements of Doors (v) Position and fixing

**Unit IV –Home Furnishing and Floor Coverings**

1. Home Furnishing – (a) Necessity of curtains (b) Types of curtains (c) selection of curtains (d) Making and Hanging of curtains (e) Care and maintenance of curtain

2. Carpet and Rugs:

- a) Factor affecting the selection- (i) Character (ii) Styles (iii) Pattern (iv) Texture  
(v) Durability (vi) Cost (vii) Color (viii) Size
- (b) Types of carpets and rugs.
- c.) Care of carpets and rugs.

3. Wall treatment- (i) Wallpapers (ii) Paints (iii) Tiles

4. Accessories in Interiors- (i) Hanging of pictures (ii) Relation of pictures to room (iii)  
Other Accessories

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

**Practicals**

- 1: Drawing of Architectural symbols for house Plan.
- 2: Drawing of floor Plan for low income group.
- 3: Drawing of Floor Plan for middle income group.
- 4: Drawing of Floor Plan for high income group.
- 5: Draw one wall kitchen.
- 6: Draw two wall kitchen.
- 7: Draw 'U' shaped kitchen.
- 8: Draw 'L' shaped kitchen.
- 9: Working drawing of landscape design.

<b>Total Marks</b>	<b>40+10</b>
Floor Plans	10
Draw kitchens	10
Landscape Drawing	10
Record	10
IA	10

**INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

Any two of the following

- (a) Accessories in Home Decoration (any two)
  - Ceramic work / Clay Modeling /Pottery painting
- (b) Visit to ideal house/ideal kitchen
- (c) Preparation of sample book on furnishing materials and types of curtains

**Books Recommended:**

Agan T. C. – ‘The House’ Oxford and I. B. H. publishing Co.

Ann Reilly; Susan A. Roth – ‘The Home Landscape’, Home planners Inc. Tucson, Arizona.

Deshpande R. S. – ‘Modern Indian Homes in India’, United Book Corporation, Poona, 2<sup>nd</sup> Edition.

Deshpande R. S. – ‘Build your own Home’, United Book Corporation, Poona, 4<sup>th</sup> Edition.

Deshpande R. S. – ‘Low Cost Housing’, United Book Corporation, Poona, 4<sup>th</sup> Edition.

Goldstin H. / Goldstein V. – ‘Art in Every day Life’ MacMillan Co., New York, 4<sup>th</sup> Edition.

Pak – Tin & Helan Yeap – ‘Feng Shui – Health Harmony’ B.Jain Publishers Pvt Ltd., New Delhi, 1998.

Rutt A. – ‘Home Furnishing’, Wiley Eastern Pvt.Ltd., New Delhi, 2<sup>nd</sup> Edition.

Shrivastav – ‘Remedial Vastu Shastra’, Manoj Publication, Delhi, 2001

**B.Sc HOME SCIENCE SEMESTER - IV**  
**PAPER - V**  
**Media In Extension**

**(4 T -5)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20= 100
Practical + IA	40+10=50

**Objectives :**

1. To develop understanding regarding communication techniques.
2. To develop concept and learn process of communication.
3. To understand the concept of mass communication.
4. To comprehend the concept of advertisement in extension.
5. To develop the understanding of journalism.

**Theory:**

**UNIT – I**

1 Communication Techniques :

Meaning, Definition of Communication, Functions of Communication, Importance of effective communication, Key elements involved in effective Communication process, Critical factors affecting Communication process.

2. Mass Communication and media:

Meaning and importance of mass Communication, Barriers in mass communication, Characteristics of mass Media.

**UNIT – II**

1. Media in Extension :

Meaning of media, Cone of experience, Classification of media- Electronic media, print media, Folk media.

2. Electronic media :

Radio as mass medium, Impact of Radio, Advantages and limitations of radio. Television as mass medium for education and development, Impact of television, advantages and limitations of Television .

**UNIT - III**

i. Print media :

Types of print media, Impact of print media, Advantages and limitations of print media. Techniques of effective writing. Written communication- Newspaper, script writing.

ii. Folk media.

Folk forms as mass media, Indian folk forms- folk songs, folk dramas, puppets.  
Impact of folk media.

## **UNIT IV**

### 1. Advertisement as Mass Media.

Meaning and scope of Advertisement, Planning of Advertisement layout, Format of advertisement, Role of Advertisement and its impact on consumers.

### 2. Journalism in Extension.

Meaning of news, Principles of news, Methods of collecting news, Qualities and duties of Editors and Reporters.

## **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **Practical :**

1. Preparation of radio script.
2. Preparation and presentation of flash cards for communication.
3. Preparation of handmade puppets.
4. Preparation of computerized or handmade advertisement on any issue
5. Report of a pilot survey on women's problems.

<b>Total Marks</b>	<b>40 +10</b>
Spotting	10
Teaching Aid	10
Presentation	10
Record	10
IA	10

## **INTERNAL ASSESSMENT**

### **Report on survey of media availability in 5 households of rural/slum areas.**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

### **Books Recommended :**

1. Supe. S. V. An Introduction to Extension Education – Oxford Publishing Company, New Delhi & Kolkata.1999.
2. Dahama. O. P. and Batnagar O. P. Education & Communication for Development, Oxford & IBH Publishing Co., New Delhi, 1977.
3. Reddy Adivi. A. Extension Education, Shree Laxmi Press, Bapatla, Guntor, A.P.
4. Singh J. K., Mass Media and Information Technology, Mangaldeep Publication, Jaipur.
5. Kumar K. J. L., Mass Communication in India, Jaico Publishing House, Mumbai.
6. Mehta D. S., Mass Communication and Journalism in India, Allied Publishers Pvt. Ltd., Chennai.

**B.Sc. (HOME SCIENCE) SEMESTER- IV**  
**PAPER VI**  
**Applied Physiology -II**  
**(4 T-6)**

<b>Total Marks</b>	<b>75</b>
Theory + IA	$40 + 10 = 50$
Practical +IA	$20 + 05 = 25$

**Objectives :**

1. To understand the structure and function of various organs of human body.
2. To promote the basic knowledge of first aid.

**UNIT-I**

Heart-

- i. Structure of Heart.
- ii. Functions of valves.
- iii. Coronary blood supply.
- iv. Structure and function of artery, vein and capillaries.

**UNIT-II**

Respiratory System-

- i. Structure and functions of respiratory system.
- ii. Mechanism of Respiration.
- iii. Transport of oxygen in brief.

**UNIT-III**

1. Digestive System-
  - i. Brief study of alimentary canal.
  - ii. Accessory glands of digestion.
  - iii. Process of digestion and absorption.
2. Excretory System-
  - i. Structure and functions of excretory organs.
  - ii. Formation of Urine.

**UNIT-IV**

1. Reproductive System-
  - i. Male and Female reproductive organs, their structure and functions.
  - ii. Physiology of Menstrual cycle.
2. Endocrine Glands- Structure and function of pituitary gland, thyroid gland and adrenal gland in brief.

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

## **PRACTICALS-**

1. Study of Microscopic slides of common organs- T.S. of Liver, Pancreas, Intestine, Lungs, Testis, Ovary, Kidney, V.S. of Skin, T.S. of Artery and Vein.
2. Determine Blood Group and 'Rh' type by slide method.
3. Preparation of blood slide and staining by Leishman's stain.
4. Measurement of pulse rate and temperature by using clinical thermometer.
5. Study of different systems by charts or models.
6. Determination of bleeding time and clotting time.

<b>Total Marks</b>	<b>20 + 5</b>
Experiment -1	04
Experiment -2	03
Spotting	06
Bandage Demo	02
Record	03
Viva Voce	02
IA	05

## **INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>05</b>
--------------------	-----------

Preparation of Drawing Charts on any four systems.

## **REFERENCES-**

- Community Health and Nursing- Basavan Phappa B.T.
- Practical Pathology- Chaturvedi O.U.
- Human Anatomy- Chaurasia
- Medical Physiology- Guyton
- Hygiene and Public Health- Ghosh P.
- A.B.C. of Nursing in the Home- Gravelious E.M.
- Manual of First Aid- Gupta
- Nursing- George
- Anatomy and Physiology for Nurses- Jain A.K.
- Practical Guide to First Aid- Keech P.
- Anatomy and Physiology for Nurses- Pearce
- Essentials of Community Health Nursing- J.E. Park
- Practical First Aid- Park
- Home Nursing- Prabhu V.
- Anatomy for Nurses- Prasad
- Anatomy and Physiology in Health and Nurses- Ross & Wilson

**B.Sc. HOME SCIENCE SEMESTER IV**  
**PAPER VII**

**APPLIED CHEMISTRY-II**  
**(4 T-7)**

<b>Total Marks</b>	<b>75</b>
Theory + IA	$40+10=50$
Practical + IA	$20+05=25$

**COURSE CONTENT:**

**THEORY**

**Unit-I**

- a) **Polymers:** Definition, addition and condensation polymerization, preparation and uses of polyethylene, PVC, Nylon-6, Nylon-66 and polyester.
- b) Rubber: Definition, chemical nature and vulcanization, synthetic rubber (Buna-S) and uses.

**Unit-II**

- a) **Textile Chemistry :** Definition, Requisite of a true dye, Types of fibres: structure features of fibres (Cotton, wool, silk, cellulose acetate, polyamide, polyesters), Basic operations in dyeing process ( preparation of the fibre, preparation of dye bath, application of dye and finishing), Various methods of dyeing ( direct dyeing, vat dyeing, Mordant Dyeing, and disperse dyeing).
- b) Witts theory of colour and constitution, classification of dyes based on their functional group- i) Nitro ii) Nitroso and iii) Azo, pollution problem due to dye industry

**Unit-III**

- a) **Cosmetics:** Definition, functions and ingredients of shampoo, face powder, cold cream, lipstick, hazards of cosmetics.
- b) **Drugs:** Preparation and uses of following drugs: i) Aspirin ii) Paracetamol and iii) oil of winter green.

**Unit-IV**

- a) **Essential oils :** Definition, occurrence and methods of extraction of essential oils. Eucalyptus oil, Rose oil, Lavender essential oil
- b) **Perfumes:** Definition, characteristics of perfume, composition of perfumes, formulation of any two perfumes.

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

**PRACTICAL**

**Practical A**

1. Preparation of Soap
2. Preparation of liquid detergent
3. Preparation of solid detergents
4. Preparation of phenyl

<b>Total Marks</b>	<b>20+05</b>
Practical A	06
Practical B	06
Viva	04
Record	04
IA	05

## **Practical B**

Identification of Carbohydrates: Glucose, fructose , sucrose and starch

### **INTERNAL ASSESSMENT**

Any one of the following :

Total Marks	05
-------------	----

1. Educational visits to various factories and chemical laboratories in India.
2. Assignment book/ workbook for topics from syllabus (all four units)

### **BOOK RECOMMENDED:**

1. Text Book of Organic Chemistry: B.S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
2. Text Book of Physical Chemistry: B.S. Bahl and G.D. Tuli, S. Chand Publication, New Delhi.
3. A Text Book of Engineering Chemistry, S.S. Dara and Suresh Umare, S. Chand Publication, New Delhi.
4. A Text Book of Basic and Applied Chemistry, P.C. Jain and Monica Jain.
5. Polymer Science by V.R. Gowarikar, Wiley Ester Ltd 1987.
6. Text Book of Organic Chemistry by J. L. Finar, Longman Publication,
7. Synthetic Dyes by G R Chatwal, Himalaya Publishing House, New Delhi.
8. Synthetic Drug by G R Chatwal and Anand, Himalaya Publishing House, New Delhi.
9. Organic Chemistry of Natural Products Vol. I and II, by G. R. Chatwal, Himalaya Publishing House, New Delhi.
10. Perfumes, Cosmetics, Soaps Vol. I, II and III by W. A. Poucher, Ninth Edition, Chapman and Hall Publication (1975)
11. New Cosmetic Science by Takeo Mitsui, Elsevier, 1997.

## B.Sc. HOME SCIENCE SEMESTER IV

### PAPER –VIII Applied Physics & Computer Application -II (4 T-8)

<b>Total Marks</b>	<b>75</b>
Theory + IA	$40 + 10 = 50$
Practical + IA	$20 + 05 = 25$

**Objectives:** To learn about electricity, effects of electric current, electrical appliances and MS power point and internet.

#### Theory

##### Unit- I

**Electromagnetic Induction and its Application:** Concept and statement of Faraday's laws of electromagnetic induction, Transformer (working principle and construction), transformation ratio (turns ratio, Voltage ratio and Current ratio), efficiency of transformer, types of transformer and applications of transformer. Electricity from generator to home, Definition of kilowatt hour unit for consumption of electricity.

##### Unit -II

**Home Appliances:** Motor based appliances: Principle, construction, working, defects and remedies of: mixer- grinder, fan, cooler, hair dryer, vacuum cleaner, washing machine, and refrigerator.

Microwave oven: concept of microwave heating, principle and working of Induction Cooker.

##### Unit- III

**Chemical effect of electric current:** Chemical effect of electric current, electrolyte, electrolysis, electrolysis of copper sulphate and water, Faraday's law of electrolysis, relation between chemical equivalent and electrochemical equivalent, uses of electrolysis, primary cells, (Daniel cell, Leclanche cell), secondary cells (Lead acid accumulator).

##### Unit- IV

##### Computer Applications:

**MS Power point:-** applications of MS Power point, creating presentation, adding slides in presentation, deleting slide, creating masters, formatting text, color to fonts, inserting auto-shapes, inserting pictures, inserting sound, inserting videos, slide show.

**Internet:-** Internet, Internet connection (Broadband, Dial-up and wireless connection), Web browsers (Internet explorer, Mozilla firefox, Google chrome and Opera), World Wide Web, Search engine, E-mail.

### **INTERNAL ASSESSMENT (Refer Direction)**

#### **Practical**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

<b>Total Marks</b>	<b>20+5</b>
Experiment	10
Viva	05
Record	05
IA	05

1. Study of transformer and determination of turn's ratio
2. To measure power of an appliance and calculate time for 1 kWh unit of electric energy consumption.
3. To determine electrochemical equivalent (ECE) of copper using copper voltameter.
4. To find  $E_1/E_2$  of two cells by potentiometer.
5. Measurement of voltages of given dry batteries of different voltages.
6. Creating e-mail id and use of internet to send/ receive e-mails.
7. Creating and enhancing Power Point Presentation
8. Create slides using different slide layouts
9. Working with shapes, lines, text and objects: creating rectangles, squares, circles, ellipse, polygon etc.

### **INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>05</b>
1. Assignment book/ workbook for topics from syllabus (all four units)	

#### **Reference Books:**

1. Principles of physics (vol. I & II) – Halliday & Resnik
2. Principles of physics – Subramanyam, Brijwal
3. How things work (vol. I & II ), INDUS (Harper Collins India)
4. Study of electrical appliances and devices, K. B. Bhatia, Khanna Publishers, New Delhi.
5. Electrician Theory, A. K. Mittal, Arihant Publication, Merath.
6. Basic Electrical Engineering, M. L. Anwani, Dhanpat Rai & Co. (P) Ltd.
7. Elements of Computer Science, S. K. Sarkar, A. K. Gupta, S. Chand & Co., New Delhi
8. Fundamental of computers E. Balguruswamy, Mc Graw Hill Education Pvt. Ltd. New Delhi
9. Computer fundamental (concepts, system & application) Pradeep K. Sinha, Priti Sinha, Sixth edition 2011, B.P.B . Publication
10. Comdex computer course, Vikas Gupta, PM Publication, New Delhi.

**B.Sc. HOME SCIENCE**

**SEMESTER –V**

**B.Sc. HOME SCIENCE SEMESTER V**  
**PAPER-I**  
**DIET THERAPY -I**  
**(5 T-1)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**OBJECTIVES:**

- 1) To provide knowledge about the causes and symptoms of various diseases
- 2) To understand the role of diet in the management of these conditions.
- 3) To plan, calculate and prepare diets for various diseases. .

**COURSE CONTENT: THEORY**

**UNIT-I**

**Diet Therapy and G. T. Disorders:**

**1. Introduction to diet therapy:**

- A) Applications of principles of diet therapy:
  - a) Dietetics : Meaning & Principles of Dietetics.
  - b) Diet counseling : Role of Dietician & important aspects/Tips to remember for planning a healthy diet for patient.
  - c) Dietetic care in hospital patients: its importance &
- B) Therapeutic adaptations of the Normal Diet :
  - a) Soft diet    b) Clear Liquid diet    c) Liquid diet
  - d) Bland diet    e) Low fibre diet
- C) Modes of feeding:
  - a) Enteral    b) Parenteral

**UNIT-II**

**Conditions Requiring Nutritional Support:**

Causes, Symptoms and Principles of Dietary Management of some of the special conditions requiring Nutritional support:

- 1) Fevers: Short and long
- 2) Anemia: Types
- 3) Surgery: Pre and postoperative care
- 4) Burns: Types, degree
- 5) Cancer: Types of Cancer, carcinogens
- 6) Food Allergy; Common food allergens

### **UNIT-III :**

1) Gastrointestinal disorders:

Causes, Symptoms and Principles of Dietary Management of Gastro- intestinal disorders:

- a) Peptic Ulcer
  - b) Diarrhoea
  - c) Acidity
  - d) Constipation
- 2). Liver disorders:
- a) Viral Hepatitis
  - b) Cirrhosis

### **UNIT-IV**

**Renal Disorders:**

Causes, Symptoms and Principles of Dietary Management of some of the special conditions requiring Nutritional support:

- (a) Glomerulonephritis
- (b) Nephrotic syndrome
- (c) Acute and chronic Renal failure
- (d) Importance of dialysis.
- (e) Renal calculi

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **PRACTICAL**

1. Preparation and Evaluation of Therapeutic adaptations of the Normal Diet

- 1) Liquid Diets (Full Clear)
- 2) Soft Diet
- 3) Bland Diet

2. Planning, Calculation and Preparation for the following disorders:

1) Gastrointestinal Disorders:

- a) Peptic Ulcer
- b) Diarrhoea
- c) Constipation

2) Liver Disorders:

- a) Jaundice: Mild to Moderate

3) Fever: Short and long duration.

4) Anemia: Iron Deficiency

5) Kidney Disorders :

- a)Nephritis
- b) Nephrosis

## **References**

1. **Nutritive value of Indian Foods:** *Gopalan C, Rama Sastri & Balasubramanian, S.C.* National Institute of Nutrition, 1993.
2. **Krause's Food Nutrition and Diet therapy:** *L Kathleen Mahan, Sylvia Escottstump.* 19<sup>th</sup> edition, W.B. Saunders Co.1996.
3. **Normal & Therapeutic Nutrition:** *Corinne H. Robinson & M.R Lawer,* 15<sup>th</sup> Edition 1997.
4. **Clinical Dietetics:** *F.P. Antia,* 2<sup>nd</sup> Edition. Oxford University Press 1973.
5. **Text book of Human Nutrition:** Editors: *Bamji M.S. Rao N.P Reddy V.* Oxford & IBH pub. Co. pvt.Ltd.1996.
6. **Dietetics:** *Srilakshmi B,* 3<sup>rd</sup> Edition, New Age International (p) Ltd., 2000.
7. **Manual of Nutrition and diet Therapy:** *Grills & Bosscher,* Macmillan Pub.Co. Inc. 1981.
8. **Essentials of Nutrition and Diet Therapy** *Williams S.R. Times Mirror / Mosby* College Pub.1990.
9. **Nutrition & Dietetics:** *Shubhangini A. Joshi .* Tata McGraw - Hill Pub. Co. Ltd., New Delhi 1992.

**B.SC HOME SCIENCE SEMESTER - V**  
**PAPER -II**  
**Family Dynamics and Developmental Assessment**  
**(5T-2)**

Total Marks	100
Theory	80
Internal Assessment	20
Practical	-

**Objectives :**

- To make students aware of importance of family & marriage
- To introduce to the students concept of developmental assessment.

**Theory :**

**Unit I - Marriage**

- Meaning and definition,
- Marriage as an institution : goals, rituals, philosophy and functions
- Readiness for Marriage : Psychological, Social, Physiological and Economical
- Preparation for Marriage
- Selecting a suitable partner
- Premarital association
- Premarital guidance and counselling

**Unit II - Family**

- Meaning definition and structure of family.
- Changing trends in family constitution, roles, demand and responsibilities.
- Nuclear and joint families - Structure, role, interaction and hierarchy of dominance in joint and nuclear families.
- Influence of different disciplinary patterns, maternal deprivation, and overprotection in child development.
- Areas of adjustment within the family at different stages of family life cycle.
- Crisis in family life – unemployment, prolonged illness, death, separation, desertion, divorce, violence and distress and birth of handicapped child.

**Unit III - Developmental assessment**

- Definition, purpose and importance of assessment
- Developmental milestones – definition and developmental milestones of children from 0 to 6 years.
- Assessment below 2 years
- Tools & techniques used for assessment- TDSC, DASII, DDST, DOC,

- Neurological evaluation
- Assessment of visual & hearing impairment.

#### **Unit IV- Early Developmental Stimulation**

- Definition, aims, importance,
- Role of parents.
- Newborn stimulation in NICU & at Home.
- Sensory training, early stimulation programmes
- Developmental delay – meaning and risk factor
- Early intervention for the developmental delay.

#### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

#### **Practical**

- Observation of milestones in a child (0 to 6 years) and the identification of developmental status
- Learning and preparation of different activities for stimulation - tactile auditory, motor, language, visual & cognitive
- Psychological test (marriage attitude scale , parent child relationship scale, CPM and SFBT).

#### **References :**

- Corsor, Rose (1975); The family, its structure and functions, New York, Mac Publishing Co.
- Guppy, G R (1976) ; Family and social change in Modern India, New Delhi, Vikas pu.co.
- Rao P & Rao V N ( 1982), Marriage – The family & women in India, New Delhi, Vikas pu.co.
- Shrivastava, Ak (1986); Social class & Family life in India.
- Freeman, Theory & practice of psychological testing, Oxford & IBH pu.co. New Delhi.
- Anna Anastasi, Psychological testing .

**B.Sc. HOME SCIENCE SEMESTER-V**  
**PAPER-III**  
**Advanced Pattern Making**  
**(5T-3)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**OBJECTIVES-**

1. To develop skill in designing and making paper pattern for different garment.
2. To orient students in detail the principles of draping fabric on the dress form.

**UNIT-I:**

- Commercial pattern development.
- Body/ types and measurements.
- Pattern envelope-front and back of envelope, garment description and fabric types
- Pattern Markings: Essential symbols of patterns- piece identification grain lines, darts, center front and back, fold lines, lengthen and shorter lines,
- Helpful marking-cutting lines, stitching lines, direction, gathers, pleats, hem, width,
- pattern layouts-Definition layout, importance, principles, types of layout, importanceof fabric estimation, advantages, methods of estimating material requirement forgarment- easy method & formula method of estimation

**UNIT-II:**

- Pattern grading: Definition and different methods for grading pattern. Grading-definition, sizes, principles, types, grading points, & importance of manual and computerized grading and software's used for grading.
- Different methods of pattern designing a) Drafting b) Flat pattern c)Draping

**UNIT-III**

- Dart: Types of dart, dart manipulation and its different methods-Slash and Spread and Pivot method.
- Types of figures and its defects.
- Selection of dress design on the basis of art principles and effect of line colour design and texture on different type of figure.
- Factors affecting fitting, fitting problems and their remedy.

**UNIT- IV**

- Plackets- definition, types Self, front placket, continues bound placket, two piece sleeve placket and shirt placket
- Skirts – Basic-flared, circular, gathered, pleated, basic waist band application
- Collars - Definition, terms, classification, and types –Peter pan, sailor, Turtle collar, shawl, formal shirt collar, Mandarin, collar with stand & its variations& construction

### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

#### **Practical**

1. Drafting cutting stitching and designing of following garments by using different types of fabric.
  - a) Casual wear (Skirt and Top)
  - b) Saree blouse plain / katori
2. Draping on dress form
  - a) Basic front and back bodice of skirt.
  - b) Dart manipulation
  - c) Yokes and collars.
  - d) Flared, pleated and hip yoke skirt.

#### **BOOKS RECOMMENDED**

- Bains, S. and Hutton, J., Singer Sewing Book, Hamlyn, London, 1972
- Patternmaking for Fashion Designers, Lori A. Knowles, 2006, Fairchild Publications Inc.
- Principles of Flat Pattern Design, 4<sup>th</sup> Edition, Nora M. MacDonald, Fairchild Publications Inc.,2009.
- Armstrong, Helen.,Pattern Making for Fashion Design,Harper Collins Publishers.,1997.
- Verma, Gayatri,Cutting and Stitching Pratical,Asian Publishers,Darya
- Gang, New Delhi,2007.( Hindi Book)
- Armstrong, H.J. (2009), Pattern Making for Fashion Design, Harper Collins Publishers, INC, New York.
- Constantino, M, Fashion Marketing, BT Batsford, London, 199

**B.Sc. HOME SCIENCE SEMESTER V**  
**PAPER – IV**  
**Advanced Resource Management-I**  
**(5T-4)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**Objectives:-**

- 1) To recognize the importance of wise use of resources in order to reach personal and family goals.
- 2) To make students realize the importance of motivating factors in management – values, goals and standards.
- 3) To give opportunity to develop ability to take rational decisions.

COURSE CONTENT: Theory

**UNIT I :**

**A) Management**

- a) Definition & Importance
- b) Concept of Management
- c) Principles of Management-(i) Division of Work (ii) Authority and Responsibility (iii) Discipline (iv) Unity of Command (v) unity of Direction (vi) Emphasis on group interest than individual interest (vii) Fair Remuneration (viii) Centralization (ix) Scalar Chain (x) Work Order (xi) Equality (xii) Stability (xiii) Co-operation (xiv) Initiative

**B) The Management Process:**

- (a) Definition, Importance and Scope
- (b) Planning – i) Importance & need for planning  
ii) Types: - 1) Use- Single, Repeat 2) General, Specific  
3) Levels – i) Master planning ii) Operational Planning iii) Day to day planning 4) Sequencing & Ordering
- (c) Implementation- i) Controlling/ Executive of plan  
ii) Energizing- checking the progress  
iii) Adjusting the plan
- (d) Evaluative feedback – i) Importance  
ii) Types- 1) Formal 2) Informal 3) Self  
iii) Methods of evaluation
- (e) Relation between planning, controlling & evaluation

## **UNIT II : Family Resources**

- 1) Resources : a) Definition b) Role of resources c) Scope of resources  
d) Classification – i) Human Resource: i) Time ii) Energy iii) Interest  
iv) Ability or skill v) Knowledge vi) Attitude
- 2) Non-human – i) Money ii) Material goods iii) Community Facilities  
Factors affecting family resources. Characteristics of resources.

## **UNIT III : Motivating factors of Human Life:**

- 1) Values : a) Definition b) Importance  
c) Classification – i) Intrinsic ii) Instrumental iii) Human needs values
- 2) Goals: a) Definition b) Importance of goal setting c) Classification –Mean- end d)  
Short term e) Intermediate f) Long term
- 3) Standards: a) Definition b) Importance c) Classification- i) Conventional ii)  
Flexible iii) Qualitative iv) Quantitative

## **UNIT IV : Decision Making –**

- a) Definition and Importance
- b) Role and scope of decision making
- c) Process of decision making
- d) Types- i) Individual ii) Group iii) Habitual Iv) Intellectual
- e) Factors affecting decision making

**INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### **Practical**

3. Diagrammatic Representation of the following:
  - a) Management Process
  - b) Family Resources
  - c) Inter-relatedness of values, goals and standards.
  - d) Decision Making  
Arrange exhibition/Visit to exhibition / Trade show – Report
2. Giving seminars on related topics
3. Bags / Purses
4. Assignment on related topics

### **Books Recommended:**

1. Good year & Klohar ‘Managing for effective living’ John Wiley and Sons.
2. Gross-crandall-knoll ‘Management for Modern families’ Prentice Hall, Inc. New Jersey.
3. Nickell- Rice- Tucker, ‘Management in family living’ John Wiley & Sons.
4. Swanson Bettye ‘Introduction to Home Management McMillan Pub. House. Inc. New York.
5. Borkar Sunita ‘ Introduction to Resource Management’, Himalaya Publishing House.
6. Sounderaraj Stella ‘A textbook of Household Arts’ Orient longman.
7. Rudramurthy B., Extension in Planned Social Change, Allied Publishers Pvt. Ltd., Chennai.

**B.Sc HOME SCIENCE SEMESTER – V**  
**PAPER – V**  
**Programme Planning And Building In Extension**  
**(5T-5)**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

**Objectives :**

1. To develop understanding about Programme planning.
2. To understand the need for programme planning.
3. To develop understanding of community organization.
4. To know the significance of adoption process in community development.
5. To comprehend the communication of innovations.

**Theory :**

**Unit - I**

1. Programme planning for extension work :  
Definition, characteristics of programme planning process, importance of extension programmes, Steps in programme planning process.
2. Programme building in extension :  
Principles of programme planning, professional abilities needed by programme planners, role of officials and non-officials in programme planning

**Unit - II**

1. Community organization :  
Definition and concept of community organization, principles of community organization, methods of community organization.
2. Communication of innovations:  
The SMCRE model, Diffusion, Relation between Communication and diffusion, definition of innovation, characteristics of innovations.

**Unit - III**

1. Innovation decision process :  
Innovation Decision Process, Innovativeness, Stages involved in adoption process, Classification of adopters, Characteristics of Adopters, Rate of adoption.
2. Information from communication media:  
Sources of information regarding communication media, adoption stages and information sources, important factors related to adoption of practices.

## **Unit IV**

### **1. Group Mobilization :**

Definition of groups, occasions of group association, groups in rural communities, principles of working with groups.

### **2. Change agent :**

Meaning, traits of change agents, role of change agents working towards ensuring change.

## **INTERNAL ASSESSMENT (Refer Direction)**

<b>Practical</b>	<b>Total Marks</b>	<b>20</b>
------------------	--------------------	-----------

1. Report on assessment of working pattern of change agent.
2. Power point presentation on any home science aspect.
3. Programme planning for one day event.
4. Survey on comparative study of household practices .e.g. difference between old and new innovation in nutrition, health, textiles, child rearing practices.
5. Organizing Exhibition for display of articles related to home science.

## **Books Recommended :**

1. Directorate of extension : Extension Education in Community Development.
2. Supe. S. V. An Introduction to Extension Education – Oxford Publishing Company,  
New Delhi & Kolkata.1999.
3. Chandra. A., Shah. A. and Joshi. V.: Fundamentals of teaching Home Science,  
Sterling Publishers,  
New Delhi, 1989.
4. Waghmare S. K., Teaching Extension, Prashant Publishers, Vallabh Vidyanagar.
5. Singh. K., Rural Sociology, Prakashan Kendra, Lucknow.
6. Dahama. O. P. and Batnagar O. P. Education & Communication for Development,  
Oxford & IBH Publishing Co., New Delhi, 1977.

## B.Sc. Home Science Semester V

### PAPER- VI

#### Nutritional Biochemistry- I (5T-6)

Total Marks	100
Theory	80
Internal Assessment	20
Practical	-

#### OBJECTIVES

This course will enable the students to :

1. Develop an understanding of the principals of biochemistry (as applicable to human nutrition)
2. Obtain an insight into the chemistry of major nutrients and physiologically important compounds.
3. Understand the biological processes and systems as applicable to human nutrition.
4. Apply the knowledge acquired to human nutrition and dietetics.

#### COURSE CONTENT: Theory

##### UNIT I: Carbohydrates

1. Definition and Classification: Mono, Di, Oligo, and Polysaccharides with at least two examples of each class.

###### Monosaccharides –

- 1) based on number of carbon atoms (Triose, Tetrose, Pentose, Hexose),
- 2) based on functional group (Aldo and Keto derivatives)

2. Structure and sources of

- Monosaccharides : glucose, fructose, galactose.
- Disaccharides – maltose, lactose, sucrose.

3. Reducing and Non reducing Sugars

4. Polysaccharides –Classification : Homopolysaccharides & Heteropolysaccharides  
General Idea and difference between : starch, glycogen, cellulose.

##### UNIT II: Proteins

1. Amino Acids : Basic Structure of Amino Acid and formation of peptide bond

- Classification :
- 1) Polar , Non-polar.
  - 2) Essential and Non-essential amino acid
  - 3) Glucogenic and Ketogenic

2. Proteins :
  1. Definition and classification of proteins (based on solubility, based on functions)
  2. Structure : Basic idea of primary, secondary and tertiary structure of protein.

##### Unit III : Lipids

1. Fatty Acids :Essential and non essential fatty acids

Types of Fatty Acids : SFA, MUFA, PUFA, Omega -3 and Omega -6 Fatty Acids.  
Cis Fatty Acids and Trans Fatty acids.

**2. Lipids : Definition and Classification**

**Unit IV**

**1. Nucleic Acids**

Structure of a mononucleotide. Bases found in nucleic acids. Difference between RNA and DNA and their functions. Structures of DNAs & RNAs. Base pairing rule.

**2. Introduction and Definition of :**

- a. Bioenergetics
- b. High Energy compounds :a] ATP b] ADP
- c. Inborn errors of metabolism : a]Sickle cell anemia b]Gout

**INTERNAL ASSESSMENT (Refer Direction)**

**PRACTICALS**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

**I. QUALITATIVE ANALYSIS**

- 1. Colour Reactions of Carbohydrates.
  - 1. Fructose
  - 2. Maltose
  - 3. Sucrose
- 2. Colour Reactions of Cholesterol

**II. QUANTITATIVE ANALYSIS**

- 1. Estimation of Glucose by Benedict's Method.

**III. SMALL EXPERIMENT**

- 1. Isolation of Casein from Milk.

**IV. EXPERIMENTS WITH ENZYMES**

- 1. Inversion (Hydrolysis) of Sucrose by Yeast Invertase.

**References :**

1. West E. S., Todd W.R., Mason H.S. & Van Bruggen J.T. (1974) : 4<sup>th</sup> Ed. Text book of biochemistry, Amerind Pub Co Pvt Ltd.
2. White A., Handlar P., Smith E.L, Stelten, D.W. (1959) : 2<sup>nd</sup> Ed. Principles of Biochemistry, McGraw Hill Book Co.
3. Murray R K Granner, D.K., Mayes, P.A. & Rodwell V.W.(1993) : 23<sup>rd</sup> Ed. Harper's Biochemistry. Lange medical book.
4. Lehninger, A.L, Nelson D.L. & Cox M.M. (1993) : 2<sup>nd</sup> Ed. Principles of Biochemistry, CBS Publishers & distributers.
5. Devlin, T.M. (1986) : 2<sup>nd</sup> Ed. Text book of biochemistry with Clinical correlations, John Wiley and sons.
6. Stryer, L. (1995) : Biochemistry, Freeman WH and Co.
7. U. Satyanarayan and U Chakrapani : 2008 Fundamentals of Biochemistry, Books & Allied Pvt. Ltd, Calcutta Trueman R. Patricia 2007 Nutritional Biochemistry MJP Pub, Chennai

**B.Sc. (HOME SCIENCE) SEMESTER- V  
PAPER VII  
(5T-7)**

# **Health Science and Hygiene**

<b>Total Marks</b>	<b>100</b>
Theory	80
Internal Assessment	20
Practical	-

## OBJECTIVES

1. To understand basic concept of microorganisms
  2. To impart knowledge of measures taken for prevention and control of diseases.
  3. To promote basic knowledge of role of disinfection in health

## **UNIT-I**

## Infectious disease Epidemiology-

- i. Definition of Infection, contamination, host, communicable and non-communicable diseases, source of infection, Incubation period, types of communicable and non-communicable diseases.
  - ii. Modes of transmission of disease- Direct and Indirect.
  - iii. Measures of Disease Prevention and Control.

## **UNIT-II**

- A. Health Education- Aims, Objectives, Principles, Role of Communication in Health Education.
  - B. Disinfection-
    - i. Definition of disinfection, sterilization, disinfectant, antiseptic, deodorant.
    - ii. Types of disinfection.
    - iii. Types of disinfectants-a. Natural agents
      - b. Physical agents
      - c. Chemical agents

### **UNIT-III**

1. International Health Organisation- WHO, UNICEF
  2. Implication of drug addiction, Narcotics, Alcoholism, smoking, their control and prevention.

## **UNIT-IV**

Family planning and demography.

- a. Definition, necessity, advantages, and methods of family planning.
- b. Birth rate, Death rate and Census.
- c. Geriatrics.

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

## **PRACTICALS**

1. Study of common insecticides and disinfectants- Phenyle,Dettol,DDT,BHC powder,Potassium Permangnate,Bleaching Powder.
2. Identification of RBC and WBC by using Leishman's stain.
3. Demonstration of RBC & WBC count by using Haemocytometer.

## **REFERENCES-**

1. Textbook of Paediatrics- Aghor
2. Community Health and Nursing- Basavan Phappa B.T.
3. Textbook Microbiology for Nurses- Baveja C.P.
4. Practical Pathology- Chaturvedi O.U.
5. Textbook of Medicine- P.C. Das
6. Handbook of Paediatrics- Desai
7. Hygiene and Public Health- Ghosh P.
8. Textbook of Preventive and Social Medicine- K. Park
9. Textbook of Preventive and Social Medicine- J.E. Park
10. Essentials of Community Health Nursing- J.E. Park
11. Textbook of Obstetrics and Gynaecology- D.C. Dutta
12. Textbook of Medical Microbiology- Anantnarayan

**B.Sc. HOME SCIENCE**

**SEMESTER –VI**

**B.Sc. HOME SCIENCE SEMESTER VI**  
**PAPER-I**  
**Diet Therapy-II**  
**(6T-1)**

<b>Total Marks</b>	<b>150</b>
Theory +IA	80 +20
Practical +IA	40+10

**OBJECTIVES:**

- 1) To provide knowledge about the causes and symptoms of various diseases
- 2) To understand the role of diet in the management of these conditions.
- 3) To plan, calculate and prepare diets for various diseases.

**COURSE CONTENT: THEORY**

**UNIT-I**

**I Weight Management: Obesity and overweight.**

Causes, Symptoms and Principles of Dietary Management of obesity and overweight

- a) Types and causes of obesity.
- b) Criteria for obesity and overweight .
- c) Dietary management of obesity:
  - i) Fats in diet
  - ii) Role of exercise

**II . Underweight**

- a) Definition
- b) Problems associated with Underweight
- c) Dietary management of Underweight

**UNIT-II**

**I Diabetes Mellitus:**

Causes, Symptoms and Principles of Dietary Management of Diabetes Mellitus:

Diabetes Mellitus:

- a) Normal Blood Glucose level.
- b) Types of Diabetes Mellitus
- c) Treatment : Oral Hypoglycemic drugs and Insulin.
- d) Role of diet in the management of IDDM and NIDDM.

**2. Food Exchange List**

**UNIT III**

**1. Hypertension**

Causes, Symptoms and Principles of Dietary Management of Hypertension

- a) Normal Blood pressure and types of hypertension
- b) Role of Sodium and Salt in Hypertension
- c) Role of diet in management of hypertension

**2 Dyslipidemia**

- a) Role of diet in management of high cholesterol
- b) Role of diet in management of high Triglycerides
- c) Role of Omega 3 in management of dyslipidemia.

## **UNIT IV :**

### **1) Coronary Heart diseases :**

Causes, Symptoms and Principles of Dietary Management of Coronary Heart diseases:

- a) Risk factors for CHD.
- b) Atherosclerotic Heart disease:
- c) Dietary principles of CHD.
- d) Role of fat in management of CHD.
- e) Lifestyle modification.
- d) Control of Risk factors.

### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

## **COURSE CONTENT PRACTICAL**

Preparation and Evaluation of Therapeutic adaptations of the Normal Diet

- 1) Weight Management: Overweight, Obesity, Underweight
- 2) Metabolic Disorder: Diabetes (NIDDM)
- 3) Hypertension
- 4) Coronary Heart diseases

<b>Total Marks</b>	<b>40+10</b>
Planning	10
Cooking	10
Calculation	10
Viva	05
Record	05
IA	10

### **INTERNAL ASSESSMENT**

#### **Any one of the following**

- 1. Seminar on any one topic from syllabus
- 2. Preparation of Scrap Book
- 3. Power Point Presentation

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

### **References**

1. **Nutritive value of Indian Foods:** *Gopalan C, Rama Sastri & Balasubramanian, S.C.* National Institute of Nutrition, 1993.
2. **Krause's Food Nutrition and Diet therapy:** *L Kathleen Mahan, Sylvia Escottstump.* 19<sup>th</sup> edition, W.B. Saunders Co.1996.
3. **Normal & Therapeutic Nutrition:** *Corinne H. Robinson & M.R Lawer,* 15<sup>th</sup> Edition 1997.
4. **Clinical Dietetics:** *F.P. Antia,* 2<sup>nd</sup> Edition. Oxford University Press 1973.
5. **Text book of Human Nutrition:** Editors: *Bamji M.S. Rao N.P Reddy V.* Oxford & IBH pub. Co. pvt.Ltd.1996.
6. **Dietetics:** *Srilakshmi B,* 3<sup>rd</sup> Edition, New Age International (p) Ltd., 2000.
7. **Manual of Nutrition and diet Therapy:** *Grills & Bosscher,* Macmillan Pub.Co. Inc. 1981.
8. **Essentials of Nutrition and Diet Therapy** *Williams S.R. Times Mirror / Mosby* College Pub.1990.
9. **Nutrition & Dietetics:** *Shubhangini A. Joshi .* Tata McGraw - Hill Pub. Co. Ltd., New Delhi 1992.

**B.SC HOME SCIENCE SEMESTER - VI**  
**PAPER -II**  
**Care and well-being in Human Development**  
**(6T-2)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 +20
Practical + IA	40+10

**Objectives :**

- To understand the significance of care and well-being in human development
- To understand the concerns at different stages of life
- To explore the availability of services and institutions that promote care and wellbeing.

**Theory :**

**Unit I : Care and Human Development**

1. Definition, concept and relevance of care
2. Vulnerable periods in life that require care
3. Principles of care giving
4. Holistic concept of well-being
5. Promoting well-being
6. Relationship between care and well-being
7. Subjective well being.

**Unit II : Care and Well-being in Childhood**

1. Critical issues during infancy
2. Critical issues during early childhood years
3. Critical issues during middle childhood
4. Critical issues during adolescence
5. Health care; nutritional and psychological counselling.

**Unit III : Care and Well-being in Adulthood**

1. Adults as caregivers and their needs
2. Experiencing wellness at different stages and work domains of adulthood
3. Care needs of elderly
4. Health and nutritional care
5. Spiritual and psychological well-being.

**Unit IV : Policies, Services and Programmes**

1. Community resources for well-being
2. Provisions and services that promote well-being
3. School health programmes

4. Counselling services for individuals and families

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

**Practical**

1. Observation of an infant in natural settings to understand their care needs
2. Interview of a young mother of a preschool child as a caregiver.
3. Visits to :
  - A counseling centre/clinic
  - A centre for the elderly
4. Psychological test (self concept inventory, behaviour orientation scale and 16 PF).

<b>Total Marks</b>	<b>40 +10</b>
<b>Psychological Testing</b>	<b>15</b>
<b>2 Questions</b>	<b>15</b>
<b>Record Book</b>	<b>05</b>
<b>Viva</b>	<b>05</b>
<b>Internal Assessment</b>	<b>10</b>

**INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

**1 . Preparation of workbook on any one :**

- Spiritual and psychological well being
- Disciplinary patterns of child rearing

**2.Oral presentation on any given topic :**

**References :**

- Chelsea, C., Fielder, D., Komilzoda, S. & Pathmanathan, I. ( 2009). Child health policy and programming for marginalized communities. New Delhi: UNICEF
- Davar, B.V. (Ed.) ( 2001). Mental health from a gender perspective. New Delhi: Sage.
- Ghosh, S. (1981). The Feeding & Care of Infant & Young Children. New Delhi: Voluntary Health Association of India.
- Swaminathan, M. (1985). Who cares? : A study of child care facilities for low income working women in India. New Delhi: Centre for Women's Development Studies.

**B.Sc. HOME SCIENCE SEMESTER-VI**  
**PAPER-III**  
**Fashion Designing**  
**(6T-3) :**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical +IA	40+10

### **Objectives**

- To understand the concept related to elements and principles of design.
- To understand terminology related to fashion.
- To acquaint the students with the basic factors influencing fashion.
- To foster an understanding of international designers and their work. To learn basic fashion designing process and apparel manufacture,
- To gain Knowledge of fashion marketing and merchandising.

### **UNIT-I**

- Definition of Fashion, Evolution of Fashion, Terminology of Fashion Principles of Fashion movement Theories of fashion adoption Trickle-down theory, bottom up theory & trickle across theory
- Classification of fashion, Principles of Fashion factors influencing fashion., fashion cycle and fashion trends in India.

### **UNIT-II**

- Origins of fashion and clothing theories, Clothing as modesty, protection, status and religious symbol, Fashion as status symbol
- Flow chart of fashion design process to promote inspiration, innovation. Research inspiration, fashion prediction, flow chart of introduction to design process, silhouettes, colours. Fashion Forecasting

### **UNIT-III**

- International Fashion centers Fashion Categories-
- Indian and International. Consumer groups- fashion leaders, followers
- Fashion Psychology, role of clothing in physical, social, psychological and cultural scenario, Clothing and gender differentiation

### **UNIT-IV**

- Fundamentals of apparel production, different departments in garment industry and their working.
- Fashion marketing and merchandising, market research, analysis of market trends,

fashion advertising, promotion, different style and methods.

### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

#### **PRACTICAL**

1. Drafting cutting stitching and designing of following garments by using different types of fabric.
2. Evening wear (Salwar / Chudidar/ Plazzo & kurta)
3. Cocktail wear
4. Use of computer in fashion designing.

<b>Total Marks</b>	<b>40+10</b>
<b>Drafting</b>	10
<b>Stitching</b>	20
<b>Record Book</b>	10
<b>IA</b>	10

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

### **INTERNAL ASSESSMENT**

- i) Designing and making one fashion accessories (Purse/Belts/Fashion Jewellery / Scarves/Stole etc.)
- ii) Visits to fashion institute, export house and study tour.

#### **BOOKS RECOMMENDED:**

##### **Kaur Navneet,comdex Fashion Design vol 1 Fashion concept SDR Printer Delhi**

- Armstrong, H.J. (2009), Pattern Making for Fashion Design, Harper Collins Publishers, INC, New York.
- Fringes, G.S. (1999), Fashion from Concept to Consumer, 6<sup>th</sup> edition, NJ, Prentice Hall.
- Jarnow, J. Dickerson Kitty G (1987), Inside the Fashion Business, New Jersey, Merrill, Prentice Hall.
- Mc. Kelvey, K., Muslow, J., Fashion Forecasting (2008) Wiley Blackwell
- Tate, S.L. and Edwards, M.S.(1982) The Complete Book of Fashion Design, New York, Harper & Row Publication.
- Stephens Frings Gini, 2007, Fashion: From Concept to Consumer (9th Edition), Prentice Hall
- Genova Aneta 2011, Accessory Design, Fairchild Pubns; 1 edition
- Schaffer Jane, Saunders Sue 2012, Fashion Design Course: Accessories: Design Practice and Processes for Creating Hats, Bags, Shoes, and Other Fashion Accessories, Barron's Educational Series
- Lau John 2012, Basics Fashion Design 09: Designing Accessories: Exploring the design and construction of bags, shoes, hats and jewellery, A Publishing; 1 edition
- The Dynamics of Fashion, Elaine Stone, Fairchild Publication, 2008
- Frings Gini, Fashion From Concept to Consumer, (5<sup>th</sup> Edition), Prentice Hall

**B.Sc. HOME SCIENCE SEMESTER VI**  
**PAPER – IV**  
**Advanced Resource Management -II**  
**(6T-4)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical + IA	40 + 10

**Objectives:-**

- 1).To give opportunity to develop ability to manage time, energy and money.
- 2)To develop ability to apply management principles in experimental house and in day to day life experience and various small events.
- 3)To develop ability to apply work simplification techniques.
- 4) To make them aware of intelligent choice of consumer goods.

**COURSE CONTENT: Theory**

**UNIT – I Time Management**

- a) Definition
- b) Nature/Importance of time
- c) Specific aids or tools of time management -
  - i. Work Production Curves
  - ii. Rest and sleep periods
- d) Process of managing time
  - i. Planning
  - ii. Implementation
  - iii. Evaluative feedback
- e) Leisure-i)Meaning ii)Importance iii)Activities

**UNIT – II Energy Management**

- a) Energy Management Meaning, Importance
- b) The efforts used in Home making activities
- c) Energy requirements for household tasks
- d) Forms and effects of fatigue
- e) Process of managing energy
  - i. Planning
  - ii. Implementing
  - iii. Evaluating feedback
- f) Definition of consumer
- g) Intelligent choice of consumer goods

**1) UNIT – III Work Simplification**

- a) Definition
- b) Importance
- c) Techniques

- i. Process chart
- ii. Operation chart
- iii. Pathway chart
- d) Mundel's classes of change
- e) Consumer credit – credit purchase
- f) Consumer protection

#### **UNIT – IV Finance / Money Management**

- a) Income concept
- b) Planning – definition, Importance of family finance plan/Budget – steps in making budget
- c) Implementing
- d) Evaluative feedback
- 1) Account keeping
  - a) Definition & Importance
  - b) Types of account keeping
- 2) Definition of consumer
  - a) Intelligent choice of consumer goods
  - b) Consumer credit-credit purchase
  - c) Consumer protection

#### **INTERNAL ASSESSMENT (Refer Direction)**

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

#### **Practical**

1. Time plan for college going students, working and non-working women.
2. Work simplification techniques applied to any activity – Pathway – process – Operation chart.
3. Establishing Budget making & actual spending (for any event)
4. Account keeping – ( any event)

<b>Total Marks</b>	<b>40 +10</b>
Time plan	10
Work simplification techniques	10
Budget making	10
Record Book	10
IA	10

#### **INTERNAL ASSESSMENT**

- a) Arrange any one Event  
Formal : Exhibition, Seminar, Conference  
Informal : Birthday Parties, Festival

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

#### **Books Recommended:**

1. Good year & Klohar 'Managing for effective living' John Wiley and Sons.
2. Gross-crandall-knoll 'Management for Modern families' Prentice Hall, Inc. New Jersey.
3. Nickell- Rice- Tucker, 'Management in family living' John Wiley & Sons.
4. Swanson Bettye 'Introduction to Home Management McMillan Pub. House. Inc. New York.
5. Borkar Sunita ' Introduction to Resource Management', Himalaya Publishing House.
6. Sounderaraj Stella 'A textbook of Household Arts' Orient longman.

**B.Sc HOME SCIENCE SEMESTER VI**  
**PAPER V**  
**Community Development And Management**  
**(6 T-5)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical + IA	40 + 10

**Objectives :**

1. To understand the importance of leadership in extension work.
2. To developed the concept of teaching methods.
3. To understand the necessity of co-ordination in extension work.
4. To understand the concept of development communication.
5. To understand administration, supervision and evaluation for extension work.

**Theory :**

**Unit - I**

1. Leadership in Extension :  
Definition of leadership, Methods of selecting local leaders for extension work, traits of leaders, role of local leaders in extension work.
2. Motivation for extension work  
Definition of motivation, importance of motivation for extension work, basic elements to motivate home makers, techniques of motivation,

**Unit - II**

1. Extension Training & Methods :  
Meaning & Importance of training, need of training, Types of training for extension workers, principles of training.
2. Coordination for extension work :  
Importance of coordination, necessity of team work, aspects of coordination, practical difficulty of team work and its solutions.

**Unit III**

1. Development communication :  
Meaning and definition of development communication, approaches for development communication, constraints in development communication.
2. Participatory Approach in Development Communication :

Meaning of PADC, types of participation of people in development process, participatory approaches

#### **Unit - IV**

##### **1. Extension Administration and Supervision :**

Meaning of administration and supervision, concept, principles of good administration, necessity of administration, traits desirable in extension administrators or supervisors.

##### **2. Extension monitoring evaluation :**

Meaning of monitoring evaluation, Importance of monitoring evaluation, types of evaluation, methods of evaluating extension programmes.

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

##### **Practicals :**

Practice of public speaking.

1. Preparation of Television script.
2. Handling and operation of Overhead Projector.
3. Preparation and presentation of computerized transparency.
4. Organizing and conducting seminar on home science aspects.

<b>Total Marks</b>	<b>40+10</b>
Spotting	10
Teaching Aid	10
Presentation	10
Viva	05
Record	05
IA	10

##### **INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

Report on Survey of Health & hygiene conditions of 5 households of rural/ slum areas.

##### **Books Recommended :**

1. Directorate of extension : Extension Education in Community Development.
2. Supe. S. V. An Introduction to Extension Education – Oxford Publishing Company, New Delhi & Kolkata.1999.
3. Chandra.A., Shah. A. and Joshi. V.: Fundamentals of teaching Home Science, Sterling Publishers, New Delhi, 1989.
4. Devdas. R. P., Methods of teaching Home Science, National Council of Education.1978.
5. Singh. K., Rural Sociology, Prakashan Kendra, Lucknow.
6. Dahama. O. P. and Batnagar O. P. Education & Communication for Development, Oxford & IBH Publishing Co., New Delhi, 1977.
7. Rudramurthy B., Extension in Planned Social Change, Allied Publishers Pvt: Ltd, Chennai.

**B.Sc. Home Science Semester VI**  
**PAPER- VI**  
**Nutritional Biochemistry-II**  
**(6 T-6)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical + IA	40+10

### **OBJECTIVES**

This course will enable the students to :

1. Develop an understanding of the principals of biochemistry (as applicable to human nutrition)
2. Obtain an insight into the chemistry of major nutrients and physiologically important compounds.
3. Understand the biological processes and systems as applicable to human nutrition.
4. Apply the knowledge acquired to human nutrition and dietetics.

### **COURSE CONTENT: Theory**

#### **Unit I Metabolism**

1. **Metabolism** : Introduction to Anabolism and Catabolism & its relation to nutrition.
2. **Carbohydrate Metabolism** : Absorption, transport and assimilation of Carbohydrates.
3. **Protein Metabolism** : Absorption, transport and assimilation of Proteins.
4. **Lipid Metabolism** : Absorption, transport and assimilation of Lipids.

#### **Unit II Carbohydrate Metabolism**

1. Introduction and significance of intermediary metabolism :
  1. Glycolysis,
  2. Kreb's cycle
  3. Glycogenesis,
  4. Gluconeogenesis.
2. **Definition** : Blood sugar regulation : hypoglycemia, hyperglycemia and renal threshold. Glucose Tolerance Test.

#### **Unit III. Protein Metabolism**

1. Introduction of
  - i) Transamination
  - ii) Oxidative Deamination,
  - iii) Urea Formation.
2. Enzymes : Classification according to IUB system. Effect of temperature and pH on the activity of enzymes

#### **Unit IV: Lipid Metabolism :**

1. Lipid profile (Cholesterol, Bile acids, Triglycerides) & Health status.
2. Definition of : Lipogenesis and Hyperlipidemia.
3. Formation of Ketone bodies in diabetics.
4. Elementary idea of Beta Oxidation

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

### INTERNAL ASSESSMENT (Refer Direction)

#### PRACTICALS

##### I. QUALITATIVE ANALYSIS

- a. Colour Reactions of Carbohydrates.
  - 1. Glucose
  - 2. Lactose
  - 3. Starch
- b. Colour Reactions of Proteins.
  - 1. Albumin
  - 2. Casein
  - 3. Gelatin

<b>Total Marks</b>	<b>40+10</b>
Qualitative	10
Quantitative	10
Small experiment	10
Record	05
Viva	05
IA	10

##### II. QUANTITATIVE ANALYSIS

- 1. Sorenson's Amino Acids Titration (Formol Titration)

##### III. SMALL EXPERIMENT

- 1. Preparation of Potato Starch :  
Solubility test and Colour Reactions

#### IV EXPERIMENTS WITH ENZYMES

- 1. Action of Ptyalin (Salivary Amylase) on Starch.

#### INTERNAL ASSESSMENT

Any one of the following :

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

- 1. Seminar on any one topic
- 2. Preparation of Drawing Book based on any one topic
- 3. Power Point Presentation

#### References :

1. West E. S., Todd W.R., Mason H.S. & Van Bruggen J.T. (1974) : 4<sup>th</sup> Ed. Text book of biochemistry, Amerind Pub Co Pvt Ltd.
2. White A., Handlar P., Smith E.L, Stelten, D.W. (1959) : 2<sup>nd</sup> Ed. Principles of Biochemistry, McGraw Hill Book Co.
3. Murray R K Granner, D.K., Mayes, P.A. & Rodwell V.W.(1993) : 23<sup>rd</sup> Ed. Harper's Biochemistry. Lange medical book.
4. Lehninger, A.L, Nelson D.L. & Cox M.M. (1993) : 2<sup>nd</sup> Ed. Principles of Biochemistry, CBS Publishers & distributers.
5. Devlin, T.M. (1986) : 2<sup>nd</sup> Ed. Text book of biochemistry with Clinical correlations, John Wiley and sons.
6. Stryer, L. ( 1995) : Biochemistry, Freeman WH and Co.
7. U. Satyanarayan and U Chakrapani : 2008 Fundamentals of Biochemistry, Books & Allied Pvt Ltd, Calcutta
8. Trueman R. Patricia 2007 Nutritional Biochemistry MJP Pub, Chennai

**B.Sc. (HOME SCIENCE) SEMESTER- VI**  
**PAPER VII**  
**Public Health**  
**(6 T-7)**

<b>Total Marks</b>	<b>150</b>
Theory + IA	80 + 20
Practical + IA	40+10

**Objectives :**

1. To understand basic concept of microorganisms
2. To impart knowledge of measures taken for prevention and control of diseases.
3. To promote basic knowledge of role of disinfection in health

**UNIT-I**

- a. General concept of Bacteria and viruses-
  - i. Structure of bacterial cell, classification of bacteria.
  - ii. Structure of virion and types of viruses.
- b. Gram staining.
- c. Non-communicable diseases-
  - Diabetes mellitus
  - Nephrotic syndrome

**UNIT-II**

Diseases caused by bacteria, viruses and protozoa.

1. Water, food and milkborne diseases.-Hepatitis, Cholera, Typhoid, Dysentery.
2. Airborne diseases- Tuberculosis, poliomyelitis, measles.

**UNIT-III**

Parasitic infections-

- a. Mode of infection, life cycle, harmful effects, prevention and control of following infections-
  - i. Amoebiasis (Entamoeba Histolytica)
  - ii. Ascariasis (Roundworm)
- b. Mode of infection, life cycle, harmful effects, prevention and control of diseases caused by insects.
  - i. Malaria (Plasmodium vivax and Plasmodium falciparum)
  - ii. Filaria (Wuchereria Bancrofti)

**UNIT-IV**

Immunity-

- a. Definition
- b. Classification- Natural and Acquired Immunity, Active and Passive Immunity.
- c. Mechanism Of Immunity (in brief)- Humeral and cellular Immunity.
- d. Vaccines, Routine immunization schedule.
- e. Antibiotics- Definition and classification of antibiotics.

**INTERNAL ASSESSMENT** (Refer Direction)

<b>Total Marks</b>	<b>20</b>
--------------------	-----------

## **PRACTICALS-**

1. Examination of slides of microorganisms- Staphylococci, Streptococci, Mycobacterium Tuberculosis, E-coli, Malarial Parasite, Filarial Parasite.
2. Urine examination- Physical and Chemical examination like sugar, Albumin, Acetone & bile salts.
3. Estimation of Haemoglobin percentage by Sahli's and Haemometer.
4. Study of life cycle of parasites by charts. (Entamoeba Histolytica, Roundworm, Plasmodium vivax and Plasmodium falciparum, Wuchereria Bancrofti)

<b>Total Marks</b>	<b>40 + 10</b>
Experiment -1	10
Experiment -2	10
Spotting	10
Record	05
Viva	05
IA	10

## **INTERNAL ASSESSMENT**

<b>Total Marks</b>	<b>10</b>
--------------------	-----------

Survey on communicable or non-communicable diseases in your locality.

## **REFERENCES-**

1. Textbook of Paediatrics- Aghor
2. Community Health and Nursing- Basavan Phappa B.T.
3. Textbook Microbiology for Nurses- Baveja C.P.
4. Practical Pathology- Chaturvedi O.U.
5. Textbook of Medicine- P.C. Das
6. Handbook of Paediatrics- Desai
7. Hygiene and Public Health- Ghosh P.
8. Textbook of Preventive and Social Medicine- K. Park
9. Textbook of Preventive and Social Medicine- J.E. Park
10. Essentials of Community Health Nursing- J.E. Park
11. Textbook of Obstetrics and Gynaecology- D.C. Dutta
12. Textbook of Medical Microbiology- Anantnarayan.



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY  
NAGPUR**

**(Established by Government of Central Provinces Education Department by Notification No. 513  
dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Public  
Universities Act, 2016)**

---

**FACULTY OF SCIENCE AND TECHNOLOGY**

**DIRECTION NO. 11 of 2019**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF  
BACHELOR OF APPLIED ELECTRONICS AND SOFTWARE TECHNOLOGY  
( SEMESTER PATTERN)**

(Directions issued under section 12(8) of the Maharashtra Public University Act 2016 relating to award of Bachelor degree in Applied Electronics and Software Technology in the Faculty of Science and Technology )

Whereas the Maharashtra Public Universities act No. 6 of 2016 has come into force with effect from 1<sup>st</sup> March 2017 and was amended from time to time.,

**AND**

WHEREAS, the University Grants Commission, New Delhi vide letter No.D.O.No.F-2/2008/(XI Plan), dated 31 January 2008 regarding new initiatives under the XI Plan – Academic reforms in the University has suggested for improving quality of higher education and to initiate the academic reform at the earliest,

**AND**

Whereas the co-ordinator special task committee in Applied Electronics Technology in faculty of Science and Technology has submitted amendments to direction No. 75 as per direction no 13 of 2017 at its meeting held on 16-06-2017

**AND**

Whereas the Special Task Committee of Applied Electronics Technology in the Faculty of Home Science at its meeting held on 25-8-2016, have recommended for starting of semester pattern and prepared the syllabus and scheme of examination for Bachelor of Applied Electronics and Software Technology, commensurate with the governing guidelines.

**AND**

Whereas the Special Task Committee of Applied Electronics Technology in the Faculty of Science and Technology at its meeting held on 27-11-2018, have recommended Amendments to Direction No. 28 of 2017 and prepared the syllabus and scheme of examination for Bachelor of Applied Electronics and Software Technology, commensurate with the governing guidelines, to be implemented from academic session 2018-2019

**AND**

Whereas the Coordinator of Faculty of Home Science concurred with the recommendations of the Special Task Committee in Applied Electronics Technology in the Faculty of Home science vide her observations dated 25-8-2016.

**AND**

Whereas, the new draft direction and scheme of examinations as per semester pattern is to be implemented from the academic session 2016-2017 for Bachelor of Applied Electronics and Software Technology which is to be regulated by this direction and as such there is no existence and framing of an ordinance for the above examination,

**AND**

Whereas it is expedient to provide an ordinance for the purpose prescribing examinations leading to the degree of Bachelor of Applied Electronics and Software Technology (Semester Pattern) in the faculty of Science and Technology and repeal the Direction No. 28 of 2016 governing the existing course of Bachelor of Applied Electronics and Software Technology

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Academic Council on 7-10-2016 under section 12(7) of Maharashtra Public University Act 2016.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Management Council under section 12(7) of Maharashtra Public University Act 2016.

**AND**

Whereas, the framing of an ordinance as required under provision of Act is a time consuming process, now therefore, I, Dr. S. P. Kane, the Vice Chancellor of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers vested under Section 12(8) of the Act do hereby issue the following Direction.

1. This Direction may be called "Direction governing the Examination leading to the Degree of Bachelor of Applied Electronics and Software Technology (Semester Pattern), in the Faculty of Science and Technology , Rashtrasant Tukadoji Maharaj , Nagpur University, Nagpur"

2. The direction shall come into force from the date of its issue by Hon'ble Vice Chancellor and shall remain in force till the relevant ordinance comes into being in accordance with the provisions of the Act.

3. The duration of the Bachelor of Applied Electronics and Software Technology course shall be of Four academic years consisting of eight semesters with University examinations at the end of each semester namely:

- a. Bachelor of Applied Electronics and Software Technology Semester I Exam.
  - b. Bachelor of Applied Electronics and Software Technology Semester II Exam.
  - c. Bachelor of Applied Electronics and Software Technology Semester III Exam.
  - d. Bachelor of Applied Electronics and Software Technology Semester IV Exam.
  - e. Bachelor of Applied Electronics and Software Technology Semester V Exam.
  - f. Bachelor of Applied Electronics and Software Technology Semester VI Exam.
  - g. Bachelor of Applied Electronics and Software Technology Semester VII Exam.
  - h. Bachelor of Applied Electronics and Software Technology Semester VIII Exam. The period of Academic Session shall be such as may be notified by the university.
4. The Examination specified in paragraph 3 shall be held twice a year at such places on such dates as may be decided by the University. The main examination of semester I,III,V and VII shall be held in winter whereas the examination for semester II,IV,VI and VIII shall be held in summer. The supplementary examination of semester I,III,V and VII will be held in summer whereas supplementary examination for semester II,IV,VI,VIII will be held in winter. There shall be no practical examination during semester I,III,V and VII. Practical examination will be held during semester II,IV,VI,VIII only considering complete curriculum of both the semesters of that particular year.
5. Subject to the compliance with provisions of this direction and of other ordinances in force from time to time, a candidate for admission to the examination shall:
- a.) In case of semester I of Bachelor of Applied Electronics & Software Technology , have passed XII standard of Maharashtra State Board of Secondary Education or an examination recognized as equivalent there to with Physics, Chemistry, Mathematics and English as subjects or MCVC(Electronics / Electronics Technology or equivalent) from Maharashtra State Board of Secondary Education or equivalent examination.
  - b) In the case of Bachelor of Applied Electronics & Software Technology Semester III, have passed the Bachelor of Applied Electronics & Software Technology semester I and II Examination of the University or an examination recognized as equivalent there to.

That any one who holds a First Class Diploma in Electronics and Telecommunications or Diploma in Electronics from any one of the polytechnics in Maharashtra state shall be eligible for admission to third semester of Bachelor of Applied Electronics and Software Technology

That any first class diploma holders in Electronics or Electronics and Telecommunication from state other than Maharashtra with English medium alone shall be eligible for

admission to the third semester of Bachelor of Applied Electronics and Software Technology course provided equivalence of diploma examination passed by him/her from polytechnic in other state is established by the university

c) In the case of Bachelor of Applied Electronics & Software Technology semester V , have passed the Bachelor of Applied Electronics & Software Technology semester I,II, III, IV Examination of the University or an examination recognized as equivalent there to.

d) In the case of Bachelor of Applied Electronics & Software Technology semester VII , have passed the Bachelor of Applied Electronics & Software Technology semester I,II,III,IV, V,VI Examination of the University or an examination recognized as equivalent there to.

6. A student shall undergo ‘Industrial Training’ after appearing at the IV th Semester Bachelor of Applied Electronics and Software Technology culminating to a total of 6 weeks in any Industry and shall produce a certificate to that effect to the satisfaction of the Principal of the College.

7 a) Without prejudice to the other provisions of the Ordinance No. 6 relating to the examination in general the provision of paragraph 5,7,8,10 and 32 of the said ordinance shall apply to every collegiate candidate.

b) The ATKT rules for admission for the Course Bachelor of Applied Electronics and Software Technology (Theory and Practical as separate passing head) shall be as given in the following table

Admission to semester	Candidate should have passed in all the subjects of the following examination of R.T.M. Nagpur University	Candidate should have passed at least half of the total passing heads taken together prescribed for Examinations given below (on calculation, fraction if any should be ignored)	Candidate should have appeared for the following examinations
Semester I	As provided in the para 5 of the direction	-----	-----
Semester II	-----	-----	Semester I
Semester III	-----	Semester I and II	-----
Semester IV	-----	-----	Semester III
Semester V	Semester I and II	Semester III and IV	-----
Semester VI	-----	-----	Semester V
Semester VII	Semester III and IV	Semester V and VI	-----
Semester VIII	-----	-----	Semester VII

8. The fees for the examinations shall be as prescribed by the University, from time to time and whenever, any change is made in the fees prescribed for any particular examination that shall be notified through a notification for the information of all concerned.
9. Every candidate for Bachelor of Applied Electronics & Software Technology Semester I,II,III,IV,V,VI,VII,VIII Examination shall be examined in the subjects as set out in the Appendix to Directions
- i. The scope of the subjects shall be as indicated in the respective syllabus in force from time to time.
  - ii. Medium of examination shall be English.
10. An applicant for admission to an Examination shall satisfy the Head of the Department / Principal as regards the Sessional examinations/Internal assessment conducted during the academic year regarding her / his suitability to take the University examination.
11. In order to pass in the Examination an examinee shall obtain in each subject not less than the minimum marks as indicated in the Appendix 1,2,3,4,5,6,7,8.
12. The Head of the Department / Principal shall maintain in her/his office the complete record of the marks obtained by the candidate in the Sessional examinations/internal assessment that shall be submitted, before the commencement of the University examination, to the Director of Examination, in a sealed cover.
13. There shall be no classification of successful examinees at I,II,III,IV,V,VI,VII semester of Bachelor of Applied Electronics and Software Technology.
14. Division of examinees successful at the VIII th semester of Bachelor of Applied Electronics and Software Technology shall be determined on the basis of the aggregate marks obtained at all the semesters of Bachelor of Applied Electronics & Software Technology.
15. Those obtaining 60% or more marks in aggregate shall be placed in First Division and all other successful examinees in the Second Division respectively.
16. An examinee who is successful at an examination and obtained not less than 75% or more of the marks prescribed in a subject shall be declared to have passed the examination with Distinction in that subject.
17. Provision of Ordinance No. 7 A– relating to the condonation of Deficiency of marks for passing an examination and of ordinance No. 10 relating to examinations and compartments as amended from time to time shall apply to the Examination under this direction.

18. An unsuccessful examinee at any of the examination of Bachelor of Applied Electronics & Software Technology shall have an option to carry her/his Sessional Examination/Internal assessment college assessment marks for Theory/Practical examinations to her/his successive attempt(s) at the examination. The examinee however can forgo her/his Sessional Examination/Internal assessment marks in subject/subjects in which case she/he shall be examined for total marks comprising of theory /practical and college assessment together at her/his successive attempt(s).
19. As soon as possible after the examinations but not later than 30<sup>th</sup> June next following in case of examination held in March-April and 26<sup>th</sup> February next following, in case of examination held in October-November, the Board of Exams shall publish a list of successful examinees. List of successful examinees at the Eighth semester of Bachelor of Applied Electronics & Software Technology examination shall be arranged in the First and Second Division as envisaged in clause 14 of the ordinance and names of examinee passing the said examination as whole in the minimum prescribed period and obtaining the prescribed number of places in the first or second Division shall be arranged in order of Merit as provided in the examination in General Ordinance No. 6.
20. Notwithstanding anything to the contrary in this direction, no person shall be admitted to this examination, if she/he already passed the same examination or an equivalent examination thereto of other statutory university.
21. That educational tour or visit comprising of 1-5 days shall be compulsory to the students at least once during four years of the course.
22. Successful examinees at the I,II,III,IV,V,VI,VII,VIII semesters of Bachelor of Applied Electronics and Software Technology Examination shall be entitled to receive certificate signed by Registrar, titled Bachelor of Applied Electronics and Software Technology, Semester I, II, III , IV,V,VI,VII,VIII respectively and those successful at all the exams of Bachelor of Applied Electronics & Software Technology shall on payment of the prescribed fee receive a degree in the prescribed form, signed by the Vice-Chancellor, at the convocation to be held by the University.
23. The Scheme of Examination shall be as per Appendix: 1,2,3,4,5,6,7and 8 (Semester pattern) . The details / title of the theory papers can be suitably modified considering the need of the subject without disturbing the main structure.
24. With the issuance of this direction, Direction No. 28 of 2017, governing the. examinations leading to award of Bachelor of Applied Electronics and Software Technology in the Faculty of Science and Technology shall stand repealed.

I, further, direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant Ordinance comes into being, in accordance with the provisions of the Maharashtra Public Universities Act, 2016.

Nagpur  
Date: 22/04/2019

Dr. Siddharthavinayak P. Kane  
(Vice Chancellor)

## APPENDIX 1

### (Semester Pattern)

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE**  
**Semester I**

Sr. No.	Subjects	Maxi- mum Sessional	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
1-T-1	Applied Physics	10	40	50	20	4		2
1-P-1	<b>Applied Physics</b>		-				<b>3</b>	
1-T-2	Applied Chemistry	10	40	50	20	4		2
1-P-2	<b>Applied Chemistry</b>						<b>3</b>	
1-T-3	Computer Programming I	10	40	50	20	4		2
1-P-3	<b>Computer Programming I</b>						<b>3</b>	
1-T-4	Electrical Engineering	10	40	50	20	4		2
1-P-4	<b>Electrical Engineering</b>						<b>3</b>	
1-T-5	Engineering Mathematics I	10	40	50	20	4		2
1-T-6	Social Science	10	40	50	20	4		2
1-P-5	<b>Communicative English</b>						<b>3</b>	
1-P-6	<b>Engineering Drawing I</b>						<b>6</b>	
	<b>Total Marks</b>			<b>300</b>		<b>24</b>	<b>21</b>	

One practical batch will consists of 12-16 students.

## APPENDIX 2

BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE Semester II

Sr. No.	Subjects	Maxi- mum Sessiona l	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
2-T-1	Applied Physics	10	40	50	20	4		2
2-P-1	<b>Applied Physics</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
2-T-2	Applied Chemistry	10	40	50	20	4		2
2-P-2	<b>Applied Chemistry</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
2-T-3	Computer Programming I	10	40	50	20	4		2
2-P-3	<b>Computer Programming I</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
2-T-4	Electrical Engineering	10	40	50	20	4		2
2-P-4	<b>Electrical Engineering</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
2-T-5	Engineering Mathematics I	10	40	50	20	4		2
2-T-6	Social Science	10	40	50	20	4		2
2-P-5	<b>Communicative English</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
2-P-6	<b>Engineering Drawing I</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>6</b>	<b>3</b>
Total Marks:						900	24	21

One practical batch will consist of 12-16 students.

## APPENDIX 3

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE**

**Semester III**

Sr. No.	Subjects	Maxi - mum Sess- ional	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
3-T-1	Electron Devices and Circuits	10	40	50	20	4		2
3-P-1	<b>Electron Devices and Circuits</b>						<b>3</b>	
3-T-2	Digital Electronics	10	40	50	20	4		2
3-P-2	<b>Digital Electronics</b>						<b>3</b>	
3-T-3	Computer Programming II	10	40	50	20	4		2
3-P-3	<b>Computer Programming II</b>						<b>3</b>	
3-T-4	Engineering Mechanics	10	40	50	20	4		2
3-P-4	<b>Engineering Drawing II</b>						<b>3</b>	
3-T-5	Linear Network Analysis	10	40	50	20	4		2
3-T-6	Engineering Mathematics II	10	40	50	20	4		2
3-P-5	<b>Workshop</b>						<b>3</b>	
	<b>Total Marks</b>			<b>300</b>		24	15	

One practical batch will consist of 12-16 students.

## APPENDIX 4

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE**

**Semester IV**

Sr. No.	Subjects	Maxi- mum Sess- ional	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
4-T-1	Electron Devices and Circuits	10	40	50	20	4		2
4-P-1	<b>Electron Devices and Circuits</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
4-T-2	Digital Electronics	10	40	50	20	4		2
4-P-2	<b>Digital Electronics</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
4-T-3	Computer programming II	10	40	50	20	4		2
4-P-3	<b>Computer programming II</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
4-T-4	Engineering Mechanics	10	40	50	20	4		2
4-P-4	<b>Engineering Drawing II</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
4-T-5	Linear Network Analysis	10	40	50	20	4		2
4-T-6	Engineering Mathematics II	10	40	50	20	4		2
4-P-5	<b>Workshop</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
	<b>Total Marks</b>			<b>800</b>		<b>24</b>	<b>15</b>	

One practical batch will consist of 12-16 students.

## APPENDIX 5

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE**

Semester V

Sr. No.	Subjects	Maxi- mum Sess- ional	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
5-T-1	Linear Integrated Circuits	10	40	50	20	4		2
<b>5-P-1</b>	<b>Linear Integrated Circuits</b>						<b>3</b>	
5-T-2	Microcontrollers	10	40	50	20	4		2
<b>5-P-2</b>	<b>Microcontrollers</b>						<b>3</b>	
5-T-3	Instrumentation and Control Systems	10	40	50	20	4		2
<b>5-P-3</b>	<b>Instrumentation and Control Systems</b>						<b>3</b>	
5-T-4	Digital Signal Processing	10	40	50	20	4		2
<b>5-P-4</b>	<b>Digital Signal Processing</b>						<b>3</b>	
5-T-5	Algorithm and Data Structure	10	40	50	20	4		2
<b>5-P-5</b>	<b>Algorithm and Data Structure</b>						<b>3</b>	
5-T-6	Communication Electronics	10	40	50	20	4		2
	<b>Total Marks</b>			<b>300</b>		24	15	

## APPENDIX 6

### BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE

#### Semester VI

Sr. No.	Subjects	Maxi- mum Sess- ional	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
6-T-1	Linear Integrated Circuits	10	40	50	20	4		2
6-P-1	Linear Integrated Circuits	20	80	100	50		3	3
6-T-2	Microcontrollers	10	40	50	20	4		2
6-P-2	Microcontrollers	20	80	100	50		3	3
6-T-3	Instrumentation and Control Systems	10	40	50	20	4		2
6-P-3	Instrumentation and Control Systems	20	80	100	50		3	3
6-T-4	Digital Signal Processing	10	40	50	20	4		2
6-P-4	Digital Signal Processing	20	80	100	50		3	3
6-T-5	Algorithm and Data Structure	10	40	50	20	4		2
6-P-5	Algorithm and Data Structure	20	80	100	50		3	3
6-T-6	Communication Electronics	10	40	50	20	4		2
	<b>Total Marks</b>			<b>800</b>		24	15	

## APPENDIX 7

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE**

**Semester VII**

Sr. No.	Subjects	Maxi- mum Sess- ional	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
7-T-1	Circuit Design	10	40	50	20	4		2
7-P-1	<b>Circuit Design</b>						<b>3</b>	
7-T-2	Advanced Microcontrollers	10	40	50	20	4		2
7-P-2	<b>Advanced Microcontrollers</b>						<b>3</b>	
7-T-3	System Design	10	40	50	20	4		2
7-P-3	<b>System Design</b>						<b>3</b>	
7-T-4	Advanced Programming	10	40	50	20	4		2
7-P-4	<b>Advanced Programming</b>						<b>3</b>	
7-T-5	Industrial Organisation & Management	10	40	50	20	4		2
7-T-6	Data Base Management system	10	40	50	20	4		2
7-P-5	<b>Project</b>						<b>3</b>	
	<b>Total Marks</b>			<b>300</b>		24	15	

One practical batch will consist of 12-16 students.

## APPENDIX 8

### BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY UNDER THE FACULTY OF HOME SCIENCE

#### Semester VIII

Sr. No.	Subjects	Maxi- mum Sess- ional	Marks Paper/ Pract.	Total	Passing Marks	No. of Periods		Exam Time Hrs.
						TH	PR	
8-T-1	Circuit Design	10	40	50	20	4		2
8-P-1	<b>Circuit Design</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
8-T-2	Advanced Microcontrollers	10	40	50	20	4		2
8-P-2	<b>Advanced Microcontrollers</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
8-T-3	System Design	10	40	50	20	4		2
8-P-3	<b>System Design</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
8-T-4	Advanced Programming	10	40	50	20	4		2
8-P-4	<b>Advanced Programming</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
8-T-5	Industrial organisation & Management	10	40	50	20	4		2
8-T-6	Elective	10	40	50	20	4		2
8-P-5	<b>Project</b>	<b>20</b>	<b>80</b>	<b>100</b>	<b>50</b>		<b>3</b>	<b>3</b>
	<b>Total Marks</b>			<b>800</b>		<b>24</b>	<b>15</b>	

Elective (8-T-6) :i) Computer Network ii) Mobile Communication iii) Television

One practical batch will consists of 12-16 students.

## **Appendix - 9**

### **Bachelor of Applied Electronics and Software Technology (Semester Pattern)**

#### **Instructions to Examiners**

Every Theory paper consists of five units. Theory examination conducted by university in each subject will be of 40 marks in every semester. Examination for each theory paper will be of two hours.

There must be one question on each unit (Total five questions) and two questions will be mixed questions based on complete syllabus. Thus Examiner/Paper setter should set total seven questions of eight marks each.

Examiner can set questions of eight marks or can divide question in two parts a and b of four marks each.

#### **APPENDIX 10**

#### **BACHELOR OF APPLIED ELECTRONICS AND SOFTWARE TECHNOLOGY Absorbtion Scheme**

**Absorbtion scheme to transfer from Bachelor of Applied Electronics and Software Technology yearly pattern to from Bachelor of Applied Electronics and Software Technology semester pattern can be implemented as below:**

Student who has passed all the subjects of first year(yearly pattern) should be directly allowed to take admission to third semester of new course.

Student who has passed all the subjects of first year(yearly pattern) and second year (yearly pattern)should be directly allowed to take admission to fifth semester of new course.

Student who has passed all the subjects of first year, second year and third year (yearly pattern) should be directly allowed to take admission to seventh semester of new course.

In the interest of the students , students of old course(yearly pattern) may be allowed 1+5 chances to pass the subjects of the concerned year , after commencement of new course (semester pattern).

If an examinee failed to pass the under graduate programme within EIGHT successive years (for Eight semesters degree) from the date of his / her first admission to particular programme he/ she shall be declared as “Not Fit for the Course (NFC)” and he/ she will not be allowed to appear further for any previous examination of the course.

#### **EQUIVALENCE FOR YEARLY TO SEMESTER PATTERN**

<b>YEAR</b>	<b>PAPER</b>	<b>OLD</b>	<b>PAPER</b>	<b>NEW</b>	<b>REMARKS/ JUSTIFICATION</b>
Part-I	1-T-1	Applied Physics	1-T-1 2-T-1	Applied Physics	
	1-P-1	Applied Physics	1-P-1 2-P-1	Applied Physics	
	1-T-2	Applied Chemistry	1-T-2 2-T-2	Applied Chemistry	
	1-P-2	Applied Chemistry	1-P-2 2-P-2	Applied Chemistry	
	1-T-3	Electrical Engineering	1-T-4 2-T-4	Electrical Engineering	
	1-P-3	Electrical Engineering	1-P-4 2-P-4	Electrical Engineering	

	1-T-4	C Programming	1-T-3 2-T-3	Computer Programming I	
	1-P-4	C Programming	1-P-3 2-P-3	Computer Programming I	
	1-T-5	Engineering Mathematics-I	1-T-5 2-T-5	Engineering Mathematics I	
	1-T-6	Social Science	1-T-6 2-T-6	Social Science	
	1-P- 5	Engineering Drawing	1-P-6	Engineering Drawing I	
	1-P- 6	Communicative English	1-P-5	Communicative English	

YEAR	PAPER	OLD PAPER	NEW PAPER	REMARKS/ JUSTIFICATION
Part-II	2-T-1	Electron Devices & Circuits	3-T-1 4-T-1	Electron Devices & Circuits
	2-P-1	Electron Devices & Circuits	4-P-1	Electron Devices & Circuits
	2-T-2	Measurements &Measuring Instruments		Modified and advancement in the subject are covered in 5S-T-3 and 6S-T-3
	2-P-1	Measurements &Measuring Instruments		
	2-T-3	Engineering Mechanics	3-T-4 4-T-4	Engineering Mechanics

	2-P-3	Engineering Mechanics	3-P-4 4-P-4	Engineering Drawing II	
	2-T-4	Algorithms & Data Structures	--	----	
	2-T-4	Algorithms & Data Structures	----	----	
	2-T-5	Digital Electronics	3-T-2 4-T-2	Digital Electronics	
	2-P-5	Digital Electronics	3, 4-P-2	Digital Electronics	
	2-T-6	Engineering Mathematics-II	3-T-6 4-T-6	Engineering Mathematics	
	2-T-7	Linear Network Analysis	3-T-3 4-T-3	Linear Network Analysis	
	2-P-6	Workshop	3,4-P-5	Workshop	

YEAR	PAPER	OLD	PAPER	NEW	REMARKS/ JUSTIFICATION
Part – III	3-T-1	Instrumentation & Control Systems	5-T-3 6-T-3	Instrumentation & Control Systems	
	3-P-1	Instrumentation & Control Systems	5,6-P-3	Instrumentation & Control Systems	
	3-T-2	Linear Integrated Circuits	5-T-1 6-T-1	Linear Integrated Circuits	

	3-P-2	Linear Integrated Circuits	5,6-P-1	Linear Integrated Circuits	
	3-T-3	Microprocessor Techniques			Modified and advancement in the subject are covered in 5-T-2 and 6-T-2
	3-P-3	Microprocessor Techniques			Modified and advancement in the subject are covered in 5-P-2 and 6-P-2
	3-T-4	Communication Electronics	5-T-6 6-T-6	Communication Electronics	
	3-P-4	Communication Electronics			
	3-T-5	Object Oriented Programming	5-T-5 6-T-5	Computer Programming II	
	3-P-5	Object Oriented Programming	5-P-5 6-P-5	Computer Programming II	
	3-T-6	Digital Signal Processing	5,6-T-4	Digital Signal Processing	
	3-P-6	Digital Signal Processing	5-P-4 6-P-4	Digital Signal Processing	
	3-T-7	Computer Organisation			Modified and advancement in the subject are covered in 7-T-6

<b>YEAR</b>	<b>PAPER</b>	<b>OLD</b>	<b>PAPER</b>	<b>NEW</b>	<b>REMARKS/ JUSTIFICATION</b>
Part-IV	4-T-1	Circuit Design	7-T-1 8-T-1	Circuit Design	
	4-P-1	Circuit Design	7,8-P-1	Circuit Design	
	4-T-2	Advanced Programming	7-T-4 8-T-4	Advanced Programming	
	4-P-2	Advanced Programming	7,8-P-4	Advanced Programming	
	4-T-3	Digital Communication	5-T-6 6-T-6	Communication Electronics	
	4-T-4	Industrial Organisation & Management	7-T-5 8-T-5	Industrial Organisation & Management	
	4-T-5	Microcontrollers	5-T-2 6-T-2	Microcontrollers	
	4-P-5	Microcontrollers	6-P-2	Microcontrollers	
	4-T-6	System Design	7-T-3 8-T-3	System Design	
	4-P-6	System Design	7,8-P-3	System Design	
	4-P-3	Software Project	7,8-P-5	Project	
	4-P-4	Hardware Project	7,8-P-5	Project	

**NOTE:** There is no change in the teaching workload.

**Syllabus -- Eight Semesters**  
**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**SEMESTER I**

**1-T-1**

**APPLIED PHYSICS**

Scheme of Examination(Theory)
Sessional – 10
Paper - 40
Total - 50

**Unit I:** Motion of charges particles in uniform electric and magnetic fields, Thomson's method for determination of e/m of t1 electron, Electrostatic and magnetostatic focussi (qualitative idea); Bainbridge mass spectrograph, Cyclotron.

**Unit II :** Elementary ideas of C.R.O., electrostatic focusing in CRO,

**Unit III :** Crystals structure (cubic b.c.c. & f.c.c.), Atomic packing, Co-ordination numbers, Millers indices, Bragg's Law.

Formation of energy bands in solids(energy level approach) classification of solids in conductors, Insulators and semiconductors, Energy band diagram for silicon and germanium semiconductors, Fermi energy, Fermi level in intrinsic and extrinsic semiconductors, Dependence of Fermi level on impurity concentration and temperature, p-n junction, Transistor, Hall effect.

**Unit IV :** The quantum nature of radiation, Photoelectric effect, Compton effect, Wavelike character of particle, Davission and Germer's experiment, De Broglie wavelength, Heisenberg's uncertainty principle, Schroedinger's wave equation (qualitative aspect).

**Unit V :** Spontaneous and stimulated emission of radiation, Coherency Laser : Working principle, different types and application, Interference in thin films.

Books for reference :

1. Material Science and Engineering : V. Raghavan
2. Physics for students of science and Engineering Part II –David Haliday & Robert Resnick
3. Electronic Engineering material – John Allison (TMH)
4. Modern Physics – Sproul
5. Lasers and their application – M.L. Bessley (Tailer and France Ltd.)

**1-P-1**

**APPLIED PHYSICS**

Scheme of Examination;  
No examination in semester I

Practicals

1. Determination of the resistivity of a semiconductor .
2. Determination of the band gap in a semiconductor using a p-n junction diode in reverse bias condition.
3. A study of the characteristics of a thermistor.
4. A study of single beam cathode ray oscilloscope (CRO) :-
5. A study of dual trace CRO:
  - i) Familiarization

- ii) Determination of phase difference by direct method
- iii) Determination of phase and frequency using lissajous patterns.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

### **Semester I**

**1-T-2**

### **APPLIED CHEMISTRY**

Scheme of Examination (Theory)

Sessional – 10
Paper - 40
Total - 50

#### **Unit I : Structure of Molecules :**

Isomerism, classification, optical isomerism, enantiomerism and distereoisomerism, geometrical isomerism; Conformational analysis of ethane and butane.

#### **Unit II : Chemical bonding:**

Introduction, Types of bonds, valence bond and molecular orbital approaches. Physical properties and chemical constitution, dipole moment and parachor.

#### **Unit III : Air pollution and its control :**

Introduction, causes of air pollution. Types of air pollutants, harmful effects of air pollution on human health. Control of air pollution.

#### **Unit IV : Water treatment ;**

Impurities in natural water (suspended, dissolved and bacterial), soft water and hard water, causes of hardness. Disadvantages of use of hard water for domestic and industrial purposes. Treatment of drinking water by filtration, coagulation, sedimentation and sterilization. Treatment of hard water for industrial purposes by Lime-soda method and ion-exchange method.

#### **Unit V : Metals and Alloys ;**

Introduction, characteristics of metals, alloys, purpose of making alloys, classification. Corrosion and protection of metals.

**1-P-2**

### **APPLIED CHEMISTRY**

Scheme of examination (Practical)  
No examination in semester I

1. Preparation and analysis of soap.
2. To determine the total hardness of hard water.
3. To determine the temporary hardness of hard water.
4. Determination of surface tension of liquid using stalagmometer.
5. Preparation of buffer solutions and determination of pH of buffer solution

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

### **SEMESTER I**

Scheme of Examination(Theory)

Sessional – 10
Paper - 40
Total - 50

**1-T-3**

### **COMPUTER PROGRAMMING I**

#### **Unit I :**

Introduction, History of computers, Generation of computer.

**Unit II :**

Basic computer organization: input-output devices, Storage devices.

**Unit III :**

Relationship between hardware and software, System Software, Application Software

**Unit IV :**

Working with DOS, Basic DOS commands & advanced DOS commands.

**Unit V :Flow chart**

Books :Computer Fundamentals – P.K.Sinha

**1-P-3**

**COMPUTER PROGRAMMING I**

Scheme of Examination (Practical):  
No examination in semester - I

Minimum 5 practicals based on the theory syllabus.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER I**

**1-T- 4**

**ELECTRICAL ENGINEERING**

Scheme of Examination (Theory)  
Sessional – 10  
Paper - 40  
Total - 50

**Unit I** : Electric Circuits : Ohm's Law, Resistance in series, Resistances in parallel, Voltage source and current source (ideal and practical), Source Transformation

**Unit II** : Electric Circuits : Kirchoff's Current Law (KCL), Kirchoff's Voltage Law (KVL), Star-delta Transformation

**Unit III:** Magnetic Circuits: Magnetic field, Flux, Flux density, Magnetomotive force (mmf), Field intensity or magnetizing force, Magnetisation curve, Comparison of electric and magnetic circuits, Series and parallel magnetic circuits.

**Unit IV** : A.C. Circuits : Generation of single phase ac voltage and current, average and rms values, Form factor, Phasor representation of alternating quantity, Reactances and impedances,

**Unit V** : A.C. Circuits : A.C. through pure resistance, Inductance and capacitance, Power in ac circuit, Power factor, series and parallel as circuits, Resonance condition in series and parallel circuits.

Books :

1. A Text book of Electrical Technology : Volume I & II – B.L. Theraja
2. Worked Examples in Electrical Engineering – B.L. Theraja

**1-P-4**

**ELECTRICAL ENGINEERING**

Scheme of examination (Practical)  
No examination in semester I

1. Verification of Kirchoff's Current Law.
2. Verification of Kirchoff's Voltage Law.
3. Verification of Superposition Theorem.
4. Study of B-H Curve.

- ### 5. Verification of various relations in R-L series circuit.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER I  
ENGINEERING MATHEMATICS I**

1-T-5

## **ENGINEERING MATHEMATICS I**

Scheme of Examination (Theory)  
Sessional – 10  
Paper - 40  
Total - 50

## **Unit I : Complex Numbers**

Cartesian and polar form of complex numbers, D' – Movre's theorem, Exponential function of a complex variable, circular functions of a complex variable, Hyperbolic functions and their inverses

## **Unit II : Theory of Equations**

General properties of polynomial equations, Relation between roots and coefficients, Transformation of equations, Horner's method of synthetic division, Reciprocal equations

### **Unit III : Tangents and Normals**

Tangent and Normals, length of the tangent, subtangent, normal and subnormal

## **Unit IV : Expansion of functions**

## Maclaurins series, Taylor's theorem for functions of one variable

## **Unit V : Indeterminate Forms**

Indeterminate forms, L' Hospital Rule for evaluating the indeterminate forms.

## Books :

- 1 Higher Engineering Mathematics – Dr.B.S.Grewal
  - 2 A Text Book of Engineering Mathematics – N.P.Bali, Manish Goyal
  - 3 Engineering Mathematics – H.K.Das

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER I**

1-P-5

## **COMMUNICATIVE ENGLISH**

## Scheme of Examination (Practical) No examination in semester-I

Unit I

## **Listening Skills**

## **Importance of Listening Skills**

### **Developing Listening Skills**

## Sessional Work

### Social Work

#### Activities related to Listening Skills

**Situational listening Skills(Meeting, Dialogue, Seminars etc)**

Unit II

- 1) Voice training and expression  
*(Effective Public Speaking)*
  - 2) Non verbal communication: Body Language
  - 3) Paragraph writing on any given topic

4) Articles

### **Sessional Work**

1) Three minutes Presentation

2) Paragraph writing

### **Unit III**

1. Correction of Errors
2. Precis Writing
3. Comprehension Passage
4. Active and Passive Voice
5. *Goal Setting*

### **Sessional Work**

1. Precis Writing
2. Comprehension Passage

### **Unit IV**

1. Preposition
2. Advertisements
3. Publicity Handouts
4. *Time Management*

### **Sessional Work**

Grammar Exercise

Advertisement

### **Unit V**

1. Letter writing

- Formal letter
- Informal letter
- E-mail writing

2. *Team Building*

### **Sessional Work**

Letter writing

### **Reference Books:**

- 1.) Professional Communication Skills : By Pravin S.R.Bhatia, A.M Sheikh: S.Chand and company
- 2.) English Grammar Composition and Effective Business Communication - M.A. Pink, S.E.Thomas : S.Chand
- 3.) You can Win - Shiv Khera
- 4.) 7 Habits of Highly effective people : Steven Corey
- 5.) Enjoying Everyday English ,A.Rama Krishna Rao. Sangam Publication
- 6.) Lets Go home and other Stories ed. Meenakshi Mukherjee
- 7.) Applied English Grammar and Composition Dr. P.C.Das New Central Book Agency(P) Ltd

8.) Macmillan College Prose Edited by T. Sriraman

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER I**

**1-T-6**

**SOCIAL SCIENCE**

Scheme of Examination(Theory)  
Sessional – 10  
Paper - 40  
Total - 50

**Unit I : Industrial Psychology**

- i) Meaning and Definition
- ii) Scope

**Unit II : Fatigue in Industry**

- i.) Meaning and Definition of Fatigue
- ii) Internal environment
- iii) Factors creating fatigue
- iv) Techniques of lessening physical fatigue, Other Techniques
- v) External environment
- vi) boredom and monotony

**Unit III : Recruitment , Selection and training**

- i) Recruitment: sources of Recruitment
- ii) Selection: steps in selection process
- iii) Training: methods of training, Advantages of Training

**Unit IV : Indian Constitution and Federal System**

- i) Remarkable features
- ii) Federal System
- iii) A Quasifederal constitution

**Unit V : Fundamental Rights and Directive Principles of state policy**

- i) Fundamental rights
- ii) Characteristics
- iii) Fundamental Right enshrined in the constitution
- iv) The directive principles of state policy

**Bibliography**

- 1) A new Outlook into Social Science – S. Shabbir, A. M. Sheikh, Jaya Dwadashiwar, S. Chand, Delhi
- 2) T. Ramasamy, 2012, Principles of Management, Himalaya Publishing House, Mumbai.
- 3) Dr. Pratibha M. Siriya, 2011, Principles of Business Management, Sai Jyoti Publication, Nagpur.
- 4) King's, Personnel management & Industrial Relations, Harsha Rastogi, Delhi.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester I**

**1-P-6**

**ENGINEERING DRAWING I**

Scheme of Examination (Practical)  
No examination semester -I

Minimum 10 sheets based on syllabus :

1. Lettering, dimensioning, plane scales, diagonal scales, vernier scales and scale of chords.
2. Conic sections, general method of constructions, oblong method and concentric circle method for ellipse, rectangle method and tangent method for parabola, rectangular hyperbola, normal and tangent to the curves.

Books for reference :

1. Engineering Drawing by N.D. Bhatt
2. Engineering Drawing by A.R. Bapat.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**SEMESTER II**

**2-T-1**

**APPLIED PHYSICS**

Scheme of Examination(Theory)  
Sessional – 10  
Paper - 40  
Total - 50

**Unit I** : Magnetic Materials : Terminology and classification, Magnetic moments due to electron spin, Domain structure, Soft magnetic materials, Hard magnetic materials. Atomic Interpretation of diamagnetic paramagnetic, antiferromagnetic and ferromagnetic materials.

Ferromagnetic domains & polarization reversal, Alloys for core materials for rotating machines and transformers and for permanent magnets, non-magnetic steels. Non metallic magnetic materials, magnetic oxide, Thin film magnets, Magnetic materials for magnetic tape & memory devices.

**Unit II** : Dielectric Materials : Polarization Temperature & Frequency effects, electric breakdown, ferroelectric materials.

**Unit III** : Conductors & Resistors : Units and constants, The resistivity range, Resistivity of different materials. The free electron theory, conduction by free electrons, Conductor and resistor materials, Superconductors.

**Unit IV** : Semiconductors : Introduction, The energy gap in solids, Intrinsic Semiconductors, extrinsic semiconductors, Semiconductor materials & their fabrication, Some Semiconductor devices.

**Unit V** : Semiconductor material technology : Method of materials preparation purification and doping, introduction to process of manufacturing semiconductor devices transistor.

Books for references :

1. Material Science and Engineering : V. Raghavan

2. Physics for students of science and Engineering Part II –David Haliday & Robert Resnick
3. Electronic Engineering material – John Allison (TMH)
4. Modern Physics – Sproul
5. Lasers and their application – M.L. Bessley (Tailer and France Ltd.)

**2-P-1**

### **APPLIED PHYSICS**

Scheme of Examination (Practical)

Sessional - 20
Practical – 80
Total - 100

1. Study of the characteristics of germanium and silicon diodes and their comparison.
2. Study of the characteristics and verification of the stability action of zener diode.
3. Study of the input, output and transfer characteristics of a pnp-npn transistor in common base configuration.
4. Study of the input, output and transfer characteristics of a pnp/npn transistor in common emitter configuration.
5. Study of series and parallel combination laws for resistance and capacitance

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

### **Semester II**

**2-T-2**

### **APPLIED CHEMISTRY**

Scheme of Examination(Theory)

Sessional – 10
Paper - 40
Total - 50

#### **Unit I : Thermochemistry**

Introduction, heat of neutralization, heat of solution, heat of combustion, and their determination. Heat of reaction at constant volume and constant pressure. Laws of thermochemistry.

#### **Unit II :Chemical kinetics**

Introduction, molecularity, rate and order of reaction. Kinetics of first and second order reaction, their characteristics and methods for determination of order of reaction.

#### **Unit III :Fuels**

Introduction, classification, essential properties and selection of good fuels. Analysis of coal, refining of petroleum,synthetic fuels, biogas.

#### **Unit IV : Non-metallic Engineering materials**

- a) Lime: Definition, classification and properties of lime.
- b) Cement: Classification, manufacture of Portland cement. Chemistry of Portland cement, chemical composition, setting and hardening.

#### **Unit V :Thermal insulators**

Introduction, factors affecting thermal conductivity of insulators, characteristics of good thermal insulator, classification with examples. Glasswool, thermocole and cork.

#### **Books :**

1. Jain and Jain - Engineering Chemistry

2. Barrow G.M.	-	Physical Chemistry
3. Finer	-	Organic Chemistry
4. Bahl & Bahl	-	Organic Chemistry
5. Riggal	-	Industrial Chemistry
6. Martin Etal	-	Industrial and Manufacturing Chemistry.
7. Bahl & Tuli	-	Physical Chemistry

## 2-P-2

### APPLIED CHEMISTRY

Scheme of examination(Practical)

Sessional : 20

Practical : 80

Total : 100

1. Preparation of an Azo dye and its application.
2. To study the heats of neutralization of
  - a) Strong acid by a strong base
  - b) Week acid by a strong base
3. To study heat of solution of a salt in water
4. To study the first order kinetics of the hydrolysis of Methyl acetate in an acid medium
5. To study second order kinetics of reaction of  $K_2S_2O_8$  with KI

### BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER II

## 2-T-3 COMPUTER PROGRAMMING I

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total - 50

#### Unit I :

Constants, Variables and keywords, Their types, rules to form keywords, constants and variable names , range of various types of constants. Hierarchy of various C operations.

#### Unit II

Control structure – ‘if statement’, ‘if-else’ statement, logical operators and conditional operators, relational operators

#### Unit III

Loop control structure : ‘while’, ‘for loop’, ‘do-while’ loop, break, continues statement.

#### Unit IV :

Functions : What is functions, Passing values between function, slope rule of functions, Function declaration and prototypes, Call by value, Call by reference, Recursion. Data types.

#### Unit V : Arrays

What are arrays, pointers and arrays, 2-dimensional arrays, Pointers and 2-dimensional arrays, Array of pointers, What are strings, Standard library string function, Array of pointers to strings structure.

Books for reference :

1. Computer Fundamentals – P.K. Sinha
2. Let us C - Yashwant Kanetkar
3. Exploring C - Yashwant Kanetkar
4. Mastering Turbo C - Dennis Ritchie
5. Programming in C - E.Balguruswamy

6. LABVIEW for everyone - Pravis Pring.

**2- P-3 COMPUTER PROGRAMMING I**

Scheme of Examination(Practical)

Sessional – 20

Paper - 80

Total - 100

Minimum 10 programs based on syllabus

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER II**

**2-T- 4 ELECTRICAL ENGINEERING**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total - 50

**Unit I :** Single Phase Transformer

Introduction, Basic principle, Construction, Classification, EMF equation, Transformer on no-load and on load, Phasor diagram

**Unit II :** Single Phase Transformer

Equivalent circuit, Losses, Efficiency, Regulation, Open circuit test and short circuit test.

**Unit III :** DC Generator

Construction, Principles of operation, Classification, Emf equation, Losses and efficiency, Power stage diagram.

**Unit IV :** DC Motor

Construction, Principle of operation, Back emf, Voltage equation, Speed equation, Losses, Power stage diagram, Different types of motors.

**Unit V :** Single Phase Induction Motor

Construction, Principle of operation, Double field revolving theory, Types of single phase induction motor, split phase type, Capacitor start induction run & Capacitor start and run type.

Books :

1. A Text book of Electrical Technology : Volume I & II – B.L. Theraja
2. Worked Examples in Electrical Engineering – B.L. Theraja

**2-P-4 ELECTRICAL ENGINEERING**

Scheme of examination(Practical)

Sessional : 20

Practical : 80

Total : 100

1. Verification of various relations in R-C series circuit.
2. Verification of various relations in R-L-C series circuit.
3. Verification of various relations in R-L-C parallel circuit.
4. Study of single phase transformer
5. To open perform open circuit and short circuit test on single phase transformer.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

## **SEMESTER II**

**2-T-5**

### **ENGINEERING MATHEMATICS I**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total - 50

#### **Unit I : Matrices**

Addition, scalar multiplication and product of matrices, Elementary row operations, Rank and inverse of a matrix, Consistency and solution of a system of linear equations, Eigen values and eigen vectors

**Unit II :** Curvature and radius of curvature ( cartesian, parametric and polar form), centre of curvature and circle of curvature (cartesian form only)

#### **Unit III :** Partial differentiation

Functions of several variables of first and higher order, Homogeneous functions, Euler's theorem on homogeneous functions

#### **Unit IV :** Differential equations of first order and first degree

Variable separable form, homogeneous equations, linear equations and exact equations

#### **Unit V : Linear Differential Equations**

Linear differential equations with constant coefficient, method of variation of parameters

Books :

- 1) Higher Engineering Mathematics – Dr.B.S.Grewal
- 2) A Text Book of Engineering Mathematics – N.P.Bali, Manish Goyal
- 3) Engineering Mathematics – H.K.Das

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER II**

**2-P-5**

### **COMMUNICATIVE ENGLISH**

Scheme of Examination (Practical)

Sessional - 20

Practical – 80

Total - 100

#### **Unit I**

- 1)Bio-data /Resume
- 2)Job Application
- 3) Tenses
- 4) Direct and Indirect Speech

#### Sessional Work

Writing a Bio-data and Job Application

Grammar exercise

#### **Unit II**

- 1)Technical report writing
- Official Report Writing
  - Report on College Gathering
  - Newspaper Report

2) Stress Management

Sessional Work

Report Writing

**Unit III**

- 1) Dialogue writing
- 2) Group Discussion
- 3) Role Playing
- 4) Transformation of Sentences
- 5) *Health and Hygiene*

Sessional Work

Dialogue writing

Group Discussion

Role Playing

**Unit IV**

- Creating a write up for an event:

- 1) Notices
- 2) Press notes
- 3) Circulars
- 4) Memos

- Seminar Presentation Techniques

Sessional Work

Presenting a seminar on a selected topic

**Unit V**

- 1) Professional Manners and Etiquettes
- 2) Personal Interview Techniques
- 3) Meeting Agendas and
- 4) Minutes writing

Sessional Work

Mock personal interviews

Mock Professional situations

**Reference Books:**

1. Professional Communication Skills : By Pravin S.R.Bhatia, A.M Sheikh: S.Chand and company
2. English Grammar Composition and Effective Business Communication - M.A. Pink, S.E.Thomas : S.Chand
3. You can Win - Shiv Khera
4. 7 Habits of Highly effective people : Steven Corey
5. Enjoying Everyday English ,A.Rama Krishna Rao. Sangam Publication
6. Lets Go home and other Stories ed. Meenakshi Mukherjee

7. Applied English Grammar and Composition Dr. P.C.Das New Central Book Agency(P) Ltd
8. Macmillan College Prose Edited by T. Sriraman

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER II**

**2-T-6**

**SOCIAL SCIENCE**

Scheme of Examination(Theory)  
 Sessional – 10  
 Paper - 40  
 Total - 50

**Unit I : Communication**

- i) Meaning and Definition
- ii) Importance of Communication
- iii) Objectives of Communication
- iv) Principles of Effective communication
- v) Media of Communication

Ref. : T. Ramasamy, 2012, Principles of Management, Himalaya Publishing House, Mumbai

**Unit II : Industrial Sociology**

- i) Meaning and Definition
- ii) Scope Industrial Sociology
- iii) Nature of Industrial Sociology

**Unit III : Work Organisation**

- i) Meaning and Definition
- ii) Importance
- iii) Forms of industrial organization: Line Organization, Line and Staff Organization, Functional Organization
- iv) Authority – Meaning and definition
- v) Delegation of authority
- vi) Process of delegation

**Unit IV : Industrial culture in India**

- i) Modernization : impact on Indian society
- ii) Industrialisation: impact on Indian society
- iii) Urbanization : impact on Indian society

**Unit V : Leadership in Industry**

- i) Meaning and Definition
- ii) Characteristics of Leadership
- iii) Importance of Leadership
- iv) Leadership Styles

Reference Books. : 1.Dr. Pratibha M. Siriya, 2011, Principles of Business Management, Sai Jyoti Publication, Nagpur

- 2 A new Outlook into Social Science – S. Shabbir, A. M. Sheikh, Jaya Dwadashiwar, S. Chand, Delhi
- 3 T. Ramasamy, 2012, Principles of Management, Himalaya Publishing House, Mumbai.
- 4 Dr. Pratibha M. Siriya, 2011, Principles of Business Management, Sai Jyoti Publication, Nagpur.
- 5 King's, Personnel management & Industrial Relations, Harsha Rastogi, Delhi.

## **FIRST YEAR BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY Semester II**

**2-P-6**

### **ENGINEERING DRAWING I**

Scheme of Examination (Practical)

Sessional - 20
Practical - 80
Total - 100

Minimum 10 sheets based on syllabus :

1. Projection of points, Projections of lines inclined to both the planes and their applications, concept of traces.
2. Projection of planes.

Books for reference :

- 1.Engineering Drawing by N.D. Bhatt
- 2.Engineering Drawing by A.R. Bapat.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER- III**

**3-T-1**

### **ELECTRON DEVICES AND CIRCUITS**

Scheme of examination (Theory)

Sessional – 10
Paper - 40
Total - 50

1. Diode Circuits :

Diode as a circuit element, Clipping circuits, Rectifiers, Half wave, full wave bridge.

Filter circuits :

capacitor input, Inductor input, L-section, II-section, Multiple L-section,, Ripple factor and regulation etc.

2.Transistor Characteristics :

The junction transistor, transistor as an amplifier, the CE cut off region, CE saturation region, CE common emitter, Common collector, Comparison of transistor amplifier configurations.

### 3. Transistor at Low Frequencies :

Transistor hybrid model, h-parameters, analysis of transistor circuit using h-parameters, conversion of parameters for three transistor configurations, Milles Theorem, Common emitter hybrid model, Emitter resistance, High input resistance circuits.

### 4. Transistor at High Frequency :

The hybrid-pi common emitter transistor model : Hybrid-pi conductance, capacitance, the CE short circuit current gain, single stage CE transistor amplifier response, gain bandwidth product.

5.Bridges : Wheatstone bridge, Kelvin bridge, Inductance bridge (Maxwell's), Capacitance bridge (Hay's ), Wein bridge, Anderson bridge, Schering bridge

**3-P-1**

## **ELECTRON DEVICES AND CIRCUITS**

### Scheme of Examination (Practical):

No practical examination during this semester

Practical : any five practicals must be conducted

1. Characteristics of diode PN junction diode.
2. Study of full wave, half wave rectifier with the help of CRO, measurement of voltage, frequency ripple factor.
3. Study of rectifier with filters..
4. Study of efficiency of a rectifier, full wave and half wave.
5. Characteristics of transistor in CB, CE, CC mode.
6. Frequency response of CE amplifier with different coupling capacitor

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER III**

**3-T-2**

### **DIGITAL ELECTRONICS**

#### Scheme of Examination ( Theory)

Sessional – 10

Paper - 40

Total - 50

1. Number System & Codes : Binary, Octal, Hexadecimal, Floating point, Number Systems and their conversion methods, BCD, excess three code, Gray code, Hamming code, other four and five bit codes, ASCII code, ISCII code, Arithmetic operation and floating point arithmetic.
2. Boolean algebra : OR, AND, NOT, NOR, NAND, ex-OR operations, Negative and Positive logic, Laws of Boolean algebra, Reduction of Boolean functions. Universal building blocks, Conversion of circuits to universal logic.
3. Logic hardware : Digital integrated circuits, levels of integration, RTL, DTL, ECL, TTL, PMOS, NMOS, CMOS Logic and their characteristics, Warst case design, Interfacing of different families
4. Synchronous logic and registers : SR, JK, MSJK, T and D types of flip flops, static and dynamic shift registers, Reading and writing of registers, Tristate loci and its use in Computer, Ring Oscillators
5. Combinational Logic : Minimization techniques using Karnaugh's map and Tabular method and implementation

#### Reference Books :

1. Digital Electronics by Bothman
2. Digital Principles and Applications by Malvino and Leach
3. Designing with TTL by Texas Instruments

4. System Design by Sonde
5. Digital Electronics and Logic Design – Nair

**3-P-2**

## **DIGITAL ELECTRONICS**

Scheme of Examination (Practical)  
No practical examination during this semester

Practicals :

1. Verification of truth table for NAND,NOR,AND,OR,NOT gates
2. Verification of NAND and NOR gates as universal building block.
3. To study SR, , D flip flop using NAND gate
4. To study RS, D FF using NOR gate
5. To study JK MS FF.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER III**

**3- T- 3**

## **COMPUTER PROGRAMMING II**

Scheme of examination (Theory)  
Sessional – 10  
Paper - 40  
Total - 50

**Unit I :**

Introduction to object oriented programming, software evolution, procedure oriented programming, object oriented programming, paradigm, benefits of OOPs.

**Unit II:**

Declaration and Constants: Declaration, scope, lifetime, types, derived types, void, pointers, arrays, structures, references. Literals, integer constants, floating point constants, character constants, string literals.

**Unit III:**

Expression and Statements, definition and examples of expression and statements, operators, parentheses, evaluation order, increment and decrement, bitwise logical operators, type conversion, selection statements, iteration statements and jump statements.

**Unit IV:**

Functions and Files, linkage, header file, libraries. Functions, declaration, definition, argument passing, call by value, call by reference. function overloading.

**Unit V:**

Classes, introduction and overview, classes and members, member function, friends, nested class, static members, structures and unions, objects.

Text Book: The C++ programming Language by Bjarne Stroustrup, Addison Wesley Publication

**3 –P -3**

## **COMPUTER PROGRAMMING II**

Scheme of examination (Practical)  
No practical examination during this semester

List of Practicals:

1. Finding size of different data types
2. Implementation of while and do-while loop
3. Implementation of for loop
4. Implementation of switch-case

5. Implementation of break and continue statements

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER III**

**3-T-4**

**ENGINEERING MECHANICS**

Scheme of examination ( Theory)

Sessional – 10

Paper - 40

Total -50

**Unit I:** Basic Concepts and force systems :

Basic concepts units, scalars and vectors, laws of mechanics, position vector, force, moment and couple, Coplanar force systems, introduction, coplanar forces, resultant of a force system, resultant of two forces, resultant of concurrent forces using analytical and graphical methods.

**Unit II:** Non-concurrent force systems:

Resultant of non-concurrent, non-parallel forces (Graphical method).

**Unit III:** Non-concurrent force systems:

Resultant of non-concurrent and parallel forces (Analytical method).

**Unit IV:** Equilibrium of forces:

Equilibrium of forces systems, conditions of equilibrium, support reactions. Equilibrium of three force system, Lami's theorem, equilibrium problems (Analytical Method).

**Unit V:** Friction

Introduction, theory of friction, angle of friction, friction of inclined plane, screw friction, wedge friction and ladder friction.

Books for reference:

- 1) Applied Mechanics by R.S. Khurmi  
Askhedkar, Kulkarni

**3-P-4**

**ENGINEERING DRAWING II**

Scheme of examination (Practical)

No practical examination during this semester

Minimum 5 sheets based on syllabus :

1. Projection of simple solids such as cylinders, cones, prisms and pyramids with varying positions of axes and ground lines.
2. Introduction to sectional views – Orthographic views, Sectional Views, Full section, half section, revolved section, removed section, Offset section, broken section.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER III**

**3-T-5**

**LINEAR NETWORK ANALYSIS**

Scheme of examination(Theory)

Sessional – 10

Paper - 40

Total - 50

**Unit I** :Voltage & Current Sources (Dependent & independent), Kirchoff's Current Law (KCL), Kirchoff's Voltage Law (KVL), Source transformation.

**Unit II** :Mesh/Loop Analysis (DC excitation and AC excitation), Matrix Method of Analysis for complicated Electrical Networks.

**Unit III** :Nodal Analysis (DC excitation and AC excitation), Matrix Method of Analysis for complicated Electrical Networks.

**Unit IV** : Network TopologyDefinitions of graph, Oriented graph, Tree, Cotree, Link, Path, Properties of a tree and graph, Incidence matrix, Numericals on formation of incidence matrix.

**Unit V** :Ladder circuits, T to Pi and Pi to T transformation of complex networks, Bridge networks  
Books :

1. Network Analysis : Kelkar and Pandit
- 2 Network Analysis : Van Valkenburg
3. Network Theory : A Usha Nandini & A. Aravamudan

### 3-P-5

### WORKSHOP

Scheme of examination (Practical)

No practical examination during this semester

A ) Carpentry :

Identifying some common types of timber and their engineering application, Names and uses of Carpenter's Tools , various types of wood working joints and their application.

**Students will carry out one job using carpentry**

B) Practicals based on renewable energy sources

## BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER III

### 3-T-6

### ENGINEERING MATHEMATICS II

Scheme of examination (Theory)

Sessional – 10

Paper - 40

Total - 50

Unit I : Double and Triple Integrals

Evaluation of double and triple integrals, change of order of integration in double integrals

Unit II : Differentiation of vectors, Gradient, Divergence and Curl

Differentiation of vectors, curves in space, velocity and acceleration, vector operator del, Gradient of scalar point function and divergence of vector point function, Irrotational and solenoidal vector fields

Unit III : Integration of vectors

Line integral of vector functions, independence of path, surface integrals, volume integrals

Unit IV : Green's theorem, Divergence theorem and Stokes theorem

Statement and examples on Green's theorem, divergence theorem and Stokes theorem.

Unit V : Laplace Transforms

Laplace transformation of standard functions and periodic functions, Theorems of Laplace transform (Application only), Method of finding inverse transforms.

Books :

- 1) Higher Engineering Mathematics – Dr.B.S.Grewal

- 2) A Text Book of Engineering Mathematics – N.P.Bali, Manish Goyal
- 3) Engineering Mathematics – H.K.Das

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER IV**

**4-T-1**

**ELECTRON DEVICES AND CIRCUITS**

Scheme of examination ( Theory)

Sessional – 10

Paper - 40

Total - 50

1. Transistor Biasing and Thermal Stabilization :  
The operating point, biasing stability, types of biasing circuits, stability factor, comparison of different biasing circuits, bias compensation, thermal runaway, thermal stability.
2. Hybrid Parameter : With emphasis on CE mode.
3. Field Effect Transistor & other Devices :  
J-FET, J-FET V-I characteristics, the J-FET small signal model, MOS FET, Low frequency common source and common drain amplifiers, biasing the FET, CS and CD amplifier gain and impedance calculations.
4. Unijunction transistor, UJT characteristics, UJT as a switch, UJT Relaxation oscillator; Four layer diode, Silicon controlled rectifier characteristics and applications.
5. Zener, diode, Schottky diode, Tunnel diode, Photodiode, Light emitting diodes-characteristics and applications.

Text Books :

1. Integrated Electronics – Analog and Digital Circuits and Systems – Millman, Hakkias, McGraw Hill Book Co.
2. Electronic Devices and Circuits – Millman, Hakkias, McGraw Hill Book Co.

Reference Books :

1. Electronics devices & Circuits – Bell Prentice Hall International.
2. Electronic Principle 4<sup>th</sup> Ed. – Malvino, McGraw Hill.

**4-P-1**

**ELECTRON DEVICES AND CIRCUITS**

Scheme of examination (Practical)

Sessional- 20

Practical – 80

Total - 100

Practicals :

1. Characteristics of UJT.
2. Study of UJT oscillation.
3. Study of SCR.
4. Characteristics of photo diode.
5. Characteristics of FET

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER IV**

**4-T-2**

**DIGITAL ELECTRONICS**

Scheme of examination (Theory)

Sessional – 10

Paper - 40

Total - 50

1. Counters : Synchronous and asynchronous counters, Binary, modulo counters, Programmable and presentable up/down counters, calculation of maximum operation frequency of counters, Realization of counters using ICs.
2. Decoders, Drivers, Encoders, Multiplexers, Demultiplexers, Buffers, Latches, Transceivers, A/D and D/A converters and their design, bar code and bar code readers, 7-segment and alpha-numeric displays.
3. Various types of A/D & D/A convertors & their design.
4. Function realization : Using different ICs : e.g. Digital clock.
5. Time & Frequency counter.

Reference Books :

- 1 Digital Electronics by Bothman
3. Digital Principles and Applications by Malvino and Leach
4. Designing with TTL by Texas Instruments
5. System Design by Sonde
6. Digital Electronics and Logic Design – Nair

**4-P-2**

## DIGITAL ELECTRONICS

Examination Scheme (Practical)
Sessional – 20
Practical - 80
Total - 100

Practicals :

1. To design Modulo “n” counters using flip-flops.
2. To design Module “n” counters using ICs like 7490.
3. To design an up/down counter using ICs like 7493.
4. To design an up/down counter using ICs like 7492.
5. Study of BCD to 7 segment convertor.
6. Study of DAC.

## BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER IV

**4-T-3**

## COMPUTER PROGRAMMING II

Scheme of examination (Theory)

Sessional – 10
Paper - 40
Total - 50

**Unit I :**

Constructor and Destructors: definitions, overloading of constructors, destructors.

**Unit II :**

Derived Class: member functions, constructors and destructors, class hierarchies, virtual functions, Abstract classes. Multiple inheritance, virtual base class.

**Unit III:**

Operator Overloading: Operator functions, binary and unary operators, predefined meanings of operators. User defined type conversion.

**Unit IV:**

Virtual functions and polymorphism.

**Unit V:**

Error Handling: Discriminations of exceptions, naming of exceptions, grouping of exceptions. Exceptions that are not errors. uncaught exceptions.

Text Book: The C++ programming Language by Bjarne Stroustrup, Addison Wesley Publication

**4-P-3**

**COMPUTER PROGRAMMING II**

Scheme of Examination (Practical):

Sessional – 20
Practical- 80
Total - 100

1. Implementation of parameter call by value
2. Implementation of parameter call by reference
3. Implementation of class and objects
4. Implementation of overloading of constructor
5. Implementation of multiple inheritance

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER IV**

**4-T-4**

**ENGINEERING MECHANICS**

Scheme of examination (Theory)

Sessional – 10
Paper - 40
Total - 50

**Unit I:** Center of gravity:

Introduction, centroids of common shapes of area, centroid of composite plane figures.

**Unit II:** Moment of Inertia

Introduction, area moment of inertia, moment of inertia for standard shapes,(ellipse should be excluded), parallel and perpendicular axis theorem, polar moment of inertia.

**Unit III:** Analysis of Trusses:

Support reactions, method of joints, and method of sections

**Unit IV:** Analysis of Trusses:

Using Maxwell diagram

**Unit V:** Virtual Work:

Principal of virtual work, applications of the principal of virtual works to simple problems on beams, lifting machines and framed structures.

**4-P-4**

**ENGINEERING DRAWING II**

Scheme of examination (Practical)

Sessional - 20
Practical – 80
Total - 100

Minimum 5 sheets based on syllabus :

1. Section of solids such as cylinders, cones, prisms and pyramids with varying position of axes and ground lines.
2. Introduction to isometric projections.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER IV**

**4-T-5**

**LINEAR NETWORK ANALYSIS**

Scheme of examination (Theory)  
Sessional – 10  
Paper - 40  
Total - 50

**Unit I :**

Network Theorems

Superposition Theorem, Reciprocity, Maximum Power Transfer Theorem (dc and ac circuits)

**Unit II :**

Thevenin Theorem, Norton Theorem (dc and ac circuits )

**Unit III :**

Differential Equations

First order and second order, general and particular solution, Time constant, Integrating factor, Solution using Laplace transformation

**Unit IV :**

Two port Networks

Relationship of two port variables, Open circuit impedance parameters, Short circuit admittance parameters, Relationship between parameter sets.

**Unit V :**

Duality : dual network, method to draw a dual network, dual network formation for dc and ac circuits.

Books :

1. Network Analysis : Kelkar and Pandit
2. Network Analysis : Van Valkenburg
3. Network Theory : A Usha Nandini & A. Aravamudan

**4-P-5**

**WORKSHOP**

Scheme of examination(Practical)  
Sessional – 20  
Practical - 80  
Total - 100

a) PCB Designing

b) Fitting :

Use of fitting tools, equipment and measuring instruments, practice in the method of marking and use of measuring instruments, chipping, filling, drilling, tapping, scraping operations

**Students will carry out one job using fitting**

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER IV**

**4-T-6**

**ENGINEERING MATHEMATICS II**

Scheme of Examination (Theory)
Sessional – 10
Paper - 40
Total - 50

**Unit I :** Series expansion, Maxima and Minima of function of two variables

Taylor's theorem, Maxima and Minima, Lagrange's method of undetermined multipliers

**Unit II :** Fourier Series

Euler's Formulae, Fourier expansion, functions having points of discontinuity, change of interval, Expansion of odd and even periodic functions, Half range series

**Unit III :** Fourier Transform

Fourier Integral theorem ( only statement), Fourier sine and cosine integral, Fourier transform, Fourier sine and cosine transforms

**Unit IV :** Z-Transform

Definition of z-transform, properties of z-transform, z-transform of standard sequences, Inverse z-transform

**Unit V :** Partial Differential Equation

Order of partial differential equation, method of forming partial differential equations, solution of partial differential equation by method of separation of variables.

Books :

- 1) Higher Engineering Mathematics – Dr.B.S.Grewal
- 2) A text Book of Engineering Mathematics – N.P. Bali, Manish Goyal
- 3) Engineering Mathematics – H.K.Das

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER V**

**5-T-1**

### **LINEAR INTEGRATED CIRCUITS**

Scheme of Examination(Theory)
Sessional – 10
Paper - 40
Total - 50

**Unit I :**

Multistage Amplifiers :Classification of amplifiers, Distortion in amplifiers, frequency response of an amplifier, step response of an amplifier, R-C coupled amplifiers – Low frequency response, High frequency response of two cascaded CE transistor stages.

**Unit II :**

Feedback AmplifiersThe feedback concept, general characteristics of negative feedback amplifiers – input resistance, output resistance voltage gain, current gain, method of analysis of feedback series, current – shunt feedback amplifier, frequency responses of feedback amplifier.

**Unit III :**

Large Signal amplifiers :Class A amplifier, harmonic distortion, transformer coupled audio power amplifiers, efficiency

**Unit IV :**

Power amplifiers.

Push-pull amplifiers and their efficiency : class AB and class B operation, complimentary symmetry push-pull amplifier.

**Unit V :** Oscillators

General principle, sinusoidal oscillators – phase shift oscillator Wein bridge oscillator, crystal oscillator, frequency stability of oscillator

**Text Books :**

1. Integrated Electronics – Analog & Digital circuits & Systems by Millman and Halkias, MC Graw Hill Book Co.
2. OP-Amps and Linear Integrated Circuits by Ramakant Gaikwad, Prentice Hall of India Pvt. Ltd.
3. Practical Transistor Circuits Design and Analysis by Gerald Williams, Tata McGraw Gill.

**Reference Book :**

1. Introduction to Electronics design by Mitchel and Mitchel, Prentice Hall of International Inc.

**5-P-1**

### **LINEAR INTEGRATED CIRCUITS**

Scheme of Examination (Practical)

No practical examination during this semester

**Practical :**

1. RC coupled amplifier.
2. Direct coupled amplifier.
3. Feedback amplifier.
4. Frequency response of transistor amplifier.
5. Phase Shift oscillator.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

### **Semester V**

**5-T-2**

### **MICROCONTROLLERS**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total -50

**Unit I :** Introduction to 8 and 16 bit microprocessors. Architecture. Characteristic features, Assembly language programming concepr, addressing modes

**Unit II :**

8051 Architecture : 8051 microcontroller hardware.

Oscillator and clock

CPU registers, internal memory, internal RAM, SFR, Internal ROM

I/O pins, ports, circuits

**Unit III** Interfacing external memory

Counter & timer

Serial data Input/Output

Interrupts

**Unit IV :**Instruction set – Assembly language syntax

**Unit V:**Assembly language programming,

**5-P-2**

### **MICROCONTROLLERS**

Scheme of Examination(Practical):

No practical examination during this semester

Minimum five practicals based on syllabus.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER V**

**5-T-3**

### **INSTRUMENTATION AND CONTROL SYSTEMS**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total - 50

**Unit I :** Concept of accuracy & precision, types of errors & their remedies, statistical analysis, standard deviation, variance, normal or Gaussian curve of errors , Generalised instrumentation system

**Unit II :** Transducers : Classification of transducers, desirable characteristics, working principle of resistive, capacitive, inductive, piezoelectric transducers, linear variable differential transformer (LVDT)

**Unit III :** Strain Gauge : Theory of strain gauges, gauge factor, types: wire wound strain gauge-unbonded & bonded, foil strain gauges, semiconductor strain gauges.

**Unit IV :** Temperature Measurement : Electrical resistance thermometer, metallic resistance thermometer, thermistors, thermocouples- thermoelectric laws, construction.

**Unit V :** Control System Components : Servomotors (AC & DC), Potentiometer, Stepper Motor, Synchros (Transmitter-Receiver), Actuators, Relays, Proximity Sensors

Books : 1) A Course in Electrical and Electronic Measurement and Instrumentation

A.K.Sawhney

2) Electronic Instrumentation and Measurement Techniques

William David Cooper.

3) Feedback Control Systems – Bhide, Shinde, Satyanarayan

4) Control Systems Engineering – Nagrath, Gopal

5) Modern Control Engineering - K. Ogata

**5 –P - 3**

### **INSTRUMENTATION AND CONTROL SYSTEMS**

Scheme of Examination (practical);

No practical examination during this semester

Atleast 5 practicals based on the syllabus.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER V**

**5-T-4**

### **DIGITAL SIGNAL PROCESSING**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total - 50

**Unit I :**

Introduction : Signal, system, Analog signal processing (ASP) , Block diagram of digital signal processing (DSP), Signal Processing – Analog vs. Digital

**Unit II :**

Application of Digital Signal Processing – Speech Processing, Image Processing.

**Unit III :**

**Signals :** Classification of signals, characteristics of continuous time and discrete time signals, discrete time signal representation

**Unit IV :**

Singularity functions – unit impulse, unit step, unit ramp, exponential and sinusoidal; various operations on discrete time signal.

**Unit V :**

Systems: classification of system, - continuous time and discrete time systems, classification of discrete time systems

**5-P- 4            DIGITAL SIGNAL PROCESSING**

Scheme of Examination (Practical)

No practical examination during this semester

Minimum five Practicals based on above syllabus using MATLAB.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER V**

**5- T-5            ALGORITHMS AND DATA STRUCTURES**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total - 50

**Unit I :** Introduction to Algorithm: Analysis of algorithms. The asymptotic notations, features of structured program, recursion, top-down and bottom-up programming techniques, divide and conquer strategy.

**Unit II :** Arrays: Axioms. Ordered lists, Sparse matrices.

**Unit III :** Stacks: Fundamentals, evaluation of expressions, infix, postfix and prefix notations. Application of stacks. Multiple stacks.

**Unit IV:** Queue: Fundamentals, circular queue. priority queue. application of queues. Multiple queues.

**Unit V :** Linked Lists: Single linked list, linked stacks and queues, the polynomial addition, example on linked list

Text Book: Algorithm & Data Structure by Ellis Horowitz

**5-P-5            ALGORITHMS AND DATA STRUCTURES**

Scheme of examination (Practical)

No practical examination during this semester

Atleast Five practicals based on above syllabus.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER VI**

**5-T-6            COMMUNICATION ELECTRONICS**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total -50

**Unit I :**

**Modulation & Demodulation :**

AM, FM : Importance, broadcasting and reception, modulation, need for modulation types of modulation, amplitude modulation, modulation factor, its importance sideband frequencies, power in AM waves, limitations, frequency modulation – mathematical analysis advantages, demodulation, importance, diode detectors.

**Unit II:**

Noise : Thermal noise, partition noise, Model's noise figure, noise fig. Of cascaded networks, noise calculation in an amplifier.

**Unit III :****Receivers & Transmitters :**

Block diagram of transmitter, function of each block, AM receivers, block diagram, function of each block, super heterodyne receiver, block diagram, function of each block block diagram of FM receiver.

**Unit IV :**

Transmission : transmission lines, antenna, Basic action of antenna, length & resonance, radiation pattern, impedance matching, antenna feeders, types of transmitting and receiving antennas.

**Unit V :****Wave Propagation :**

Different path and propagation, characteristics of ground wave, sky wave, ionosphere, different layers and their characteristics, their effect on propagation, skip distance, skip zone, critical angle, virtual height, fading of signal, propagation charges of broadcast frequency short wave.

Books : 1) Electronic Communication – Kennedy

2) Electronic tube Circuit – Seely

3) Communication Electronics – Deshpande, Rangole

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER VI**

**6-T-1****LINEAR INTEGRATED CIRCUITS**

Scheme of Examination(Theory)

Sessional – 10

Paper - 40

Total -50

**Unit I :****Operational Amplifier :**

Basic operational amplifier, differential amplifier – common mode gain, differential mode gain, CMRR, emitter coupled differential amplifier.

**Unit II :**

IC operational amplifier – op amp equivalent circuit, op amp. Parameters and their measurements, analysis of typical op amp. 741 IC, frequency response of op amp., compensation.

**Unit III :**

Operational amplifier circuits - IC as analog system building blocks

Inverting, non-inverting operation, summing and difference amplifier, analog integration and differentiation.

Precision AC/DC converters, Logarithmic amplifiers, Waveform generators, regenerative comparators.

**Unit IV :**

Unregulated power supplies with filters and regulated power supplies

**Unit V :**

Switch, speed of FET, Transistor Switch, Switching Algebra, various Switching Circuits

Text Books :

1. Integrated Electronics – Analog & Digital circuits & Systems by Millman and Halkias, MC Graw Hill Book Co.
2. OP-Amps and Linear Integrated Circuits by Ramakant Gaikwad, Prentice Hall of India Pvt. Ltd.
3. Practical Transistor Circuits Design and Analysis by Gerald Williams, Tata McGraw Gill.

Reference Book :

1. Introduction to Electronics design by Mitchel and Mitchel, Prentice Hall of International Inc.

**6-P-1**

**LINEAR INTEGRATED CIRCUITS**

Scheme of Examination (Practical)

Sessional - 20

Practical – 80

Total - 100

1. Basic Op-Amp circuits-Inverting amp., Non-inverting amplifier, adder, subtractor, integrator, differentiator, precision rectifier.
2. Complementary symmetry push pull amplifier.
3. 741 as inverting amplifier.
4. Differential amplifiers.
5. Voltage regulators – output characteristics, protection circuits.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

Semester VI

**6-T-2**

**MICROCONTROLLERS**

Scheme of examination (Theory)

Sessional - 10

Paper: – 40

Total - 50

**Unit I :**

Interfacing external memory and memory space decoding,

**Unit II:**

Expanding I/O, Interfacing I/O devices ,I/O mapping,memory-mapped I/O.

**Unit III :**

Applications : Interfacing display, Keyboard

**Unit IV:**

Applications : Serial communication, Interfacing A/D, D/A converter.

**Unit V:**

Writing C program for microcontroller

Books :

1. The 8051 microcontroller: Architecture, Programming & Applications : Kenneth J. Ayala.
2. 8051 series microcontroller handbook - Atmel
3. Microcontrollers and microprocessors - Vibhute & Barole

**6-P-2**

## **MICROCONTROLLERS**

Scheme of Examination (Practical)

Sessional	- 20
Practical	- 80
Total	- 100

Atleast five practicals based on syllabus.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY SEMESTER VI**

**6-T- 3**

## **INSTRUMENTATION AND CONTROL SYSTEMS**

Scheme of Examination (Theory)

Sessional – 10
Paper - 40
Total -50

### **Unit I :**

Introduction to Control Systems : Definition of control system, Requirements of a good control system, Open loop and closed loop systems, Comparison of open loop and closed loop systems, Effect of feedback, Classification of control systems, Transfer Function

### **Unit II :**

Block Diagram : Transfer function, Properties, Advantages & Disadvantages, Block diagram Algebra, Rules for block diagram reduction, Numericals on Block Diagram reduction.

### **Unit III :**

Signal Flow Graph : Introduction, Definition, Properties, Mason's Gain formula, Steps for solving signal flow graph, Numericals.

### **Unit IV :**

Stability Analysis : Concept of stability, Location of poles and stability, Relative stability, Hurwitz Stability criterion, Routh Stability criterion, Routh's criterion special cases.

### **Unit V :**

Measurement of liquid level, pressure and flow

Books : 1) A Course in Electrical and Electronic Measurement and Instrumentation

A.K.Sawhney

2) Electronic Instrumentation and Measurement Techniques

William David Cooper.

3) Feedback Control Systems – Bhide, Shinde, Satyanarayan

4) Control Systems Engineering – Nagrath, Gopal

5) Modern Control Engineering - K. Ogata

**6-P-3**

## **INSTRUMENTATION AND CONTROL SYSTEMS**

Scheme of Examination (Practical)

Sessional – 20
Practical - 80
Total - 100

Atleast 5 practicals based on the syllabus.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

**6-T- 4**

**SEMESTER VI  
DIGITAL SIGNAL PROCESSING**

Scheme of Examination(Theory)

Sessional –	10
Paper -	40
Total -	50

**Unit I :**

Linear time invariant (LTI) system : classification – FIR and IIR system, analysis using convolution sum – graphical, mathematical and tabulation methods, properties of convolution sum, cross correlation.

**Unit II :**

Frequency analysis of discrete time signal : Fourier representation of signals – Fourier series, Fourier transform, discrete time Fourier series (DTFS)

**Unit III :**

Discrete time Fourier transform (DTFT) , Discrete Fourier transform (DFT) and Inverse Discrete Fourier transform (IDFT), DFT and IDFT of discrete time signals.

**Unit IV :**

Sampling , Aliasing, Sampling Theorem, Nyquist sampling rate, Antialiasing Filter, Analog to Digital converter (ADC) and Digital to Analog converter (DAC).

**Unit V :**

Digital filters : Introduction, Advantages and disadvantages over analog filter, types – IIR and FIR filters.

**Text Books :**

1. Digital Signal Processing : N.G. Palan (Tech – Max Publications)
2. Digital Signal Processing : C. Ramesh Babu Durai (Laxmi Publications)
3. Digital Signal Processing : Proakis and Manolakis (PHI Pub.)

**Reference Books :**

1. Theory and Application of Signal Processing by Rabiner & Gold (PHI Pub.)
2. Digital Filter Design and Analysis by Andreas Antoniou (TMH Pub.)

**6-P- 4**

**DIGITAL SIGNAL PROCESSING**

Scheme of Examination(Practical)

Sessional-	20
Practical-	80
Total -	100

Minimum five Practicals based on above syllabus using MATLAB.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

**6- T- 5**

**SEMESTER VI  
ALGORITHMS AND DATA STRUCTURES**

Scheme of Examination(Theory)

Sessional –	10
Paper -	40
Total -	50

**Unit I :**

Advanced Linked Lists: Equivalence relation, circular linked list, doubly linked list, generalized linked list.

**Unit II:**

**Internal Sorting:** Sorting methods, internal and external sorting. bubble sort, insertion sort, selection sort, quick sort. Comparison with respect to their efficiency.

**Unit III:**

**External Sorting:** Storage devices, sorting with disks, k-way merging, sorting with tapes, balanced merge sort.

**Unit IV:**

**Searching Methods:** Sequential, binary, indexed searched, hashing techniques and collision handling mechanism.

**Unit V:**

**Trees:** Definition and terminology, representation. tree traversal examples on trees. binary tree, binary search tree, B tree and B++ trees.

Text Book: Algorithm & Data Structure by Ellis Horowitz

**6-P-5**

**ALGORITHMS AND DATA STRUCTURES**

Scheme of Examination (Practical)

Sessional	- 20
Practical	- 80
Total	- 100

Atleast five practicals based on above syllabus.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER VI**

**6-T-6**

**COMMUNICATION ELECTRONICS**

Scheme of Examination(Theory)

Sessional	- 10
Paper	- 40
Total	- 50

**Unit I:**

Sampling Theorem, PCM, quantization noise, non-uniform quantization, transmission bandwidth

**Unit II :**

Digital modulation techniques: PCM,DM,DPCM,ADM,PSK,FSK,QPSK,MSK, Comparison of modulation systems

**Unit III :**

Spread Spectrum Communication

Pseudonoise (PN) sequences, DSSS, FHSS, TDMA, CDMA

**Unit IV:**

Information and error correcting codes:

Block codes, syndrome decoding, convolution codes, code tree, measure of information, entropy, mutual information, channel capacity.

**Unit V :** Application of digital communication

Fibre optic communication:

Principles of optical communication, fibre sources and detectors, losses in fibres, connectors and splicers And

Satellite Communication:

Satellite orbits, geostationary satellites, satellite frequencies, earth stations, applications of geostationary satellites.

Books : 1) Electronic Communication – Kennedy  
2) Electronic tube Circuit – Seely  
3) Communication Electronics – Deshpande, Rangole

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester- VII**

**7-T-1**

**CIRCUIT DESIGN**

Scheme of Examination (Theory)

Sessional –	10
Paper -	40
Total -	50

1. Design of various types of power supply using 723.
2. Design of various types of power supply using 317, 337
3. Design of S.M.P.S.
4. Design of astable, monstable multivibrator using 555.
5. Design of relay drive switching amplifier using low power transistor.

**7-P-1**

**CIRCUIT DESIGN**

Scheme of Examination(Practical)

No practical examination during this semester I

Minimum five practicals based on syllabus.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester VII**

Scheme of Examination(Theory)

Sessional –	10
Paper -	40
Total -	50

**7-T-2 ADVANCED MICROCONTROLLERS**

Unit I: AVR microcontroller : History and features, Block Diagram

Unit II: AVR architecture

Unit III: Instruction set , addressing modes,assembly language programming

Unit IV: Branch and Call Instructions, delay loops

Unit V: AVR I/O port programming

**7-P-2 ADVANCED MICROCONTROLLERS**

Scheme of Examination(Practical)

No practical examination during semester VII

Minimum 10 programs should be conducted

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester VII**

**7-T-3**

**SYSTEM DESIGN**

Scheme of Examination (Theory)

Sessional – 10

Paper - 40

Total - 50

1. Design and implementatuation of atleast ten systems based on microcontroller
2. Serial Communication protocols

**7-P-3**

**SYSTEM DESIGN**

**Scheme of Examination (Practical)**

No practical examination during this semester

Minimum five practicals based on the syllabus

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester VII**

**7- T -4**

**ADVANCED PROGRAMMING**

Scheme of Examination (Theory)

Sessional -10

Paper- 40

Total- 50

**Unit I:** Data types, Variables and Arrays, integers, Floating points, Characters, Boolean, variables, type conversion and casting, arrays, operators, arithmetic, bitwise, relational, Boolean, assignment operators.? operator, operator precedence, parentheses.

**Unit II:** Control Statements: Selection statements, if, switch. Iteration statements, while, do-while, for, for-each, nested loops. Jump statements, break, continue.

**Unit III:** Classes: fundamentals, declaring objects, assigning object reference variables. Methods, constructors, Garbage collection, overloading methods, overloading of constructors. Objects as parameters. Argument passing, returning objects. Recursion. Access control. Static and Final access control. Nested and Inner classes. Storage classes. Command line arguments

**Unit IV:** Inheritance. Basics of inheritance, using super, multilevel hierarchy, method overloading. Abstract classes. final with inheritance. Object class.

**Unit V:** Packages and interfaces. Packages, access protection, importing packages, interfaces.

Text Book: Java: The Complete Reference by Herbert Schildt, TMG Publication

**7-P- 4**

**ADVANCED PROGRAMMING**

Scheme of Examination (Practical)

No practical examination during this semester

**List of Practicals**

1. Finding size of different data types
2. Implementation of class and objects
3. Implementation of overloading
4. Implementation of error handling
5. Implementation of exception handling

OR

Any five practicals based on the theory syllabus

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER VII**

**7-T-5**

**INDUSTRIAL ORGANIZATION AND MANAGEMENT**

Scheme of Examination (theory)  
sessional – 10  
paper - 40  
total - 50

**Unit-I**

- 1) Basic Economic Activities: Economic activities, Business as an economic activity, Industry as an economic activity
- 2) Role and objective of business and industry
- 3) Characteristics of business and industry

**Unit-II**

- 4) Types of business: a) Private sector undertaking
- 5) Public sector undertaking
- 6) Joint sector undertaking

**Unit-III**

- 7) Types of Industries: Role of Industrialization in economic development
- 8) Role and importance of large scale industries and small scale industries in economic development
- 9) Problems and prospects of small scale and cottage industries

**Unit-IV**

- 10) Organization Management stages in setting up of new enterprise
- 11) Basic Principles of organization
- 12) Preparing a Project Report
- 13) Determining feasibility report of a proposed project

**Unit-V**

- 14) Cost factors in Capital investment
- 15) Total product cost-capital cost
- 16) Role of return and ROI Return in Investment
- 17) Profitability Analysis
- 18) Sources of Finance

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
SEMESTER VII**

**7-P-5**

**PROJECT**

Scheme of Examination: (Practical)  
No examination during this semester

Students are expected to do one hardware /software project during the academic year.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester VII**

**7-T-6                    DATABASE MANAGEMENT SYSTEM**

Scheme of Examination (Theory)  
Sessional – 10  
Paper - 40  
Total - 50

**UNIT I:**

Introduction to Database Systems Database Systems: Significance and advantages, Types of Databases, Limitations of File processing system, the DBMS Environment, Data Abstraction, Data Independence.

**UNIT II:**

DBMS Architecture, Functions of DBMS, Formal relational query languages: Relational Algebra, Tuple Relational calculus, Domain Relational Calculus.

**UNIT III:**

Data Models and Relational Database Design Evolution of Data Models, Entity Relationship Model, Development of ER Diagrams, Extended Entity Relationship Model. Relational model: Logical View of Data, Keys, Integrity Rules, Relational set operators, Data Dictionary and System Catalog, Indexes, Codd's Relational Database Rules.

**UNIT IV:**

Normalization of Database Tables: Need and Significance, the normal forms - 1NF, 2NF, 3NF, BCNF, 4NF, 5NF, normalization & database design, denormalization.

**UNIT V:**

SQL a Introduction to SQL: SQL Data Definition, Basic Structure of SQL Queries, Set Operations, Null values, Aggregate functions, Nested Sub-queries, Modifications of the Databases Intermediate SQL: Join Expressions, Views, Integrity Constraints, SQL Data types and Schemas

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester- VIII**

**8-T-1                    CIRCUIT DESIGN**

Scheme of examination( Theory):  
Sessional – 10  
Paper - 40  
Total - 50

- 1 Design of digital meters using DPMIC 7107

2. Design of Linear Circuits using Op.Amp.
- 3 Design of Switching Circuits using Op.Amp..
- 4 Design of high impedance amplifier
- 5 Design of low pass, high pass active filters.

**8-P-1**

### **CIRCUIT DESIGN**

Scheme of examination ( Practical)	
Sessional -	20
Practical -	80
Total	-100

Minimum five practicals based on syllabus.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

### **Semester VIII**

**8-T-2**

### **ADVANCED MICROCONTROLLERS**

Scheme of Examination: (Theory)	
Sessional - 10	
Paper- 40	
Total - 50	

**Unit I:** AVR advanced assembly language programming

**Unit II:** AVR programming in C

**Unit III:** AVR hardware connections

**Unit IV:** AVR timer,interrupt, serial port programming in assembly and c

**Unit V:** Display and keyboard interfacing

**8-P-2**

### **ADVANCED MICROCONTROLLERS**

Scheme of Examination (Practical)	
Sessional - 20	
Practical – 80	
Total - 100	

Minimum five practicals based on syllabus.

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

### **Semester VIII**

**Scheme of Examination (Theory)**

Sessional –	10
Paper	- 40
Total	-50

**8-T-3**

### **SYSTEM DESIGN**

1. Design and implementation of atleast ten systems based on microcontroller

**8-P-3**

### **SYSTEM DESIGN**

Scheme of Examination (Practical)
Sessional – 20
Practical - 80
Total -100

Minimum five practicals based on the syllabus

## **BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**

### **Semester VIII**

**8- T - 4**

### **ADVANCED PROGRAMMING**

Scheme of Examination(Theory)
Sessional - 10
Paper – 40
Total - 50

**Unit I:** Exception handling. Fundamentals, exception types, uncaught exceptions, using try and catch, multiple catch statements, nested catch statements, throw, throws, finally, Java's built-in exceptions, creating own exception subclass.

**Unit II:** Multithreaded Programming. Java thread model, the main thread, creating a thread, creating multiple thread, using isAlive() and join(), thread priorities, synchronization, interthread communication, deadlock, suspending, resuming and stopping threads, using multithreads.

**Unit III:** I/O & Applets. I/O basic, reading console inputs, writing console outputs, the PrintWrite class, reading and writing files, automatically closing a file. Applet fundamentals, the transient and volatile modifiers, instanceof, stricfp, native methods.

**Unit IV:** String Handling. String constructors, string length, string operations, character extraction, string comparison, searching strings, modifying a string, data conversion using valueOf(), changing the case of characters within a string, StringBuffer, StringBuilder.

**Unit V:** Networking. Networking basics, the networking classes and interfaces, InetAddress, Inet4Address Inet6Address, TCP/IP client sockets, URL, URLConnection, HttpURLConnection, the URL class, cookies, TCP/IP server sockets. Datagrams

Text Book: Java: The Complete Reference by Herbert Schildt, TMG Publication

**8-P- 4                  ADVANCED PROGRAMMING**

Scheme of Examination: (Practical)

Sessional - 20

Practical – 80

Total - 100

Practicals

1. Implementation of multithreading
2. Implementation of I/O operation
3. Implementation of applets
4. Implementation of string handling
5. Implementation of client server communication

Or any five practicals based on syllabus

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY  
Semester VIII**

**8-T-5                  INDUSTRIAL ORGANIZATION AND MANAGEMENT**

Scheme of Examination: (Theory)

Sessional – 10

Paper - 40

Total - 50

**Unit-I**

- 1) Concept of Management
- 2) Definition, characteristics and importance of Management
- 3) Nature and functions of Management

**Unit-II**

- 4) Managerial Decision making
- 5) Is Management Art or Science or Profession
- 6) Evolution of Management Thought

**Unit-III**

- 7) Plant location and Layout considerations
- 8) Material Procurement and utilization
- 9) Quality Control and Industrial Safety
- 10) Production planning and control

**Unit-IV**

- 11) Human Resource Management
- 12) Recruitment and effective utilization of Man power-Man power planning

13) Worker Participation

**Unit-V**

- 14) Modern Marketing concepts
- 15) Marketing Management
- 16) Marketing of a Product, Techniques of advertisements, International Marketing
- 17) Marketing Research and Survey, Import Substitution and Export Promotion

**8-P-5**

**PROJECT**

Scheme of Examination: (Practical)

Sessional -20

viva – 80

Total - 100

Students are expected to do one hardware /software project during the academic year.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester VIII**

**8-T-6**

**ELECTIVE  
COMPUTER NETWORK**

Scheme of Examination (Theory)

Sessional – 10

Paper - 40

Total -50

**Unit I:** Introduction to Computer Networks

Uses of computer Network, Network Software-design Issues for layers, Service primitives and relationship of services to Protocols, Reference models-OSI & TCP/IP, network architectures introduction, Example of networks-X.25, Frame Relay & ATM, Protocols and Standards.

**Unit II:** Physical Layer

Physical layer-Data rate limits, Transmission media-guided and Unguided, Switching systems-Circuit switching

**Unit III:** Data link layer

Data link layer: Framing, Flow & Error control Protocols, HDLC, PPP, Multiple access techniques-random access, controlled access & Channelization, Ethernet types-bridged, Switched, Full duplex, Simple Router architecture, Sliding window protocol.

**Unit IV:** Transport Layer and Network Layer

Transport layer-Process to process delivery, Connection oriented & Connectionless Transport, UDP, TCP, congestion control and Quality of Service.

Network Layer: IPv6 address, Address mapping-ARP, RARP & DHCP, IPv6 datagram detail format, Addressing types-Physical, Logical & port address.

**Unit V:** Application Layer

Application layer protocols and applications like Ping, FTP, telnet, http (www), SMTP, SNMP, Trace route, TFTP, BOOTP, DNS, NFS, RPC, X-server, E-mail

**Books**

1. Behrouz A. Forouzan, "Data Communications and Networking", 4th Edition, Tata McGraw Hill
2. Andrew Tanenbaum, "Computer Networks", 4th Edition, Pearson Education.
- 3.. William Stallings, "Computer Networks and Cryptography", 3rd edition, Pearson Education

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester VIII**

**8-T-6**

**ELECTIVE**  
**MOBILE COMMUNICATION**

Scheme of Examination (Theory)	
Sessional – 10	
Paper - 40	
Total -50	

**Unit I:** The cellular concept

Evolution of mobile radio communication. Cellular telephone system, frequency reuse, channel assignment and handoff strategies

**Unit II :-** cellular system capacity

interference and system capacity, trunking and grade of service, improving capacity in cellular system.

**Unit III:-** GSM

Global system for mobile: services and features, GSM system architecture, GSM radio subsystem, GSM channel type, GSM frame structure.

**Unit IV :-** CDMA

introduction to CDMA digital cellular standard, Third generation wireless networks, 3G technology.

**Unit V:-**Introduction to wireless networking and mobile IP

Difference between wireless and fixed telephone networks, development of wireless network, traffic routing in wireless networks. mobile IP, operation of mobile IP, collocated address, Registration, Tunneling

**Books:**

1. Wireless Communications, Principles, Practice – Theodore, S. Rappaport, PHI, 2nd Edn.
2. Wireless Communication and Networking – William Stallings, PHI, 2003.

3. Mobile Communications- Jochen Schiller, Pearson Education, 2004.

**BACHELOR OF APPLIED ELECTRONICS & SOFTWARE TECHNOLOGY**  
**Semester VIII**

**8-T-6**

**ELECTIVE**  
**TELEVISION**

Scheme of Examination (Theory)	
Sessional –	10
Paper -	40
Total	-50

**Unit 1:** Fundamentals of Television and Display

Television basics: Elements of TV system, low level TV transmission, TV receiver block diagram , Production of luminance & colour difference signal , Composite video signal, and channel bandwidth etc.., Color TV systems, colour fundamentals, mixing of colors , color perception, chromaticity diagram.

**Unit 2:** TV Standards

NTSC, PAL, SECAM systems, colour TV transmitter, colour TV receivers, remote control, antennas for transmission and TV pattern generation.

**Unit 3:** Digital TV

Introduction to Digital TV, Principle of Digital TV, Digital TV signals and parameters, Digital TV Transmitters, MAC signals, advanced MAC signal transmission, Digital TV receivers, Basic principles of Digital Video compression techniques, MPEG1, MPEG2, MPEG4.

**Unit 4:** HDTV

HDTV standards and systems, HDTV transmitter and receiver/encoder, Digital TV satellite Systems, CCTV, CATV, direct to home TV, set top box with recording facility, 3D TV systems.

**Unit 5:** Consumer Applications

Colour TV Digital cameras, Camcorders, Handycams, and Diccams, Display devices: LED, LCD, CD/ DVD player, Blue Ray DVD Player, Dish TV.

**Text Books**

1. Television and video Engineering, A. M. Dhake, Tata McGraw Hill Publication.
  2. Video Demisified, Kelth jack, Penram International Publication.
  3. Audio Video Systems, R.G. Gupta, Technical Education.
- Reference Books
1. S. P. Bali, "Color TV Theory and Practice", McGraw Hill Publications.
  2. Bernard Grob, Charles E, "Basic TV and Video Systems" McGraw Hill Publications.
  3. Gulathi, "Monochrome & Color TV", New Age International Publications .
  4. R.G. Gupta, "Television Engineering & Video Systems", McGraw Hill Publications



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY  
NAGPUR  
FACULTY OF HOME SCIENCE  
DIRECTION NO. 30 OF 2016**  
**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF  
BACHELOR OF COSMETIC TECHNOLOGY  
( SEMESTER PATTERN)**

(Directions issued under section 14(8) of the Maharashtra University Act 1994 relating to award of Bachelor degree in Cosmetic Technology in the Faculty of Home science)

Whereas the Maharashtra Universities act No. XXXV of 1994 has come into force with effect from 22<sup>nd</sup> July, 1994 and was amended from time to time.,

**AND**

Whereas, the University Grants Commission, New Delhi vide letter No.D.O.No.F-2/2008/(XI Plan), dated 31 January 2008 regarding new initiatives under the XI Plan – Academic reforms in the University has suggested for improving quality of higher education and to initiate the academic reform at the earliest,

**AND**

Whereas the Task Force in Cosmetic Technology in the Faculty of Home Science at its meeting held on 08/03/2016, has recommended for starting of semester pattern and prepared the syllabus and scheme of examination for Bachelor of Cosmetic Technology, commensurate with the governing guidelines.

**AND**

Whereas the Co-ordinator, Faculty of Home Science concurred with the recommendations of the Task Force in Cosmetic Technology in the Faculty of Home science vide his observations dated .....

**AND**

Whereas, the new draft direction and scheme of examination as per semester pattern is to be implemented from the academic session 2016-2017 for Bachelor of Cosmetic Technology which is to be regulated by this direction and as such there is no existence and framing of an ordinance for the above examination,

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Academic Council on 8<sup>th</sup> June 2016 under section 14(7) of Maharashtra University Act 1994.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Management Council on 14<sup>th</sup> June 2016 under section 14(7) of Maharashtra University Act 1994.

**AND**

Whereas, the framing of an ordinance as required under provision of Act is a time consuming process, now therefore, I, Dr. Siddharthavinayaka P. Kane, the Vice Chancellor of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers vested under Section 14(8) of the Act do hereby issue the following Direction.

1. This Direction may be called "Direction governing the Examination leading to the Degree of Bachelor of Cosmetic Technology (Semester Pattern), in the Faculty of Home Science, RTM Nagpur University, Nagpur".
2. The direction shall come into force from the date of its issue by Hon'ble Vice Chancellor and shall remain in force till the relevant ordinance comes into being, in accordance with the provisions of the Act.

The duration of the Bachelor of Cosmetic Technology course shall be of Four academic years consisting of eight semesters with University examinations at the end of each semester namely:

- a. Bachelor of Cosmetic Technology Semester I Exam.
  - b. Bachelor of Cosmetic Technology Semester II Exam.
  - c. Bachelor of Cosmetic Technology Semester III Exam.
  - d. Bachelor of Cosmetic Technology Semester IV Exam.
  - e. Bachelor of Cosmetic Technology Semester V Exam.
  - f. Bachelor of Cosmetic Technology Semester VI Exam.
  - g. Bachelor of Cosmetic Technology Semester VII Exam.
  - h. Bachelor of Cosmetic Technology Semester VIII Exam.
3. The Examination specified in proceeding section shall be held twice a year at such places on such dates as may be decided by the University. The main examination of semester I,III,V and VII shall be held in winter whereas the examination for semester II,IV,VI and VIII shall be held in summer. The supplementary examination of semester I,III,V and VII will be held in summer whereas supplementary examination for semester II,IV,VI,VIII will be held in winter. There shall be no practical examination during semester I,III,V and VII. Practical examination will be held during semester II,IV,VI and VIII only comprising the curriculum of both the semesters of that particular year.
  4. Subject to the compliance with provisions of this direction and of other ordinances in force from time to time, a candidate for admission to the examination shall:
    - a) In the case of Bachelor of Cosmetic Technology Part I has passed XII standard examination of Maharashtra State Board of Secondary and Higher Secondary Education or an examination recognized as equivalent thereto with Physics, Chemistry, Biology/ Mathematics and English as subjects and with not less than 45 % of Marks for open category and 40 % of Marks for reserved category in the subjects Physics, Chemistry and Biology/ mathematics taken together at one sitting.
    - b) In the case of Bachelor of Cosmetic Technology Part II have passed the Bachelor of Cosmetic Technology Part I (Semester I and II) Examination of the University or an examination recognized as equivalent thereto.
    - c) In the case of Bachelor of Cosmetic Technology Part III have passed the Bachelor of Cosmetic Technology Part II (Semester III and IV) examination of the University or an examination recognized as equivalent thereto.
    - d) In the case of Bachelor of Cosmetic Technology Part VI have passed the Bachelor of Cosmetic Technology Part III (Semester V and VI) examination of the University or an examination recognized as equivalent thereto.
  5. Without prejudice to the other provisions of the Ordinance No. 6 relating to the examination in general, provisions of paragraph 5,7,8,10 and 32 of the said ordinance of ATKT as well as reassessment / provisional admission as issued from time to time.

6. The ATKT rules for admission for the Course Bachelor of Cosmetic Technology shall be as given in the following table,

Admission to semester	Candidate should have passed in all the subjects of the following examination of R.T.M. Nagpur University	Candidate should have passed at least half of the passing heads of the following examinations together of R.T.M. Nagpur University
Semester I	As provided in the para 4 of the direction	-----
Semester II	-----	-----
Semester III	-----	Semester I & II
Semester IV	-----	Semester I, II & III
Semester V	Semester I & II	Semester III & IV
Semester VI	-----	Semester III, IV & V
Semester VII	Semester III & IV	Semester V & VI
Semester VIII	-----	Semester V, VI & VII

7. The fees for the examinations shall be as prescribed by the University, from time to time and whenever, any change is made in the fees prescribed for any particular examination that shall be notified through a notification for the information of all concerned.
8. Every candidate for Bachelor of Cosmetic Technology Examination shall be examined in the subjects as set out in the Appendices to this Directions,
- The scope of the subjects shall be as indicated in the respective syllabus in force from time to time.
  - Medium of examination shall be English.
9. An applicant for admission to an Examination shall satisfy the Head of the Department / Principal as regards the Sessional examinations/Internal assessment conducted during the academic year regarding her / his suitability to take the University examination.
10. In order to pass in the Examination an examinee shall obtain in each subject not less than the minimum marks as indicated in the Appendices.
11. The Head of the Department / Principal shall maintain the complete record of the marks obtained by the candidate in the sessional examinations/internal assessment that shall be submitted, before the commencement of the University examination, to the Controller of Examination, in a sealed cover.
12. There shall be no classification of successful examinees at I,II,III,IV,V,VI,VII semesters of Bachelor of Cosmetic Technology.
13. Division of examinees successful at the VIII th semester of Bachelor of Cosmetic Technology shall be determined on the basis of the aggregate marks obtained at all the semesters of Bachelor of Cosmetic Technology.
14. Those obtaining 60% or more marks in aggregate shall be placed in First Division and all other successful examinees in the Second Division respectively.
15. An examinee who is successful at an examination and obtained not less than 75% or more of the marks prescribed in a subject shall be declared to have passed the examination with Distinction in that subject.

16. Provision of Ordinance No. 7a- relating to the condonation of Deficiency of marks for passing an examination and of ordinance No. 10 relating to examinations and compartments as amended from time to time shall apply to the Examination under this direction.
17. An unsuccessful examinee at any of the examination of Bachelor of Cosmetic Technology shall have an option to carry her/his Sessional Examination/Internal assessment college assessment marks for Theory/Practical examinations to her/his successive attempt(s) at the examination. The examinee however can forgo her/his Sessional Examination/Internal assessment marks in subject/subjects in which case she/he shall be examined for total marks comprising of theory /practical and college assessment together at her/his successive attempt(s).
18. As soon as possible after the examinations but not later than 30<sup>th</sup> June next following in case of examination held in March-April and 26<sup>th</sup> February next following, in case of examination held in October-November, the Board of Exams shall publish a list of successful examinees. List of successful examinees at the Eighth semester of Bachelor of Cosmetic Technology examination shall be arranged in the First and Second Division as envisaged in clause 14 of the ordinance and names of examinee passing the said examination as whole in the minimum prescribed period and obtaining the prescribed number of places in the first or second Division shall be arranged in order of Merit as provided in the examination in General Ordinance No. 6.
19. Notwithstanding anything to the contrary in this direction, no person shall be admitted to this examination, if she/he already passed the same examination or an equivalent examination thereto of other statutory university.
20. Educational tour of 6 – 10 days duration shall be compulsory after second year and short tour of 1 – 3 days duration shall be compulsory after first year of Bachelor of Cosmetic Technology.
21. Successful examinees at the I,II,III,IV,V,VI,VII,VIII semesters of Bachelor of Cosmetic Technology Examination shall be entitled to receive certificate signed by Registrar, titled Bachelor of Cosmetic Technology, Semester I, II, III , IV,V,VI,VII,VIII respectively and those successful at all the exams of Bachelor of Cosmetic Technology shall on payment of the prescribed fee receive a degree in the prescribed form, signed by the Vice-Chancellor, at the convocation to be held by the University.
22. The Scheme of Examination shall be as per Appendix: A(1),A(2),A(3),A(4),A(5),A(6),A(7) and A(8) (Semester pattern) . The details / title of the theory papers can be suitably modified considering the need of the subject without disturbing the main structure.
23. With the issuance of this direction The Ordinance No. 14 of 2009, governing the examinations leading to award of Bachelor of Cosmetic Technology in the Faculty of Home Science shall stand repealed in phasic manner.

I, further, direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant Ordinance comes into being, in accordance with the provisions of the Maharashtra Universities Act, 1994.

Nagpur

sd/-

Date : 21-6-2016

( Dr. Siddharthavinayaka P. Kane)  
Vice Chancellor

### Appendix A(1)

#### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMESTER – I

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>					<b>Periods</b>	<b>Periods</b>	<b>Hrs.</b>
1	S1-T1 Cosmetic Chemistry	10	40	50	20	4	-	2
2	S1-T2 Anatomy & Physiology	10	40	50	20	4	-	2
3	S1-T3 Organic Chemistry	10	40	50	20	4	-	2
4	S1-T4 Physical Chemistry	10	40	50	20	4	-	2
5	S1-T5 Natural Cosmetic Agents	10	40	50	20	4	-	2
6	S1-T6 Elementary Mathematics	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S1-P1 Cosmetic Chemistry	-	-	-	-	-	4	-
2	S1-P2 Anatomy & Physiology	-	-	-	-	-	4	-
3	S1-P3 Organic Chemistry	-	-	-	-	-	4	-
4	S1-P4 Physical Chemistry	-	-	-	-	-	4	-
5	S1-P5 Natural Cosmetic Agents	-	-	-	-	-	4	-
				300		24	20	

## Appendix A(2)

### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMESTER – II

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>					<b>Periods</b>	<b>Periods</b>	<b>Hrs.</b>
1	S2-T1 Cosmetic Chemistry	10	40	50	20	4	-	2
2	S2-T2 Anatomy & Physiology	10	40	50	20	4	-	2
3	S2-T3 Organic Chemistry	10	40	50	20	4	-	2
4	S2-T4 Physical Chemistry	10	40	50	20	4	-	2
5	S2-T5 Natural Cosmetic Agents	10	40	50	20	4	-	2
6	S2-T6 English Communication Skills	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S2-P1 Cosmetic Chemistry	20	80	100	50	-	4	3
2	S2-P2 Anatomy & Physiology	20	80	100	50	-	4	3
3	S2-P3 Organic Chemistry	20	80	100	50	-	4	3
4	S2-P4 Physical Chemistry	20	80	100	50	-	4	3
5	S2-P5 Natural Cosmetic Agents	20	80	100	50	-	4	3
				800		24	20	

### Appendix A (3)

#### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMESTER – III

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>					<b>Periods</b>	<b>Periods</b>	<b>Hrs.</b>
1	S3-T1 Cosmetic Technology	10	40	50	20	4	-	2
2	S3-T2 Instrumental Methods of Analysis	10	40	50	20	4	-	2
3	S3-T3 Cosmetic Engineering	10	40	50	20	4	-	2
4	S3-T4 Cosmetic Chemistry	10	40	50	20	4	-	2
5	S3-T5 Drug & Cosmetic Laws	10	40	50	20	4	-	2
6	S3-T6 Introductory Pharmacology and Toxicology	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S3-P1 Cosmetic Technology	-	-	-	-	-	4	-
2	S3-P2 Instrumental Methods of Analysis	-	-	-	-	-	4	-
3	S3-P3 Cosmetic Engineering	-	-	-	-	-	4	-
4	S3-P4 Cosmetic Chemistry	-	-	-	-	-	4	-
5	S3-P5 Beauty Culture	-	-	-	-	-	4	-
				300		24	20	

### Appendix A (4)

#### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMESTER – IV

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>					Periods	Periods	Hrs.
1	S4-T1 Cosmetic Technology	10	40	50	20	4	-	2
2	S4-T2 Instrumental Methods of Analysis	10	40	50	20	4	-	2
3	S4-T3 Cosmetic Engineering	10	40	50	20	4	-	2
4	S4-T4 Cosmetic Chemistry	10	40	50	20	4	-	2
5	S4-T5 Drug & Cosmetic Laws	10	40	50	20	4	-	2
6	S4-T6 Introductory Pharmacology and Toxicology	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S4-P1 Cosmetic Technology	20	80	100	50	-	4	3
2	S4-P2 Instrumental Methods of Analysis	20	80	100	50	-	4	3
3	S4-P3 Cosmetic Engineering	20	80	100	50	-	4	3
4	S4-P4 Cosmetic Chemistry	20	80	100	50	-	4	3
5	S4-P5 Beauty Culture	20	80	100	50	-	4	3
				800		24	20	

## Appendix A (5)

### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMISTER– V

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>					Periods	Periods	Hrs.
1	S5-T1 Perfumes	10	40	50	20	4	-	2
2	S5-T2 Cosmetic Technology	10	40	50	20	4	-	2
3	S5-T3 Principles of Cosmeceutics	10	40	50	20	4	-	2
4	S5-T4 Cosmetic Engineering	10	40	50	20	4	-	2
5	S5-T5 Beauty Culture	10	40	50	20	4	-	2
6	S5-T6 Pharmacology and Interactions	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S5-P1 Perfumes	-	-	-	-	-	4	-
2	S5-P2 Cosmetic Technology	-	-	-	-	-	4	-
3	S5-P3 Principles of Cosmeceutics	-	-	-	-	-	4	-
4	S5-P4 Cosmetic Engineering	-	-	-	-	-	4	-
5	S5-P5 Beauty Culture	-	-	-	-	-	4	-
				300		24	20	

### Appendix A (6)

#### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMESTER– VI

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>					Periods	Periods	Hrs.
1	S6-T1 Perfumes	10	40	50	20	4	-	2
2	S6-T2 Cosmetic Technology	10	40	50	20	4	-	2
3	S6-T3 Principles of Cosmeceutics	10	40	50	20	4	-	2
4	S6-T4 Cosmetic Engineering	10	40	50	20	4	-	2
5	S6-T5 Beauty Culture	10	40	50	20	4	-	2
6	S6-T6 Pharmacology and Interactions	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S6-P1 Perfumes	20	80	100	50	-	4	3
2	S6-P2 Cosmetic Technology	20	80	100	50	-	4	3
3	S6-P3 Principles of Cosmeceutics	20	80	100	50	-	4	3
4	S6-P4 Cosmetic Engineering	20	80	100	50	-	4	3
5	S6-P5 Beauty Culture	20	80	100	50	-	4	3
				800		24	20	

### Appendix A (7)

#### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMESTER – VII

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>						<b>Periods</b>	<b>Periods</b>
1	S7-T1 Perfumes & Colours	10	40	50	20	4	-	2
2	S7-T2 Cosmetic Technology	10	40	50	20	4	-	2
3	S7-T3 Plant Design	10	40	50	20	4	-	2
4	S7-T4 Quality Assurance Techniques	10	40	50	20	4	-	2
5	S7-T5 Herbal Cosmetics	10	40	50	20	4	-	2
6	S7-T6 Organisation & Management of Industries.	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S7-P1 Perfumes & Colours	-	-	-	-	-	4	-
2	S7-P2 Cosmetic Technology	-	-	-	-	-	4	-
3	S7-P3 Plant Design	-	-	-	-	-	4	-
4	S7-P4 Quality Assurance Techniques	-	-	-	-	-	4	-
5	S7-P5 Herbal Cosmetics	-	-	-	-	-	4	-
				300		24	20	

### Appendix A (8)

#### EXAMINATION LEADING TO BACHELOR OF COSMETIC TECHNOLOGY SEMESTER– VIII

S.N.	Subject	Sessi-onal	Marks Uni. Paper	Total	Passing	No. of Theory	Periods Practi-cals	Time for Exam.
	<b>THEORY</b>						<b>Periods</b>	<b>Periods</b>
1	S8-T1 Perfumes & Colours	10	40	50	20	4	-	2
2	S8-T2 Cosmetic Technology	10	40	50	20	4	-	2
3	S8-T3 Plant Design	10	40	50	20	4	-	2
4	S8-T4 Quality Assurance Techniques	10	40	50	20	4	-	2
5	S8-T5 Herbal Cosmetics	10	40	50	20	4	-	2
6	S8-T6 Organisation & Management of Industries.	10	40	50	20	4	-	2
	<b>PRACTICAL</b>							
1	S8-P1 Perfumes & Colours	20	80	100	50	-	4	3
2	S8-P2 Cosmetic Technology	20	80	100	50	-	4	3
3	S8-P3 Plant Design	20	80	100	50	-	4	3
4	S8-P4 Quality Assurance Techniques	20	80	100	50	-	4	3
5	S8-P5 Herbal Cosmetics	20	80	100	50	-	4	3
				800		24	20	

## **Appendix- A (9)**

### **General Rules and Regulations**

#### **A) Pattern of Question Paper**

1. The Syllabus of every subject is divided into units.
2. Students have to solve FOUR questions out of SIX questions set covering all units.
3. All questions should have equal weightage.
4. Each Theory paper will be of 2 hours duration.

#### **B) Absorption scheme:**

- 1) While switching over to semester pattern, the failure students of yearly pattern will be given FIVE chances, , to clear the examination.
- 2) If an examinee failed to pass the under graduate programme within EIGHT successive years (for Eight semesters degree) from the date of his / her first admission to particular programme he/ she shall be declared as “Not Fit for the Course (NFC)” and he/ she will not be allowed to appear further for any previous examination of the course.
- 3) After four years from the date of implementation of semester pattern, any student passing-

**FIRST** year of Bachelor of Cosmetic Technology should be admitted to third semester.

**SECOND** year of Bachelor of Cosmetic Technology should be admitted to fifth semester.

**THIRD** year of Bachelor of Cosmetic Technology should be admitted to seventh semester.

## **Annexure – 1**

### **Instruction to paper setter for Bachelor of Cosmetic Technology**

- There are **Five** Units in the subject for theory, the duration of exam is **two** hours.
- The total marks are **40**. The students have to answer **Four** questions of 10 marks each.
- The examiner has to set **six** questions on all topics. Preferably **one** question on each unit and a **last question** based on all units together.
- **Equal** weightage should be given to every unit.

**Syllabus for Four year degree course**  
**BACHELOR OF COSMETIC TECHNOLOGY**  
**Semester - I**

**S1 – T1**

**Cosmetic Chemistry**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Sources of impurities and their control in Cosmetic raw materials. (6 Periods)
- 2] Limit tests, limit test of chlorides, sulfates, lead, arsenic and heavy metals. (8 Periods)
- 3] Acid base theory, concept of pH, Buffer solutions, Acid Base titrations, Standard solutions, Acid base Indicators, Theory of Acid base titration curves (8 Periods)
- 4] Non-aq. titration of weak acid and weak bases – indicators used and application. (8 Periods)
- 5] Theoretical basis of qualitative inorganic analysis. (6 Periods)

Reference Books:

1. Text book of Practical Pharmaceutical Chemistry by Beckette and Stentake.
2. Quantitative Inorganic analysis be I. Vogal.
3. Cosmetic Chemistry -1 by Dr. Sheela Kulkarni

**S1 – T2**

**Anatomy & Physiology**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Cell Structure & Elementary tissues of body-  
i) Epithelial Tissues      ii) Connective Tissues  
iii) Nervous Tissues      iv) Muscular Tissues (8 Periods)
- 2] i) Detail knowledge of structure and function of Skin (4 Periods)  
ii) Skin appendages –  
    1 Sweat gland & Sebaceous gland  
    2 Hair  
    3 Nails  
iii) Eye  
iv) Tooth (10 Periods)
- 3] a) Keratinisation and  
b) Colour & Pigmentation  
c) Baby skin and adult skin (4 Periods)

- 4] Endocrine glands and Hormones. (8 Periods)
- 5] Temperature conservation – Temperature regulation and heat balance of body. (2 Periods)

**Books Recommended:**

1. Best and Taylor – The Living Body.
2. Kimber and Gray – Human Physiology and Anatomy
3. Fransis – Introduction to Human Anatomy.
4. Pharmacology and Pharmacotherapeutics By R.S. Satoskar and S. Bhandarkar
5. Ross & Wilson – Anatomy and physiology in health and illness – Ross & Wilson
6. Anatomy and physiology for Nurse – Windwood R.S.

**S1 – T3**

**Organic Chemistry**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Hydrocarbons (Saturated)  
Alkanes, Tetrahedral nature of carbon,  $SP^3$  hybridisation, isomerism, liquid paraffin, hard paraffin, preparation and reaction of cycloalkanes..... (7 Periods)
- 2] Hydrocarbon (Unsaturated) Alkenes  $SP^2$  Hybridisation, Markonikoff Rules, Cis-trans Isomerism, Dienes: preparation properties chemical reaction classification of dienes  
Alkynes  $SP$  – hybridization, preparation, properties, reactions of acetylene. (7 Periods)
- 3] Estimation and Quantitative Analysis : Estimation of elements and their principals, Determination of equivalent weight of acids and bases. Determination of empirical and molecular formula of acids and bases. (6 periods)
- 4] Ethers- Definition, preparation, properties and reaction of ethers, diethyl ether, anesthetic ether, thioether and vinyl ethers. (6 Periods)
- 5] I) Aldehyde & Ketones-Definition and nomenclature, preparation, properties and chemical reaction of aldehyde and ketones. (6 Periods)
- II) Carboxylic Acid – classification, structure, preparation and chemical reaction of monocharboxylic acid. Optical isomerism. (4Periods)

**Books Recommended:**

1. Text Book of Organic Chemistry by Morrison and Boyd.
2. L.M. Atherdon, Bentley and Driver's Text Books of Pharmaceutical Chemistry. Oxford University Press, London.
3. Text book of Organic Chemistry by Bahl & Bahl.

**S1 – T4**

**Physical Chemistry**

Theory - 40  
Sessional – 10  
Total- 50

- 1] Thermo chemistry –Introduction, heat of reaction at constant volume and constant pressure, Heat of combustion, heat of neutralization, heat of solution and their determination. Laws of thermo chemistry. (8 periods)
- 2] Physical Properties and properties of liquids molecules.
  - i) Surface tension ii) Viscosity
  - iii) Intermolecular forces and it's impact on states of matter, physical properties and chemical constitution, parachor, dipole moment. (8 periods)
- 3] Osmotic pressure, osmosis, semi – permeable membrane, osmotic pressure measurement, laws of osmotic pressure Molecular wt. Calculations. (8 periods)
- 4] Faraday's laws of electrolysis, conductivity of solutions, equivalent conductivity and it's determination, principles of conductometric titration. (6 periods)
- 5] E.M.F. of Galvanic cell, Std. Oxidation Potential of an electrode, glass, calomel, redox electrodes, Principles of potentiometric titration. (6 periods)

**Books recommended:**

1. A.N. Martin – Physical Pharmacy
2. Glasstone – Elements of Physical Chemistry
3. A. J. Med – Physical Chemistry
4. Vogel- Quantitative Inorganic Analysis.
5. Bahl and Tuli : Essentials of Physical Chemistry

**S1 – T5**

**Natural Cosmetic Agents**

Theory - 40  
Sessional – 10  
Total - 50

- 1] History, development and role of natural product in cosmetic & medicine. (2Periods)
- 2] Different systems of classification of drugs of natural origin their merits & demerits. (6 Periods)
- 3] Herbs description and morphology of organized and unorganized herbs. Organized herbs root, stem, leaf and fruit and seed. Unorganized herbs – mucilage, latex and extracts. (4 Periods)
- 4] Carbohydrate-
  - a) Definition, classification and general identification tests.
  - b) study of following carbohydrates used in cosmetics with respect to their source, chemical constituents and uses-i) Starches – Wheat, maize, rice, potato ii) Gums- Acacia, gaur-gum. pectin, agar, and cellulose (12 Periods)
- 5] Lipids-
  - a) Definition, classification and general identification tests.

- b) i) oils – castor, linseed, olive, sesame, coconut, arachise oil  
ii) fat and waxes – kokum butter, lanoline, beeswax, spermaceti, carnauba wax, candelilla wax, shea butter. (12 Periods)

**Books recommended:**

1. Text book of Pharmacognosy – Trease and Evan's
2. Pharmacognosy – By Claus and Tayler.
3. Text Book of Pharmacognosy – T. E. Wallis.
4. Materia Medica – By Nadkarni.
5. Wealth of India – CSIR
6. Indian medical plants: by Kirtikar & Basu
7. Pharmacognosy – by Dr. Kokate
8. Naturals and Cosmetics – by Dr. Satish Sakharwade

<b>S1 – T6</b>		<b>Elementary Mathematics</b>	
			Theory - 40 Sessional – 10 Total - 50
1]	Algebra: - Profit and loss, percentage calculation, Logarithms		(6 Periods)
2]	Trigonometry: - Degrees and Radians trigonometric ratios. Identities for sum and difference of angles, multiple angles		(8 Periods)
3]	Statistics: - Frequency Distribution, Histogram, Representation of data in a curve, Mean, Median mode, Standard deviation, mean deviation from mean, Measures of Central tendency, Correlation, Coefficient of correlation only.		(8 Periods)
4]	Derivatives		(6 Periods)
5]	Application of Derivatives: a) Maxima, Minima b) Rates and motion c) Velocity acceleration		(8 Periods)

**Books Recommended :**

1. Higher Engineering Mathematics by B. S. Grewal (Unit I, II,V).
2. Higher Algebra by Hall and Knight (Unit I)
3. Plane Trigonometry Part I by S.L. Loney (Unit II)

**S1 – P1**

**Cosmetic Chemistry**

- 1] Preparation of Standard solutions: 1 normal, 1 molar, % w/v solution, % v/v solution
- 2] Standardization of volumetric apparatus.
- 3] Volumetric estimation involving Acidimetry, Alkalimetry oxidation & reductions.
- 4] Experiments based on limit tests of chlorides, Arsenic, ions sulphate & Heavy metals.
- 5] Practical significance of MSDS.

**S1 – P2****Anatomy & Physiology**

1. Study with the help of Charts and models of-
  - a) Skin
  - b) Hair
  - c) Eye
  - d) Tooth
2. Microscopic examination of Epithelial, Cardiac, Smooth Muscles, Skeletal muscles and other tissues.

**S1 – P3****Organic Chemistry**

- 1] Organic Preparations based on:
- i) Alkaline Hydrolysis
  - ii) Acidic Hydrolysis
  - iii) Acetylation
  - iv) Oxidation

**S1 – P4****Physical Chemistry**

1. Study of surface tension of liquids using a stalagmometer.
2. Study of Viscosity of liquids using Ostwald's Viscometer.
3. Study of variation of viscosity of liquid mixtures using an Ostwald's viscometer and its use to determine the concentration of such mixtures.
4. Study the total hardness of water
5. Study the temporary hardness of water.
6. Study the heat of solution of a salt in water.
7. Study the heat of neutralization of a strong acid by a strong base as well as weak acid and strong base using a calorimeter.

**S1 – P5****Natural Cosmetic Agents**

- 1]. Carbohydrates:
- i. Study of organoleptic properties, identification and microscopic studies of:

a. Rice Starch	b. Maize starch
c. Potato starch	d. Wheat starch
  - ii. 

a. Agar	b. Gum Acacia.
c. Tragacanth.	d. Gaur Gum
e. Pectin	f. Cellulose
- 2] Study of chemical identification of fixed oils and waxes.
- 3] Detection of Adulteration in Olive oil, Coconut oil, Almond oil, and other vegetable oil.

## **SEMESTER – II**

### **S2 – T1**

### **Cosmetic Chemistry**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Nernst eq. Calculation of std. Potential, oxi-red titrations, study of common oxidizing agents and reducing agents, oxi-red curves, ceric ammonium sulfate, titanous chloride, 2-6 dichlor phenol indo phenol titration, their theory and applications. (12 Periods)
- 2] Iodometry and iodimetry, Gravimetric analysis. Quantitative separation, solubility product. Fractional precipitation, CO - & post precipitation Practical aspects of gravimetry and applications. (8 Periods)
- 3] Precipitation titration, Precipitation and complex forming reactions. Argentometric Titration, Gay-Lussac, Volhard's Mohr's and Fajan's Method. Mercuric nitrate titration. (8 Periods)
- 4] Complexometric titration, concepts of complexation and chelation, co-ordination number stability constant, titration curves, metal ion indicator, Masking and demasking agents, types of complexometric titration and applications (12 Periods)
- 5] Determination & significance of acid value, saponification value, iodine value, ester value. (6 Periods)

#### Reference Books:

1. Text book of Practical Pharmaceutical Chemistry by Beckette and Stentake.
2. Quantitative Inorganic analysis by I. Vogal.
3. Cosmetic Chemistry -1 by Dr. Sheela Kulkarni

### **S2 – T2**

### **Anatomy & Physiology**

Theory - 40  
Sessional – 10  
Total - 50

- 1] I) Cardiovascular system Anatomy of Heart, flow of blood through heart, blood pressure, structure of artery, vein and capillaries.  
II) Blood –  
i) Composition & Function                    ii) Blood groups  
iii) Coagulation of blood (12 Periods)
- 2] Respiratory system – Anatomy of organs, mechanism of respiration. (6 Periods)
- 3] Digestive system – Anatomy of digestive organs, Digestion of carbohydrate, protein and fat. (6 Periods)
- 4] Excretory system – organs of excretion, structure of kidney, Mechanism

- of urine formation. (6 Periods)
- 5] Nervous system – CNS, Brain, anatomy in short, spinal cord, ganglion cranial nerves, reflex action and reflex arch. (6 Periods)

**Books Recommended:**

1. Best and Taylor – The Living Body.
2. Kimber and Gray – Human Physiology and Anatomy
3. Fransis – Introduction to Human Anatomy.
4. Pharmacology and Pharmacotherapeutics By R.S. Satoskar and S. Bhandarkar
5. Ross & Wilson – Anatomy and physiology in health and illness – Ross & Wilson
6. Anatomy and physiology for Nurse – Windwood R.S.

S2 – T3

**Organic Chemistry**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Halohydrocarbon: Preparation and reaction of alkyl halide and Grignard reagents and chloroform. (6 periods)
- 2] Alcohols – Definition, classification, preparation, properties and chemical reaction of alcohols, fermentation, manufacture of ethyl alcohol, proof spirit, denatured alcohol, glycol and glycerol. (8 periods)
- 3] Benzene and other aromatic compounds:
  - i) Benzene Resonance and structure – o-p & meta directing effect.
  - ii) Aromatic nitro compound (Nitrobenzenes): preparation & properties,
  - iii) Aromatic amines (Aniline) – Preparation & Properties.
  - iv) Aromatic carboxylic acids (Benzoic and Cinnamic acid, Salicylic acid.)
 (7 periods)
- 4] Fats & Oil : Definition, uses, properties. Analysis of fats and oils. Application of fats and oils in cosmetics. (7 periods)
- 5] I) Proteins and Amino Acid : Introduction, Peptides, amino Acids, definition, hydrolysis, polypeptides, qualitative test and colour reaction, essential amino acid. (7 periods)  
 II) Carbohydrates and Glucose : Classification and Qualitative test, structure of Glucose, Lactose (excluding derivation). (5 periods)

**Books Recommended:**

1. Text Book of Organic Chemistry by Morrison and Boyd.
2. L.M. Atherdon, Bentley and Driver's Text Books of Pharmaceutical Chemistry. Oxford University Press, London.
3. Text book of Organic Chemistry by Bahl & Bahl.

**S2 – T4****Physical Chemistry**

Theory -	40
Sessional –	10
Total-	50

- 1] Phase rule : Phase rule, the terms involved in it and applications to one component system, water and sulphur system. Introduction to two component systems. (8 periods)
- 2] Solutions,: Raoult's law, and it's application, molecular weight determination by measuring vapour pressure, Boiling Pt. & freezing point. (8 periods)
- 3] Law of mass action, Le-Chatelier's principle, homogeneous gaseous equilibria and homogeneous equilibria in liquid system. (8 periods)
- 4] Chemical kinetics: Introduction, molecularity, order and rate of reaction. Kinetics of first and second order reaction, their characteristics and some methods of determination. (8 periods)
- 5] pH metry: pH and hydrogen ion concentration, pH calculation for weak acids and weak bases. Buffer solutions and types, mechanism of buffer action of acidic and basic buffers. Theories of acid base indicators. (8 periods)

**Books recommended:**

1. A.N. Martin – Physical Pharmacy
2. Glasstone – Elements of Physical Chemistry
3. A. J. Med – Physical Chemistry
4. Vogel- Quantitative Inorganic Analysis.
5. Physical Chemistry by Bahl & Tuli.

**S2 – T5****Natural Cosmetic Agents**

Theory -	40
Sessional –	10
Total -	50

- 1] Adulteration - types of adulteration, Method of adulteration and methods of detection of adulteration in Natural ingredients. (9 Periods)
- 2] Resin and balsam -  
 a) Definition, classification and general identification tests.  
 b) Study of following - Balsam of Tolu, Balsam of Peru, Benzoin, Storax, Colophony, Asafoetida. (9 Periods)
- 3] Tannins – Definition, Classification and Identification test.  
 Study of the following – Black Catechu, Tannic Acid, Amla, Behra, Hirda, Arjun, Pale catechu, Ashok. (9 Periods)
- 4] Study of mineral ingredients.  
 Kaolin, Bentonite, Talc., Fuller's earth, Mica, Calamine. (5 Periods)
- 5] Herbs description and morphology of organized and unorganized herbs. (4 Periods)

**Books recommended:**

1. Text book of Pharmacognosy – Trease and Evan's
2. Pharmacognosy – By Claus and Tayler.
3. Text Book of Pharmacognosy – T. E. Wallis.
4. Materia Medica – By Nadkarni.
5. Wealth of India – CSIR
6. Indian medical plants: by Kirtikar & Basu
7. Pharmacognosy – by Dr. Kokate
8. Naturals and Cosmetics – by Dr. Satish Sakharwade

**S2 – T6****English Communication Skills**

Theory -	40
Sessional -	10
Total -	50

- |    |  |             |
|----|--|-------------|
| 1] | Writing skills:- Letter Writing, Informal letter, Formal letter, Bio-data/Resume, job Application    | (7 Periods) |
| 2] | Report Writing: Dialogue writing, Advertisement  | (5 Periods) |
| 3] | Personality Development: Effective Public speaking, Goal setting, time management, stress management | (7 Periods) |
| 4] | Speech Writing : View and Counterview, Expansion of Ideas, completion and Developing a story         | (5 Periods) |
| 5] | Listening skills: Loud Reading, Speaking, Conversations, Telephonic conversation.                    | (7 Periods) |
| 6] | Interview techniques, group discussion, situational role play.                                       | (5 Periods) |

**S2 – P1****Cosmetic Chemistry**

Theory -	80
Sessional –	20
Total -	100

- |    |  |
|----|--|
| 1] | Preparation and standardization of Cerric Ammonium Sulphate Potassium Iodate, Assays Based on use of above agents. |
| 2] | Preparation and standardization of Perchloric Acid and Sodium Methoxide. Assay based on above.                     |
| 3] | Preparation and standardization of Sodium EDTA. Assay based on EDTA.   |
| 4] | Preparation and Standardization of Silver Nitrate and Amonium Thiocynate. Assay Based on above.                    |
| 5] | Gravimetric analysis: experiments based on gravimetric analysis  |

**S2 – P2****Anatomy & Physiology**

Practical - 80  
Sessional – 20  
Total - 100

- 1] Determination of clotting time.
- 2] Determination of bleeding time
- 3] Determination of hemoglobin content.
- 4] Determination of R.B.C. count, D.L.C., T.L.C.
- 5] Study with the help of charts and models of
  - a) Cardiovascular system
  - b) Excretory system
  - c) Digestive system
  - d) Nervous system
- 6] Recording of body temperature, Pulse and Heart rate and Blood Pressure.

**S2 – P3****Organic Chemistry**

Practical - 80  
Sessional – 20  
Total - 100

- 1] Systematic Organic analysis of unknown organic substance (i.e. preliminary tests, detection of elements, groups, determination of physical constants and specific tests and confirmation by derivatives preparation)
  - a) Acetic acid
  - b) Benzoic acid
  - c) Salicylic acid
  - d) Urea
  - e) Thiourea
  - f) Aniline
  - g) Glucose

**S2 – P4****Physical Chemistry**

Practical - 80  
Sessional – 20  
Total - 100

- 1] Study the phenol – water two phase system and determine the critical temperature of the system.
- 2] Determine the molecular weight of a nonvolatile compound by the Rast's Camphor method.
- 3] Study of partition of iodine between Carbon Tetrachloride and water and determine the partition coefficients of iodine between the two solvents.
- 4] Study the first order kinetics of the hydrolysis of Methyl Acetate in an acid medium.
- 5] Study the second order kinetics of the reaction of  $K_2S_2O_8$  with KI.
- 6] Study of Buffer solutions and hence determine the pH of buffer solution using a comparator

**S2 – P5**

**Natural Cosmetic Agents**

Practical - 80  
Sessional – 20  
Total - 100

- 1] Organoleptic study and identification of
  - a. Tolu Balsum b. Peru Balsum
  - c. Benzoin d. Storax
  - e. Colophony f. Asfoetida
- 2] Morphological study and identification of following tannin containing agents:
  - a. Black Catechu. b. Amls
  - c. Behra d. Hirada
  - e. Ashoka Bark f. Arjua Bark.
- 3] Organoleptic study of Kaolin, Bentonite, Talc., Fuller's earth, Mica, Calamine.

**SEMESTER -III**

**S3 – T1**

**Cosmetic Technology**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Physical & Chemical properties of agents (Drug & Cosmetics) influencing design of products forms. (6 Periods)
- 2] Monophasic liquid formulations, techniques of enhancing solubilities of ingredients in vehicles, other problems involved in preparation and stability of liquid with special emphasis on spray. (8 Periods)
- 3] Surface active agents – definition classification based on chemical nature and HLB scale, properties and significance in cosmetics (8 Periods)
- 4] Packaging and dispensing of cosmetic formulations: Importance of different materials for containers and closures. Packaging of cosmetic product and labeling. Environmental aspects of packaging materials, appropriate recycling and disposal. Green packaging. (8 Periods)
- 5] Hydrocolloids – definition classification, properties and significance in cosmetics (6 Periods)

**Books recommended:**

1. Mithal Text Book of Pharm formulations B 11, Pilani.
2. The Pharmacopoeia of India
3. Remingtons Pharmaceutical Practices.
4. Cooper & Gum Dispensing for Pharmaceutical Students.
5. Husa: Pharmaceutical Dispensing: mach Publishing Co.
6. Text Book of Cosmeticology – by Harry's

**S3 – T2                  Instrumental Methods of Analysis.**

Theory -	40
Sessional -	10
Total -	50

- 1] Introduction to Instruments used for cosmetic analysis, Classification of instrumental Methods. (5 Periods)
- 2] Spectroscopy: introduction to spectroscopy, electromagnetic radiation- its properties and spectrum. (5 Periods)
- 3] Colorimetric, UV and Visible spectroscopy - Basic Principles, essential parts of spectrophotometers, uses and application of spectrophotometer. Spectrophotometric titration. (10 Periods)
- 4] Flame photometry- Introduction, General principles, Instrumentations and applications (6 Periods)
- 5] Chromatography- Introduction and classification in General Principles, type – columns, paper and thin layer chromatography and their applications. (10 Periods)

**Book Recommended:**

1. Instrumental Methods of Analysis – Dean, Willar
2. Instrumental Methods of Analysis – Ewing.
3. Quantitative Inorganic Analysis – A.I. Vogel
4. Commercial Method of Analysis – Shall be Biffer.

**S3 – T3                  Cosmetic Engineering**

Theory -	40
Sessional –	10
Total -	50

- 1] Flow of Fluids:  
Fluid statics, manometers, Reynolds No. Bernoulli's Theorem, fluid heads, frictional losses, (9 Periods)
- 2] Measurement of fluid flow meters. Orifice meters, Venturimeter, Pitot tube, Rotameter, displacement meter. (9 Periods)
- 3] Transportation of fluids:  
Pipes, pipe joints, (4 Periods)
- 4] Pumps: various types of pumps: reciprocating, Piston, Duplex diaphragm, rotary, centrifugal and turbine pumps. (8 Periods)
- 5] Conveying : Belt, Apron, Buchet, Screw & pneumatic. (6 Periods)

**Book Recommended:**

1. Bodger & Banchero : Introduction to chemical Engineering.
2. Mc-cabe & Smith : Unit operations in chemical Engineering.
3. Richardsaon & Coulson Vol. I & II : Chemical Engineering.
4. Hougen & Watson : Material & Energy Balances Part – I

**S3 – T4****Cosmetic Chemistry**

Theory -	40
Sessional –	10
Total -	50

- 1] Amino Acids : Classification, essential and non-essential amino acids, ketogenic & glycogenic amino acids, Zwitterions. Physical & Chemical properties of amino acids with respect to their use in cosmetic preparations .Their wide applications in cosmetics. **8 periods**
- 2] Proteins : Sources, classification in detail, Physical and Chemical properties and relation of these properties in use of proteins in cosmetic preparations. Importance of proteins in cosmetic and Pharmaceutical industries. **7 periods**
- 3] Enzymes : Definition, nomenclature & classification. Mechanism of enzyme action. Coenzymes & Prosthetic group. Properties of enzymes. Their industrial uses with respect to cosmetic and pharmaceutical industries. **8 periods**
- 4] Clay minerals and the natural and synthetic silicates: Chemistry in brief of silicones. Properties, Natural silicates, synthetics, synthetics silicates. Their properties and uses in preparation of cosmetics and drugs. Toxicity of Silicones. Silk powder. **7 periods**
- 5] I) Synthetic Surfactants : Classification, commercial, commercial surfactants, cosmetic uses. **3 periods**  
II) Insoluble Metallic soaps:  
Methods of manufacture and uses. **3 periods**

**Book Recommended:**

1. Chemistry & Manufacture of Cosmetics by M. G. DeNavarre

**S3 –T5****Drug & Cosmetic Laws**

Theory -	40
Sessional –	10
Total -	50

- 1] Drugs & Cosmetic Acts and Rules (with reference to cosmetics). (12 Periods)
- 2] Drugs and Magic Remedies Act. Objectionable Advertisements. (3 Periods)
- 3] Prevention of Cruelty to Animal Act. (3 Periods)
- 4] The Medicinal and Toilet preparations (Excise duties) Acts and Rules. (6 Periods)
- 5] Schedule S & schedule Q of D & C act. (6 Periods)
- 6] Schedule M (ii) of Drug and Cosmetic Act with G.M.P. (6 Periods)

**Books recommended:**

1. Drugs & Cosmetic Acts & Rules. Govt. of India Publication.
2. T.B. of Forensic pharmacy by M. Mittal
3. IP, BP, NF, USP.

**S3 – T6                  Introductory Pharmacology & Toxicology**

Theory -	40
Sessional -	10
Total -	50

- 1] Scope of Pharmacology in Cosmetics, Terminologies and Definitions **(4 Periods)**
- 2] Routes of Administration of drug, giving special emphasis on Topical route, their advantages and disadvantages. **(8 Periods)**
- 3] Various processes of absorption of drug and the factors affecting absorption. Disposition of drug. **(10 Periods)**
- 4] General mechanism of drug action, site of drug action, type of drug action. **(10 Periods)**
- 5] Material safety data sheet (MSDS) its scope, significance during cosmetic material handling with examples. **(4 Periods)**

**Books recommended:**

1. Pharmacology and Pharmacotherapeutics By R.S. Satoskar and S. Bhandarkar
2. Essentials of pharmacotherapeutics By F.S.K. Barar.

**S3 – P1                  Cosmetic Technology**

- 1] Monophasic preparations like toners, mouthwash, astringents.
- 2] a) Wet gum method by using fixed and mineral oils.  
b) Dry gum method by using fixed and mineral oils.
- 3] Preparation of o/w emulsions eg. Vanishing cream and all purpose cream
- 4] Preparation of w/o emulsion eg. Cold cream
- 5] Identification of types of emulsions.
- 6] Preparation of suspension eg. calamine lotion, rouge, foundation etc.

**S3 – P2                  Instrumental Methods of Analysis.**

- 1] Determination of  $\lambda$  – max., absorption curve of organic dyes by Colorimeter.
- 2] Determination of concentration of organic dyes by Colorimeter and spectrophotometer.
- 3] Basic Experiment based on chromatography ie paper chromatography, thin layer chromatography and column chromatography

**S3 – P3****Cosmetic Engineering**

- 1] Use on Instruments, Practice in lettering construction & uses of plain diagonal, vernier scales and scale of chords.
- 2] Projections of points, lines and planes.
- 3] Section of solids.

**Book Recommended:**

1. Elementary Drawing – N. D. Bhatt.

**S3 – P4****Cosmetic Chemistry**

- 1] Qualitative test for proteins and amino acids.
- 2] Precipitation of proteins.
- 3] Effect of Ph change on proteins: Precipitation of casein from milk.
- 4] Quantitative estimation of glycine by Sorenson's method.
- 5] Colorimetric estimation of proteins by Biuret/ Lowry's method.
- 6] Enzyme assay. Assay of amylase activity.

**S3 – P5****Beauty Culture**

1. Eye Brows:
  - i) Factors affecting eye brow shaping.
  - ii) Determination of correct length of eye brow.
2. Different methods for eyebrow shaping:
  - i) Threading.
  - ii) Tweezing
3. Treatment for superfluous hair waxing.
  - a. Hot wax treatment
  - b. Cold wax treatment
    - i) Leg waxing
    - ii) Hand waxing
    - iii) Under arm waxing.
4. Bleaching :
  - i) Preparation of paste.
  - ii) Patch test
  - iii) Face bleaching
  - iv) Hand bleaching
  - v) Leg bleaching
  - vi) Precautions.

**Books recommended:**

1. Ann Eaton and Flurence Openshaw, Cosmetic Make – Up and Manicure.

## **SEMESTER – IV**

**S4 – T1**

**Cosmetic Technology**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Bisphasic liquid formulations:  
Emulsions & Suspensions. Emulsions – types, identification of emulsions, preparation, Suspensions – Floculated and non-flocculated suspensions, selection of wetting suspending and dispensing agents, preparation and stability. (10 Periods)
- 2] Preservatives- origin of contamination, factors influencing the effectiveness of preservatives, Ideal characters, uses and safety aspects (4 Periods)
- 3] Semisolid formulations:  
Ointments, paste, creams, jellies, sticks, selection of ideal bases, preparation and stability and packing. (8 Periods)
- 4] Solid formulations - Bulk powders, incorporation of different varieties of powders viz. dusting, compact, face and talcum. (8 Periods)
- 5] Incompatibility – physical and chemical (6 Periods)

**Books recommended:**

1. Mithal Text Book of Pharm formulations B 11, Pilani.
2. The Pharmacopoeia of India
3. Remingtons Pharmaceutical Practices.
4. Cooper & Gun's Dispensing for Pharmaceutical Students.
5. Husa: Pharmaceutical Dispensing: mach Publishing Co.
6. Text Book of Cosmeticology – by Harry's

**S4 – T2**

**Instrumental Methods of Analysis.**

Practical- 40  
Sessional – 10  
Total- 50

- 1] Raman Spectroscopy.- Introduction, principle, Instrumentation, applications (6 Periods)
- 2] Polarimetry:- Introduction, optical activity, General Principles, apparatus, application in the determination of optical rotation and specific optical rotation of liquid and solid substances. (8 Periods)
- 3] pH measurement: by pH indicators and by Potentiometric method (pH meter)  
Its Instrumentation and applications. (8 Periods)
- 4] Refractometry – Introduction to refractive index, theory and principle of Abbe's Refractometer, its application (8 Periods)

- 5] Conductometry:- Introduction, laws and definition of conductance, specific conductance, equivalent conductance, molecular conductance. Principles, instrumentation and applications.  
 (6 Periods)

**Book Recommended:**

5. Instrumental Methods of Analysis – Dean, Willar
6. Instrumental Methods of Analysis – Ewing.
7. Quantitative Inorganic Analysis – A.I. Vogel
8. Commercial Method of Analysis – Shall be Biffer.

**S4 – T3**

**Cosmetic Engineering**

Theory -	40
Sessional -	10
Total -	50

- 1] Humidification and air conditioning:  
 Definitions, Humidity charts and uses, wet bulb theory, determination of Humidity, Humidifiers and dehumidifiers. (8 Periods)
- 2] Flow of heat:  
 Classification of heat flow processes, Fourier's law, Heat flow through cylinder, convection. Natural Convection, forced convection surface coefficients, overall heat transfer through boiling liquids and condensing vapours (8 Periods)
- 3] Radiations, Black body, Emmissivity, mometry, (6 Periods)
- 4] Heaters, Heat interchangers, Parallel and countercurrent Heat Exchangers, Finned tube heat changers. (6 Periods)
- 5] Fundamental concepts of material & energy balances:  
 Units & Dimensions, dimensional analysis, material & energy balances for operations without chemical reactions. (8 Periods)

**Book Recommended:**

1. Bedger & Banchero : Introduction to chemical Engineering.
2. Mc-cabe & Smith : Unit operations in chemical Engineering.
3. Richardson & Coulson Vol. I & II : Chemical Engineering.
4. Hougen & Watson : Material & Energy Balances Part – I

**S4 – T4**

**Cosmetic Chemistry**

Practical-	40
Sessional -	10
Total -	50

- 1] Lipids : Sources, classification, structure of simple triglycerides. Waxes: classification, Composition, properties and importance of these properties in cosmetic formulations , uses. Fatty acids: classification essential fatty acids, Production method, Production method, Properties and uses of fatty acids with respect to cosmetic and pharmaceutical establishments Lonolim : composition, derivatives & uses. Derivatives of fatty acids : Their role in Cosmetics,  
 Fatty Alcohols : Chemistry, types & uses. (8 periods)

- 2] I) Humectants and Polyols :  
Choice of humectant, unusual humectants, special uses of humectants.  
Lanolin : Source, composition, properties, derivatives & uses. **(5 periods)**
- II) Viscosity Modifiers – eg, gum, alcohol and electrolytes, solvents etc. **(3 periods)**
- 3] Vitamins :  
Definition, fat soluble and water soluble Vitamins, sources, structure, Physiological & Metabolic role of Vit. A, D, E & K Importance in cosmetics & Pharmaceuticals.  
Structure & Sources of water soluble vitamins, B Complex & Vit. C. Their role in Cosmetic industries. **(10 periods)**
- 4] Perals and Pearl Essence :  
Definitions, commercial uses, production methods, synthetic pearly substances. **(4 periods)**
- 5] Ion exchange resins and their cosmetic uses in case of purified water, Raw water, standards for water as per IP, BP, USP (with recent amendments) **(6 periods)**

**Book Recommended:**

- Chemistry & Manufacture of Cosmetics by M. G. DeNavarre

**S4 –T5**

**Drug & Cosmetic Laws**

Theory -	40
Sessional –	10
Total -	50

- |    |  |             |
|----|--|-------------|
| 1] | Pharmacy Act.  | (8 Periods) |
| 2] | Factory Act.   | (6 Periods) |
| 3] | Contract Act.  | (4 Periods) |
| 4] | Shop & Establishment Act.  | (4 Periods) |
| 5] | Sales Promotion Act.   | (6 Periods) |
| 6] | Standards of weight and measures Act (with reference to cosmetics) | (4 Periods) |
| 7] | Patenting in India & Abroad.                                       | (4 Periods) |

**Books recommended:**

- Drugs & Cosmetic Acts & Rules. Govt. of India Publication.
- T.B. of Forensic pharmacy by M. Mittal
- IP, BP, NF, USP.

**S4 – T6**

**Introductory Pharmacology & Toxicology**

Theory -	40
Sessional –	10
Total -	50

- |    |   |                     |
|----|---|---------------------|
| 1] | Pharmacology of Topical drugs, Introduction. Types of Topical drugs:<br><br>a. Protective absorbents<br>c. Demulcents.<br>d. Emollients | <b>(10 Periods)</b> |
|----|---|---------------------|

- e. Astringents and antiperspirants-deodorant
  - f. Irritants, Rubefacients and Vesicants.
  - g. Sclerosing Agents.
  - h. Caustics and Escharotics
  - i. Keratolytics (Desquamating Agents)
  - j. Cleansing preparations.
  - k. Miscellaneous Dermatologics- mouth washes, gargals, sunscreens, melanizers & demelanizers.
- 2] Miscellaneous Topical Drugs – Local antifungal agents- classification, properties, method of estimation of potency and mechanism of action of antibacterial agent, antifungal agent, ectoparasiticides **(5 Periods)**
- 3] Pharmacology of Cosmeceuticals used for Antiaging, Antiwrinkle, Fairness-bleaching & Sunscreens, Antidandruff, Anti inflammatory, Anti acne/pimple, Pigmentation etc. **(5 Periods)**
- 4] Autocoids: histamine, its pharmacological role and antihistamines. **(8 Periods)**
- 5] Heavy metals and metal antagonist: Symptoms and management of mercury, Arsenic, & lead poisoning. **(8 Periods)**

**Books recommended:**

3. Pharmacology and Pharmacotherapeutics By R.S. Satoskar and S. Bhandarkar
4. Essentials of pharmacotherapeutics By F.S.K. Barar.

**S4 – P1**

**Cosmetic Technology**

Practical-	80
Sessional –	20
Total -	100

- 1] Stability study of suspension – by use of thickening agents, flocculation agents.
- 2] Preparation of ointment bases – i) hydrocarbon ii) Absorbable iii) Water Soluble iv) Water miscible.
- 3] Preparation of paste & jelly bases.
- 4] Preparation of simple stick bases.
- 5] Preparation of face powders

**S4 – P2**

**Instrumental Methods of Analysis.**

Practical-	80
Sessional –	20
Total-	100

- 1] Experiment based on pH – Meter, pH determination of cosmetic raw material and products as per IP specification
- 2] Experiment based on Conductometer, determination of specific conductance/ conductivity of various electrolytes, standard graph, determination of concentration of electrolytes.
- 3] Study of refractometer, determination of refractive index of cosmetic ingredients as per IP specifications.

- 4] Experiment based on polarimeter, determination of optical rotation of specific optical rotation of optically active substances as per IP specifications.

**S4 – P3**

**Cosmetic Engineering**

Practical- 80  
Sessional – 20  
Total - 100

- 1] Elementary ideas of I st angle and IIrd angle projectors. Top view, front view and sections.
- 2] Projections of simple solids such as cones, cylinders, prisms of pyramids with different positions and ground lines.
- 3] Isometric projections of simple solids.

**Book Recommended:**

1. Elementary Drawing – N. D. Bhatt.

**S4 – P4**

**Cosmetic Chemistry**

Practical- 80  
Sessional – 20  
Total- 100

- 1] Qualitative test for lipids.
- 2] Determination of Saponification value of fats.
- 3] Determination of Acid value of fats.
- 4] Determination of Iodin number of fats.
- 5] Estimation of Ascorbic Acid (Vit. C)
- 6] Identification test and analysis of lanolin.
- 7] Identification test and analysis of Kaolin.
- 8] Identification test and analysis of Bentonite.
- 9] Analysis of water as per IP, BP and USP.

**S4 – P5**

**Beauty Culture**

Practical- 80  
Sessional – 20  
Total - 100

1. Manicure:
  - a. Requirement for manicure
  - b. Procedure
  - c. Nail shaping
  - d. Cuticle removing
  - e. Hand Massage.
  - f. Application of varnish
  - g. Nail extenders and Nail decoration
2. Pedicure:
  - a. Requirement for Pedicure

- b. Procedure.
  - c. Massage for pedicure.
  - d. Application of varnish
3. Electric Manicure.
  4. Nail Arts / Nail designing
  5. Application of false nails

**Books recommended:**

1. Ann Eaton and Flurence Openshaw, Cosmetic Make – Up and Manicure.

## SEMESTER - V

**S5 – T1**

**Perfumes**

Theory -	40
Sessional –	10
Total-	50

- |  |
|--|
| <ol style="list-style-type: none"> <li>1] Essential oils – Production equipment, water distillation, Steam distillation, steam and water distillation, treatment of condensate water after distillation. (9 Periods)</li> <li>2] Flower oils – Extraction with cold fat and hot fat, alcoholic extracts, absolute of enflurages and chassis. Extraction with volatile solvents, selection of solvent and extraction apparatus. (9 Periods)</li> <li>3] Resins, Gum &amp; Exedution – Their extraction processes e.g. Soxhlet Apparatus, Percolation, Maceration.           <ul style="list-style-type: none"> <li>Oleo Resins – Ginger oleoresins.</li> <li>Oleo gum resins – Gum Styrax, Gum Benzoin and Balsams – Balsam Peru, Myrrh.</li> </ul> (6 Periods)         </li> <li>4] Isolates – Methods of Isolation, properties &amp; uses of following:           <ul style="list-style-type: none"> <li>Eugenol, Pinene, Linalool, Citral and Geraniol.</li> <li>Flavours – Sources and properties of Vanilla, Rose, Pineapple, Peppermint, Mango, Raspberry, Orange &amp; Lemon.</li> </ul> (6 Periods)         </li> <li>5] Alcohols -           <ul style="list-style-type: none"> <li>• Manufacture of ethanol.</li> <li>• Purification of Ethanol</li> <li>• Deodorization of ethanol.</li> </ul> (6 Periods)         </li> </ol> |
|--|

**Books recommended:**

1. Perfumes, Flavours and Essential oil Industries – SBP Board.
2. Manufacture of Perfumes, Cosmetics & Detergents – Giriraj Prasad
3. Perfumes: History & Chemistry Vol-I- Dr. D.D.Wasule
4. Cosmetics: Science & Technology – Sagarin.
5. Essential oils Vol. I by Gunther.
6. Perfumes, soups & Cosmetics – Poucher.

**S5 – T2**

**Cosmetic Technology**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Soaps –Manufacturing technology, ingredients, types of soaps-bathing, toilet soaps, antibacterial soaps transparent soaps, liquid soaps syndates (synthetic detergent bars) (6 Periods)
- 2] I) Humectants – Introduction, drying out, types, hygroscopicity, stability, safety, skin moisturization. (4 Periods)  
II) Antioxidant : Introduction, General oxidative theory, measurement of oxidation and assessments of oxidant efficiency, choice of antioxidants. (6 Periods)
- 3] Skin Creams : Introduction, classification of skin creams, cleansing creams, Night and massage creams, Moisturizing, vanishing and foundation creams, Pigmented foundation creams, hand creams, hand and body cream, all purpose creams. (8 Periods)
- 4] Astringents and skin tonics : Introduction, types of astringents and astringent products and formulation aspects, antiperspirant and deodorants. (6 Periods)
- 5] Face packs and Masks: Introduction; water based systems, Rubber – Based systems, vinyl – based systems, hydrocolloid – based systems, Earth based systems, anti wrinkle preparation and their formulation aspects. (6 Periods)

**Books Recommended:**

1. Harry's Cosmetology.
2. Cosmetic Science and Technology by Sagarin E.

**S5 – T3**

**Principle of Cosmeceutics**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Surface active agents:  
Classification based on chemical nature & HLB scale, determination of HLB, surface activity, Bulk properties of surfactant solution, factors affecting micelle formation, structure of micelles and liquid crystal micellar solubilisation and its significance. (6 Periods)
- 2] Interfacial Phenomenon:
  - a) Cohesion adhesion and spreading, absorption at solid and liquid interfaces, absorption isotherm's applications.
  - b) Electrical properties at interface, origin of charge, electric double layer, Nerst and Zeta potential, effect of electrolyte. (6 Periods)
- 3] Suspension:  
Particle interaction and behaviour, flocculation and deflocculation, sedimentation parameters, Role of wetting, controlled flocculation and structured vehicle in formulation, evaluation of suspension stability. (9 Periods)
- 4] Emulsion:

Types, detection, thermodynamic considerations, mechanism of droplet stabilization, theories of emulsification, properties and stability of emulsion, assessment of emulsion self life.

(9 Periods)

5] Solubility:

Mechanism of solute – solvent interaction, ideal solubility and Hildebrand – wood Scatchard equation, salvation and association, quantitative approach to the factors influencing solubility of drugs,

(6 Periods)

**Books Recommended:**

1. Martin, Swarbrick. Commerate & cuhn Physical Pharmacy.
2. Burger & Lee, Physical and Technical Pharmacy.
3. Rawlins : Bentley's Text Book of Pharmaceutics.
4. Shilton and Ridgway : Physical Pharmaceutic.
5. Remingtons Pharmaceutical Practices.

**S5 – T4 Cosmetic Engineering**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Size reduction: Theory of size reduction, energy for size reduction, factors influencing size reduction, study of size reduction equipments, Crushers, Grinders, Cutting m /s, open circuit and closed circuit grinding. (5 Periods)
- 2] Study of size reduction equipments, Crushers, Grinders, Cutting m /s, open circuit and closed circuit grinding. (5 Periods)
- 3] Size separation : Types of screening equipment, Air separation method, cyclone separators, bag filters, classifiers, simple and mechanical classifiers, size separation by setting and difference in density. (10 Periods)
- 4] Filtration : Theory of filtration, filter aids, selection of filters, study of filter press, Rotary, drum leaf filters, meta filters, disc filters, membrane filters. (8 Periods)
- 5] Air: Methods for quality air, HEPA filters class of air, laminar flow - +ve & -ve pressure in manufacturing area. (8 Periods)

**Book Recommended :**

1. Introduction to Chemical Engineering – Badger & Banchero.
2. Unit Operation in Chemical Engineering Mc-cabe & Smith.
3. Chemical Engineering Vol. I & II – Richardson & Coulson.

**S5 – T5**

**Beauty Culture**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Structure of skin.  
a) Recognition of skin types.  
b) Different types of treatments suitable to skin conditions and skin types.

- c) Skin care in different seasons.  
d) Diet and Exercises for healthy skin. (8 Periods)

2] Different types of skin blemishes and their treatment.  
i. Black heads                    ii. White heads  
iii. Acne                        iv. Open pores.  
v. Freckles                      vi. Treatment for curing wrinkles. (6 Periods)

3] Muscles of facial expression.  
a) Bones of the Cranium and face (Only labeled diagrams)  
b) Face pack ingredients and their effects  
c) Facial:  
i. Cleaning                    ii. Toning,           iii. Face Massage techniques  
iv. Different types of facial (8 Periods)

4] Mask Therapy :  
i. Setting masks.                ii. Peel off masks.  
iii. Thermal types- paraffin wax masks        iv. Non-setting masks. v. Hot oil marks (6 Periods)

5] Introduction to aroma therapy.  
a) Methods of extraction of essential oils.  
b) Blending & precautions. Properties of essential oils & carrier oils  
c) Patch testing, safety & precautions.  
d) Different aroma therapy formulations for skin and hair care. (8 Periods)

## **Books recommended:**

1. Ann Eaton and Flurence Openshaw, Cosmetic Make – Up and Manicure.
  2. A Professional Guide to Hair Dressing and Beauty Therapy by Veena Pitre
  3. The Science of Cosmetics by John V. Simmons
  4. Complete Beauty Book by Helen Foster
  5. Vogue- Body and Beauty Book by Bronwen Meredith
  6. A Guide for Health & Beauty Therapist Vol.-1 Face, hands and feet by Gaynor Winyard

S5 – T6

## **Pharmacology & Interaction**

Theory - 40  
 Sessional – 10  
 Total - 50

- wash & gargals. (6 Periods)
- 5] Skin pigmentation, disorder of pigmentation, various pigmentary and depigmentary agents used on above disorders. (10 Periods)

**Books Recommended :**

1. Human Physiology – by C.C. Chatterjee.
2. Roxburis Common Skin Diseases.
3. Clinical Dermatology – An individual approach by John T. Ingrans.
4. The merck manual of Diagnosis and Therapy.
5. Unwanted Effects of Cosmetics and Drugs used in Dermatology By. J. P. Nater, Groot & Liem.
6. Harry's Cosmetology.

**S5 – P1 Perfumes**

- 1] Distillation of water and estimate boiling range before & after distillation.
- 2] Distillation of alcohol or any other liquid and report boiling range before & after distillation.
- 3] Isolation of essential oil – Extraction (from bark, leaves, flowers, seeds etc.) distillation.
- 4] Study of soxhlet apparatus & its use.
- 5] Preparation of water extracts of turmeric (Haldi), Shikaki, Ritha, Ginger.
- 6] Preparation of alcoholic extract of above herb.
- 7] Deodorization of alcohol.
- 8] Identification of perfumes.
- 9] Identification of flavors.

**Books recommended:**

1. Perfumes, Flavours and Essential oil Industries – SBP Board.
2. Manufacture of Perfumes, Cosmetics & Detergents – Giriraj Prasad
3. Perfumes: History & Chemistry Vol-I- Dr. D.D.Wasule
4. Cosmetics: Science & Technology – Sagarin.
5. Essential oils Vol. I by Gunther.
6. Perfumes, soups & Cosmetics – Poucher.

**S5 – P2 Cosmetic Technology**

Preparation of :

1. Cleansing Creams.
2. Cold Cream.
3. Vanishing Cream.
4. Emollient Cream.
5. Emollient Cream
6. Hand Cream
7. Face-Packs- Masks.
8. Astringent preparation.

**S5 – P3 Principles of Cosmeceutics**

- 1] Determination of surface tension.
- 2] Determination of Interfacial Tension and spreading Coefficient.

- 3] To find critical micellar concentration (cmc) of the given surfactants.
- 4] Effect of phase – volume ratio on stability of emulsion.
- 5] Evaluation of Emulsion stability and shelf life.
- 6] To study and verify Freundlich Adsorption Isotherm.
- 7] To calculate sedimentation parameters of suspension.
- 8] Determination of globule size of emulsion- effect of emulgant

#### **S5 – P4 Cosmetic Engineering**

- 1] To calibrate orifice meter & to obtain the coefficient of discharge for the same.
- 2] To calibrate venturimeter & to obtain the coefficient of discharge for the same.
- 3] To study sedimentation process of setting of Ca CO<sub>3</sub> slurry and find area of thickener
- 4] To study relationship between drag coefficient & modified Reynolds No. for a body falling through liquid.
- 5] To carry out sieve analysis.

#### **S5 – P5 Beauty Culture**

- 1] Facial
  - a) Skin analysis
  - b) Facial massage techniques
  - c) Use of different face pack ingredients .
- 2] General facial treatment.
- 3] Herbal facial treatment.
- 4] Fruit Facial
- 5] Different types of facial treatments
  - a) Facial for Mature skin
  - b) Facial for sensitive skin
  - c) Facial for acnefied skin
- 6] Aroma Therapy
  - a) Aroma Facial for different skin type

# **SEMESTER -VI**

**S6 – T1**

**Perfumes**

Theory -	40
Sessional –	10
Total-	50

- 1] A) Fixatives – Sources, Classification, Chemical composition and uses -  
 i) Animal Source – Civet, Musk, Ambergris.  
 ii) Resinous Fixatives – Benzoin, Balsam, Myrrh.  
 iii) Essential oil Fixatives – Sandalwood, Lemon, Cinnamon.  
 iv) Synthetic Fixatives. Diethyl Phthalate, Benzyl Benzoate, alcohols.
- B) Fixatives – selection and uses of fixatives.
- C) Building of perfumes and body of the perfumes. (6 Periods)
- 2] Odorous materials manufactured synthetically by (Reaction and flow diagrams) Condensation – Coumarin, Diphenyl oxide and cinnamic aldehyde and Esterification – Benzyl acetate, Benzyl Benzoate. (8 Periods)
- 3] Odorous materials manufactured synthetically by (Reaction and flow diagrams) Nitration – Musk ambrette, musk xylene and Musk Ketone. (8 Periods)
- 4] Odorous materials manufactured synthetically by (Reaction and flow diagrams) Oxidation – Vanillin, Heleotropins, anisaldehyde, Benzaldehyde (8 Periods)
- 5] Odorous materials manufactured synthetically by (Reaction and flow diagrams) Grignard's Process – Phenyl ethyl alcohol and Hydrogenation – Citronellal from citronellal (6 Periods)

**Books recommended:**

1. Perfumes, Flavours and Essential oil Industries – SBP Board.
2. Manufacture of Perfumes, Cosmetics & Detergents – Giriraj Prasad
3. Perfumes: History & Chemistry Vol-I- Dr. D.D.Wasule
4. Cosmetics: Science & Technology – Sagarin.
5. Essential oils Vol. I by Gunther.
6. Perfumes, soaps & Cosmetics – Poucher.

**S6 – T2**

**Cosmetic Technology**

Theory -	40
Sessional –	10
Total -	50

- 1] I) Productive creams and hand cleansers: Introduction; barrier material; protective cream and gels and formulation aspects. (6 Periods)
- II) Skin lightener of bleaches: Formulation aspects. (4 Periods)
- 2] Bath Preparation : Foam baths, Introduction, formulation and foam baths, types of

products, product assessment, bath salts, ingredient and formulations.

Bath Oils: introduction floating and spreading oils, dispersible or blooming oils soluble oils, foaming oils.  
(8 Periods)

- 3] Skin Products for Babies: introduction, skin problems in babies, functions, requirement of body products, safety of baby products, example, formulatrions.  
(6 Periods)
- 4] Coloured Make-up Preparations: Lipstick- Introduction. Ingredients of lipstick, Example formulation. Manufacture of lipsticks, Treatment lipstick, lip salves, liquid lipsticks. Rouge Introduction, Dry rouge, Wax based rouge, cream rouge, liquid rouge,  
(6 Periods)
- 5] Eye make-up, Introduction, Mascara, Eyeshadow, Eyeliner, Eyebrow pencil.  
(6 Periods)

**Books Recommended:**

1. Harry's Cosmetology.
2. Cosmetic Science and Technology by Sagarin E.

**S6 – T3**

**Principles of Cosmeceutics**

Theory - 40  
Sessional – 10  
Total- 50

- 1] Distribution phenomenon:  
Distribution of solute between immiscible liquids, ionic dissociation and molecular association influencing partitioning, Applications of distribution phenomenon.  
(6 Periods)
- 2] Colloidal Dispersion:  
Properties of colloids – Optical, kinetic and electrical and their applicability in determining molecular weight of polymer, stability of colloidal systems mechanism of peptization.  
(9 Periods)
- 3] Rheology:  
Types of flow behaviour, thixotropy and thixotropic co-efficient measurement of various rheological properties, factors influencing rheology of dispersed systems.  
(8 Periods)
- 4] Micromeritics:  
Particle size, size distribution, shape and surface area and their determination in heterogeneous systems. Porosity density and packaging arrangements in flow properties and their influence on processing of solid preparations.  
(9 Periods)
- 5] Complexation and methods of detection of complexes.  
(4 Periods)

**Books Recommended:**

1. Martin, Swarbrick, Commerate & Cuhn Physical Pharmacy.
2. Burger & Lee, Physical and Technical Pharmacy.
3. Rawlins : Bentley's Text Book of Pharmaceutics.
4. Shilton and Ridgway : Physical Pharmaceutic.
5. Remingtons Pharmaceutical Practices.

**S6 – T4**

**Cosmetic Engineering**

Theory - 40

Sessional – 10

Total - 50

- 1] Mixing: Agitation of liquids, study of mixers for liquid – liquid gas liquid, dry powder, pastes & plastic masses. (6 Periods)
- 2] Distillation : Raoult's law & Henry's law, theory of distillation of binary mixtures of miscible, immiscible and partially miscible liquids, study of distillation equipment used for simple vacuum steam, reflux & molecular distillation, (10 Periods)
- 3] Separation of Azeotropes (Binary & Ternary) and liquids of similar volatility. Rectification & fractionation. (5 Periods)
- 4] Evaporation: factors affecting evaporation, study of short tube long tube, agitated, film, evaporator performance of rubular evaporator, improving efficiency of evaporation. (8 Periods)
- 5] Drying : Definition purpose of drying, theory of drying / loss on drying, moisture content and equilibrium moisture content, classification of dryers, study of tray, Rotary, Vacuum, fluidized bed dryers. (7 Periods)

**Book Recommended :**

4. Introduction to Chemical Engineering – Badger & Banchero.
5. Unit Operation in Chemical Engineering Mc-cabe & Smith.
6. Chemical Engineering Vol. I & II – Richardson & Coulson.

**S6 – T5**

**Beauty Culture**

Theory - 80

Sessional – 20

Total - 100

- 1] I) Beautician's attitude to client and professional ethics (2 Periods)  
II) Different shapes of faces (2 Periods)
- 2] Make – up :  
A. i. Pre Make-up skin care.  
ii. Make-up Techniques – Complexion planning.  
B. Application of cosmetics  
i. Cleanser ii. Toner  
iii. Astringent. iv. Moisturizer  
v. Foundation. vi. Powder.  
vii. Blusher. viii Lipsticks. (8 Periods)
- 3] Different types of make-ups  
a) Day Make-up  
b) Evening Make-up.  
c) Party Make-up.

	d) Bridal Make-up	(8 Periods)
4]	I) Corrective Make-up for a) Face shapes b) Eyes c) Lips c) Nose	(6 Periods)
	II) Application of false eye lashes method and contraindication	(2 Periods)
5]	Hair – Structure and types of hair a) General problems and care for hair. b) Natural Dyes and Chemical Dyes d) Shampoo & Conditioner	(8 Periods)

**Books recommended:**

1. Ann Eaton and Flurence Openshaw, Cosmetic Make – Up and Manicure.
2. A Professional Guide to Hair Dressing and Beauty Therapy by Veena Pitre
3. The Science of Cosmetics by John V. Simmons
4. Complete Beauty Book by Helen Foster
5. Vogue- Body and Beauty Book by Bronwen Meredith
6. A Guide for Health & Beauty Therapist Vol.-1 Face, hands and feet by Gaynor Winyard

S6 – T6	Pharmacology & Interaction	Theory - 40
		Sessional – 10
		Total - 50

1]	Allergy and antigen – antibody reaction, types of Hypersensitivity reaction and disorders due to hyper sensitivity reactions and a topic dermatitis.	(10 Periods)
2]	Dermatitis – various types and their clinical feature. v. Acute Toxic contact dermatitis. vi. Allergic contact dermatitis. vii. Irritant contact dermatitis. viii. Phototoxic contact dermatitis.	(12 Periods)
3]	Disorders and treatment of feet, foot cosmetics.	(2 Periods)
4]	Methods for animal testing for safety evaluation of cosmetic	(6 Periods)
5]	Dermatological testing as per BIS specification patch testing, repeated insult patch testing cumulative irritation test photoallergic test phogotoxicity test.	(6 Periods)

**Books Recommended :**

- 1 Human Physiology – by C.C. Chatterjee.
- 2 Roxburgs Common Skin Diseases.
- 3 Clinical Dermatology – An individual approach by John T. Ingrans.
- 4 The Merck Manual of Diagnosis and Therapy.

- 5 Unwanted Effects of Cosmetics and Drugs used in Dermatology By. J. P. Nater, Groot & Liem.  
 6 Harry's Cosmetology.

**S6 – P1**

**Perfumes**

Practical - 80  
 Sessional – 20  
 Total - 100

- 1] Synthesis of odorous material (Any one) by following methods-
  - a) Condensation (Coumarin /Diphenyl oxide / cinnamic aldehyde)
  - b) Esterification (Benzyl acetate/ Benzyl Benzoate).
  - c) Hydrogenation (Citronellal from citronellal)
  - d) Nitration (Musk ambrette/ musk xylene /Musk Ketone)
  - e) Oxidation (Vanillin/ Heleotropins/ anisaldehyde/ Benzaldehyde)
- 2] Peppermint oil – Assay – for esters and ketones
- 3] Clove oil – determination of phenol contents
- 4] Wintergreen oil – determination of methyl salicylate content
  - Test for acidity.

**Reference book**

- 1) Indian Pharmacopoeia 2007 Vol. I, II, III
- 2) Manufacture of Perfumes, Cosmetics & Detergents – Giriraj Prasad
- 3) Perfumes: History & Chemistry Vol-I- Dr. D.D.Wasule

**S6 – P2**

**Cosmetic Technology**

Practical- 80  
 Sessional – 20  
 Total - 100

- 1] Rouge.
- 2] Lipstick
- 3] Deodorant preparations
- 4] Lotions – Cleansing and mustering
- 5] Bath oils and bath foam
- 6] Eye shadow, mascara
- 7] Soap Preparation

**S6 – P3**

**Principles of Cosmeceutics**

Practical- 80  
 Sessional –20  
 Total - 100

1. Evaluation of suspension stability
2. To find out the partition coefficient & distribution of drug between two phases.
3. To determine molecular weight by viscosity measurement method
4. To verify the Hofmerster series for the flocculation of colloids.
5. Determination of globule size of emulsion – effect of internal phase.
6. To study Krafft point and Cloud point
7. Determination of Angle of repose and study the flow properties of powders.
8. To study the bulk density and porosity of powders.

**S6 – P4****Cosmetic Engineering**

Practical- 80  
Sessional – 20  
Total - 100

- 1] To evaluate mass transfer coefficients for mass transfer from the surface of liquid into the atmosphere.
- 2] To verify Rayleigh's equation for given Binary system.
- 3] To construct boiling point diagram for given binary system.
- 4] To prepare ternary phase diagram of Binodal curve & to obtain timeline relationship for ternary system.
- 5] To obtain critical moisture content of given material & to compute equations for falling and const. Rate period.
- 6] To study effect of speed on mixing of liquids.

**S6 – P5****Beauty Culture - II**

Practical- 80  
Sessional – 20  
Total- 100

- 1] Make-up.  
Different make-up Techniques.
  - i. Use of different make-up cosmetics
  - ii. Day make-up
  - iii. Party make-up
  - iv. Bridal make-up
  - v. Make-up interview
  - vi. Corrective make-up
  - vii. Application of false eye lashes.
- 2] Different formulations for Skin and Hair care Hair
- 3] Hair
  - i. General hair care.
  - ii. Treatment for hair falling and dandruff
- 5] Hair styles & Hair setting :
  - i. Formal
  - ii. Informal
  - iii. Treatment for Hair.

## **SEMESTER - VII**

### **S7 – T1**

#### **Perfumes & Colours**

Theory - 40  
Sessional – 10  
Total- 50

- 1] Specially perfumed products – formulation and processing of :  
a. Alcoholic fragrance solution  
b. Emulsified and solid fragrances.  
c. Solubilized perfumes. (6 Periods)
- 2] Packaging of perfumes with special emphasis on aerosol products.  
Aerosol: Principle & Mechanism.  
Method of preparation, cold fill method & press fill method  
Packaging and components. (6 Periods)
- 3] Synthetic substances used to formulate different perfumes, their sources, properties and composition of lavender, Rose, Jasmine, violet, Orris, Cyprès, Amber, carnation, Muguet, Lilac, Acacia, Cassie, narcissus, Kewda, Mineral water essences. (9 Periods)
- 4] Revision, adaptation and incorporation of perfumes in skin care cosmetic products like creams, lotions, powders, soaps. (6 Periods)
- 5] a) Revision, adaptation and incorporation of perfumes in Hair care cosmetic products like shampoo, hair oils, conditioners, hair colorants and dyes  
b) Incorporation of perfume/ color/ flavor in eye preparations. Nail preparations, Lip and other preparations, tooth paste and baby preparations. (9 Periods)

#### **Books Recommended:**

- 1 Perfumes, Flavours & Essential oil Industry by S. B. Srivastava.
- 2 Manufacture of perfumes, cosmetics and detergents – By Giriraj Prasad.
- 3 Perfumes: History & Chemistry Vol-I- Dr. D.D.Wasule
- 4 Cosmetic: Science & Technology – By Sagarin.
- 5 Industrial Pharmacy – By Leon Lachman.
- 6 An introduction to perfumery – by Tony Curtis and David Williams
- 7 New cosmetic science –by T Mitsui

### **S7 – T2**

#### **Cosmetic Technology**

Theory - 40  
Sessional – 10  
Total- 50

- 1] Shampoos :  
Introduction, Detergency, Evaluation of detergents as shampoo bases, raw materials for shampoos, Principle and auxiliary surfactants, formulation of shampoo, clear liquid shampoos, Aerosol shampoos, Acid balanced Shampoos, safety of shampoos. (6 Periods)
- 2] Hair setting lotions, sprays and dressings:  
Use and purpose of hair dressings, women hair dressings, setting lotions, heated curlers and blow drying, hair sprays, Men's hair dressing – formulation brilliantines, non oily fixatives, aerosols, emulsion gels. (6 Periods)

- 3] I) Hair Tonics & Conditioners:  
 Introduction – formulation of medicated hair tonics, conditioners, evaluation of conditioning, hair thickeners, rinses. (6 Periods)
- II) Hair strengtheners:  
 Introduction, hot comb method, caustic preparations, chemical hair reducing preparations. (6 Periods)
- 4] Hair colorants:  
 Introduction – Hair coloring systems, characteristics of an ideal hair colourants, the process of hair colouring. Temporary hair dyes dyestuffs – commercial, semi permanent products and their formulations, permanent hairdyes, Bases couplers of modifiers, formation of colour in the hair. Toxicity and dangers of para dyes. Formulation of permanent hair dyes, other dyes for hair – Aromatic polyhydroxy compounds, vegetable hair dyes, metallic hair removers, Bleaching and lightening. (6 Periods)
- 5] Permanent Waving and Hair Strengtheners :  
 Introduction – chemistry of the hair waving, evaluation of permanent waving, hot waving processes, cold waving processes. Topic ‘warm air’ waves. Roller and pin permanent waves, instant permanent waves, perfuming of thioglicolate lotions, tonicity, hair strengtheners preparations. (6 Periods)

**Books recommended:**

1. Text Book of Cosmeticology – by Harry’s
2. Cosmetic Science and technology – Sagarin.

S7 – T3	Plant Design	Theory - 40 Sessional – 10 Total - 50
1]	Design considerations: Diff. Materials of construction. Material selection, Corrosion & Physical, Mechanical, Iron Steel, Aluminum and their alloys. (6 Periods)	
2]	Heat Exchangers L: Introduction, Types, Design of Shell and Tube Heat Exchangers. (6 Periods)	
3]	Pressure Vessels : Introduction, Operating conditions, selection of material, Vessels operating at low temperature, Vessels operating at elevated temperatures, Design consideration, Design of shell and its components. (9 Periods)	
4]	Design of machine elements : Shafts, Keys, Pins, Couplings belts and Pulleys, Chain drivers, Gear Drives, Riveted Joints, Welded Joints, Threaded Fasteners. (9 Periods)	
5]	Selection of Plant location, Plant site, Factory building: Study of different factors affecting selection. (6 Periods)	

**Books recommended:**

1. Process Equipment Design: M. V. Joshi
2. Chemical Engineer's handbook: Mc-Graw Hill, Perry.
3. Process equipment design – Dr. S. D. Dawande

**S7 – T4****Quality Assurance Techniques.**

Theory -	40
Sessional -	10
Total-	50

- 1] Importance of quality control in cosmetic preparations & guidelines for hygienic manufacture of cosmetics. (7 Periods)
- 2] ISO: Its significance, role and importance in cosmetic industry. Validation of cosmetic manufacturing. (7 Periods)
- 3] Stability testing of various cosmetics products – accelerated stability study.  
- Study of Rheological properties of semisolid preparation.  
- ICH guidelines. (6 Periods)
- 4] Evaluation of components (active ingredients) and finished products e.g. Shampoos, Hair dyes, depilatories, tooth pastes, powders, sun screen preparation, lipsticks and other common cosmetic products. Examples – soaps, Skin creams, traditional cosmetics, skin lotions, face wash. (12 Periods)
- 5] Testing of packaging components used for cosmetic products. (4 Periods)

**Books recommended:**

1. A.O.A.C.
2. Badlsametal : Cosmetic Science & Technology Vol. I,II,III, Ed.: Wiley Itervcine.
3. W. A. Poucher: Perfumes, Cosmetics & Soaps Vol. I,II,III, Ed.: Chapman & Hall.
4. Indian Standard Institution Booklets.
5. Booklet: Pharmaceutical Analysis.
6. A.H. Backett & J. B. Stanlake: Practical Pharmaceutical Chemistry.
7. Garret : Text Book & Pharmaceutical Analysis
8. A. L. Vogal : Quantative inorganic Analysis.
9. Ewing : Instrumental Method of Chemical Analysis
10. Connoers : Text Book of Pharmaceutical Analysis
11. Higuchi : Pharmaceutical Analysis
12. ISI Booklets.
13. Microbialogy by Pelzer & Reed
14. Microbialogy by Sally.

**S7 – T5**

**Herbal Cosmetics**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Study of following herbs used in skin care cosmetic formulations with reference to their biological and geological sources, chemical constituents, cosmetic or cosmeceutical uses  
Aloe, Babhool, Bawchi, chandan, cucumber, Haldi, Ambahaldi, Jeshthamadh, lodra, neem,  
(12 Periods)
- 2] Study of following herbs used in Hair care cosmetic formulations with reference to their biological and geological sources, chemical constituents, cosmetic or cosmeceutical uses  
Brahmi, Jatamanasi, mehandi, Nagarmotha, ritha, shikekai, kapur kachari,  
(10 Periods)
- 3] Study of storage of herbal actives in cosmetics and store house. (6 Periods)
- 4] Preparation of herbal actives in cosmetics for commercial market. (6 Periods)
- 5] Future scope of Herbal ingredients in Cosmetic Industry (2 Periods)

**Books recommended:**

1. Treas & Erans : Text Book of Pharmacognosy.
2. Claus & Tyler : Pharmacognosy.
3. Nadkarni : Material Medica
4. C.S.I.R.: Wealth of India

**S7 – T6**

**Organization & Management of Industries**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Entrepreneurial Development:  
Process of generating business ideas, Technical & Economic feasibility - development detailed project report for implementation.  
(10 Periods)
- 2] Types of importance sources of finances and Taxation. (6 Periods)
- 3] Financial Management:  
Management of working capital, Cost factors in capital investment total product cost, depreciation cost profitability and rate of return analysis cost benefit analysis,  
(10 Periods)
- 4] Personnel Management:  
Different methods of developing personnel skills. (5 Periods)
- 5] Different management development programmes. Orientation Appreciation, Application and Education, measuring impact of training and development. (4 Periods)

**S7- P1****Perfumes & Colors**

- 1] Preparation of Emulsified fragrances—  
Cream - Formulation, Method & Quantity with ingredients 30/40 gms.  
Lotion - Formulation, Method & Quantity with ingredients 30/40 gms.
- 2] Solid fragrances – 2 Nos (stick)  
formulation with ingredients  
Method, quantity.
- 3] Perfume creation and matching ; Simple floral fragrance (six)  
formulation, ingredient & quantities
- 4] Alcoholic fragrance Soln – 2 products
- 5] Colognes – citrus oil
- 6] Toilet waters
- 7] Perfuming of hair oil
- 8] perfuming of powders - 2 products
- 9] performance evaluation of perfume

**S7 – P2****Cosmetic Technology**

- 1] Shampoos at least two preparation
- 2] Hair setting preparations (Men & Women both)
- 3] Hair tonics
- 4] Hair conditioners
- 5] Hair color preparations
- 6] Hair waving preparations
- 7] Hair straightner
- 8] Hair strengthner

**S7 – P3****Plant Design**

Sheets Based on –

1. Design of Pressure vessel.
2. Design of Heat Exchanger
3. Various machine elements such as screw threads, Nuts and Knots, Rivets, Shafts, Keys, coupling, Joints etc.
4. Design of Nut and bolts

**S7 – P4****Quality Assurance Techniques**

- 1] Evaluation of cosmetic products like:
  - i. Shampoos – Synthetic, Herbal, Antidandruff.
  - ii. Hair Dye
  - iii. Creams
  - iv. Face Powders
  - v. Tooth Paste
  - vi. Tooth Powders
  - vii. Depilatory
- 2] Raw Material analysis as per BIS
  - i. Stearic Acid
  - ii. Zinc Oxide
  - iii. Sodium Lauryl Sulphate

- iv. Calcium carbonate
  - v. Talc
- 3] Study of rheological properties of cream, shampoo, powder.

**S7 – P5**

**Herbal Cosmetic**

- 1] Practical based on- morphological characters, extraction by appropriate method, identification of chemical constituent, and incorporation of extract in suitable formulation of any three herbal ingredients from each (i) and (ii) of following,
- i) Aloe, Babhool, Bawchi, chandan, cucumber, Haldi, Jeshthamadh, lodra, neem,
  - ii) Brahmi, Jatamanasi, mehandi, Nagarmotha, ritha, shikekai, kapur kachari,

**SEMESTER – VIII**

**S8 – T1**

**Perfumes & Colours**

Theory - 40

Sessional – 10

Total- 50

- 1] Introduction: colour, croma, light and colour, colour system, relation of colour and emotions, pigment, dye, lake and tonner, hue, value, bleed, tones, higdning power, certified colours.  
(12 Periods)
- 2] Classification of colors.- Natural (sources, properties), Synthetic based on chemical structures, in organic colours.  
(8 Periods)
- 3] Preparation of colour solutions and incorporation of colours in skin care and hair care products including soaps.  
(6 Periods)
- 4] Study of colours with specific reference to IS 4707 and schedule Q of D & C act. As per guidelines in India and other countries.  
(4 Periods)
- 5] Determination of colors and Color matching of marketed products.  
(6 Periods)

**Books Recommended:**

- 1 Perfumes, Flavours & Essential oil Industry by S. B. Srivastava.
- 2 Manufacture of perfumes, cosmetics and detergents – By Giriraj Prasad.
- 3 Perfumes: History & Chemistry Vol-I- Dr. D.D.Wasule
- 4 Cosmetic: Science & Technology – By Sagarin.
- 5 Industrial Pharmacy – By Leon Lachman.
- 6 An introduction to perfumery – by Tony Curtis and David Williams
- 7 New cosmetic science –by T Mitsui

**S8 – T2**

**Cosmetic Technology**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Shaving preparation:  
Wet shaving preparation, Introduction, Beard softening cream, Lather shaving creams, lather shaving sticks, Aerosoles of shaving foams, Brushless or non lathering creams, Brushless shaving stick, Novel compositions for wet shaving dry – shaving preparation: Introduction pre-electric – shave lotion, collapsible foam pre-electric shave lotion, pre-electric shave gel stick. Pre-electric shave powder.  
(8 Periods)
- 2] Sunscreen, Suntan and Antisunburn Preparations:  
Sunlight and the human body – Introduction, tanning – beneficial and adverse effects of sunlight, Solar radiation and its effect on skin Protective mechanism of the skin.  
Sunscreen and suntan preparations – Introduction. Sunscreen agents and their formulation.  
(6 Periods)
- 3] Foot preparations:  
Introduction: Influence of foot wear, foot ailments, foot infections, foot care and hygiene, Bathing the feet. Foot powders, foot sprays, foot creams, corn and callus preparations, chilblain preparations, Athlete's foot preparations, other developments.  
(6 Periods)
- 4] Manicure Preparations:  
Cuticle remover, nail bleach, nail cream, Nail strengthener, Nail white, Nail polish, Nail lacquer – Introduction, Ingredients of Nail lacquer, formulation, manufacture of nail lacquer, Base coats and top coats, Enamel remover, Nail drier, plastic finger nails and elongators, Nail mending compositions.  
(6 Periods)
- 5] I) Dentifrices :  
Basic requirement of a dentifrice. Tooth – paste, Basic structure ingredients, formulation of toothpaste, manufacture of toothpaste, powders, manufacture of toothpowders, solid dentifrices, performance tests Abrasive action, luster, the toothbrush and tooth brushing, Denture cleansers.  
(6 Periods)
- II) Mouthwashes :  
Introduction : Choice of antibacterial agents, flavouring of mouthwashes, Aerosol mouth freshener.  
(4 Periods)

**Books recommended:**

1. Text Book of Cosmeticology – by Harry's
2. Cosmetic Science and technology – Sagarin.

**S8 – T3**

**Plant Design**

Theory - 40  
Sessional – 10  
Total - 50

- 1] Process hazards & safety measure in equipment design: Introduction, Hazards in process Industries, analysis of hazards, Safety Measures, Safety measure in equipment designs.  
(9 Periods)
- 2] Reaction vessel : Material of construction, agitation, classification of reaction vessels,

- heating systems, design, consideration. (8 Periods)
- 3] Agitators : Introduction, types, power requirement, Design of agitation system components, Drive for Agitators. (7 Periods)
- 4] Storage Vessels : Storage Vessels for Fluids, Non-volatile fluids, Volatile liquids gases, design of tanks, nozzles and mountings. (6 Periods)
- 5] Driers : Introduction, Types, design considerations. (6 Periods)

**Books recommended:**

1. Process Equipment Design: M. V. Joshi
2. Chemical Engineer's handbook: Mc-Graw Hill, Perry.
3. Process equipment design – Dr. S. D. Dawande

**S8 – T4 Quality Assurance Techniques.**

Theory - 40  
Sessional – 10  
Total- 50

- 1] I) Study of environmental isolates.  
 II) Microbial Analysis:  
 Classification of Bacterial & morphology : cell structure.  
 1. General characteristics of yeast, Moulds, protozoa & algae, occurrence, morphology, motility & reproduction.  
 2. Stains & staining techniques in microbiology.  
 3. Nutritional requirement for microbes:  
 Nutritional classification of bacteria photographs, chetrops, Type of media:  
 A) Synthetic media  
 B) Non-synthetic media.  
 C) Isolation & maintenance of pure culture  
 i. Streak plate & pour plate method of isolation.  
 ii. Enrichment culture techniques.  
 iii. Serial dilution, Techniques. (16 Periods)
- 2] Microbial Control:
  - Sterilization, Disinfections, Antiseptic, Sanitizer, Germicides, Microbiostasis, Antimicrobials, Preservatives.
  - Factors influencing antimicrobial activity.
  - Factors related to the killing agent, intensity, concentration, time of action & temperature.
  - Factors related to the organism being killed: Total no. of organisms being killed, kind of organism, physiological state of organism & environmental conditions.
  - Mechanism of cell injury.
  - Physical control
  - Chemical Control
  - Standardization of disinfectant phenol co-efficient.
  - Antimicrobial Assay (14 Periods)
- 3] Principle methods of analysis to enumerate various types of organisms e.g. APC. (2 Periods)
- 4] Isolation of identification of gram +ve & -ve organisms. (2 Periods)
- 5] Efficacy testing of preservative. (2 Periods)

**Books recommended:**

1. A.O.A.C.
2. Badlsametal : Cosmetic Science & Technology Vol. I,II,III, Ed.: Wiley Itervcine.
3. W. A. Poucher: Perfumes, Cosmetics & Soaps Vol. I,II,III, Ed.: Chapman & Hall.
4. Indian Standard Institution Booklets.
5. Booklet: Pharmaceutical Analysis.
6. A.H. Backett & J. B. Stanlake: Practical Pharmaceutical Chemistry.
7. Garret : Text Book & Pharmaceutical Analysis
8. A. L. Vogal : Quantitative inorganic Analysis.
9. Ewing : Instrumental Method of Chemical Analysis
10. Connoers : Text Book of Pharmaceutical Analysis
11. Higuchi : Pharmaceutical Analysis
12. Microbiology by Pelzer & Reed

**S8 – T5****Herbal Cosmetics**

Theory -	40
Sessional -	10
Total -	50

- 1] Study of following herbs used in skin care cosmetic formulations with reference to their biological and geological sources, chemical constituents, cosmetic or cosmeceutical uses  
Raktachandan, tulsi, majistha, papaya, lemon carrot, orangepeel, grapefruit (citrus paradise), kesar, lotus, ficus golmerata (umber), Akarkara, beetroot, palash,  
(12 Periods)
- 2] Study of following herbs used in Hair care cosmetic formulations with reference to their biological and geological sources, chemical constituents, cosmetic or cosmeceutical uses  
hibiscuss (Jaswand), Bhringaraj, curry leaves, neem, arnica, seetaphal (Plant and seeds)  
(12 Periods)
- 3] Various methods of extraction employed for herbal constituents. (6 Periods)
- 4] Formulating appropriate cosmetic products by incorporating herbal actives in skin care products.:  
Creams, powder, lotion  
(3 Periods)
- 5] Formulating appropriate cosmetic products by incorporating herbal actives in hair care products:  
Hair oil, shampoo, hair tonics  
(3 Periods)

**Books recommended:**

1. Treas & Erans : Text Book of Pharmacognosy.
2. Claus & Tyler : Pharmacognosy.
3. Nadkarni : Meterial Medica
4. C.S.I.R.: Wealth of India

**S8 – T6**

**Organization & Management of Industries**

Theory -	40
Sessional –	10
Total	50

- 1] Marketing Management:  
Sales forecasting – Objects, Methods, Budget Preparation, marketing Research, Consumer & Product research. (6 Periods)
- 2] Marketing Management: Distribution Techniques – Information system, Distribution budgeting and control system. Consumer research methodology execution an interpretation difference between consumer research and marketing of product, expert promotion International & Global malty Advertising.  
Evaluation of salesman's performance.  
Practical experience – Case studies on related aspects. (12 Periods)
- 3] Plant Location and Layout considerations with special reference to:  
Material Procurement and utilization, production planning and control, requirement and defective utilization of manpower. (6 Periods)
- 4] Fundamental of Business Organization & Management – Industrial safety. (6 Periods)
- 5] Small scale industries and cottage industries with emphasis on soaps, Detergents and other Cosmetic Industries. Role of small scale industries in development economy of India. Problems small scale industries. Problems of prospects small scale Industries Industrial safety. (6 Periods)

**Books recommended:**

1. Fundamental of Business Organization & Management – .Y. K. Bhushan
2. Industrial Management –I. K. Chopda and A. M. Sheikh,
3. Industrial organization and Management Sherlekar an dSherlekar
4. Industrial Management – R. K. Jain,
5. Business Organization and Management – Shukla M. S.
6. Management of Small Scale Industries – Vasant Desai
7. Principles of Management – T. Ramaswamy
8. A Text Book of Industrial Organization and Management – S. A. Sherlekar and Mallikarjun Rao.
9. Entrepreneurial development – C. B. Gupta and N. P. Shrinivasan.
10. Micro & Macro Economic Analysis – C. K. Dewett & Singh
11. Principles of Management – M. L. Seth.
12. Principles of Management – I. C. Dhingra.

**S8- P1**

**Perfumes & Colors**

Practical-	80
Sessional-	20
Total-	100

- 1] Preparation of color solution - Water soluble colors, Oil soluble colors
- 2] Incorporation of colors (Quantity) and perfume (q. s.)  
a) Powders  
b) Lipsticks  
c) Eye Shadow

- d) Rouge
- e) Compacts
- f) Maskara
- g) Nail lacquers
- h) Shampoo (Emulsion / clear)
- i) Hair oils / Hair gels
- j) Hair colorants
- k) After shave lotions
- l) Toothpaste
- m) Mouth wash
- n) Gels

3] Determination of colors and Color matching of marketed products.

**S8 – P2 Cosmetic Technology**

Practical-	80
Sessional –	20
Total -	100

- 1] Shaving preparations
- 2] Foot preparations
- 3] Sunscreening preparations
- 4] Manicure Preparations
- 5] Tooth preparations
- 6] Mouth wash

**S8 – P3 Plant Design**

Practical-	80
Sessional –	20
Total -	100

Sheets Based on –

1. Design of Dryer.
2. Design of reaction vessel
3. Design of Agitator
4. Design of Rivets, Shafts, joints

**S8 – P4 Quality Assurance Techniques.**

Theory -	80
Sessional –	20
Total-	100

- 1] Microbial Analysis
  - i. Staining techniques, preparation of media, isolation of culture.
  - ii. Aseptic transfer
  - iii. Determination of Rider Walker coefficient
  - iv. Antimicrobial assay
  - v. Estimation of total plate count in given cosmetic product.
  - vi. Identification & Isolation of gram –ve pathogenic organism
  - vii. Estimation of fungi in given cosmetic
  - viii. Challenge test for preservative efficacy.
- 2] Study of environmental isolates.
- 3] Micrological testing of raw materials & finished products.

**S8 – P5**

**Herbal Cosmetic**

Practical- 80

Sessional – 20

Total - 100

- 1] Practical based on- morphological characters, extraction by appropriate method, identification of chemical constituents, and incorporation of extract in suitable formulations of any three herbal ingredients from each (i) and (ii) of following.
- i) Tulsi, majistha, papaya, lemon, carrot, orange peel, grapefruit (citrus paradise), kesar, lotus,
  - ii) Hibiscuss (Jaswand), Bhringaraj, curry leaves, neem, arnica, seetaphal (Plant and seeds)

\*\*\*\*\*

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR  
UNIVERSITY NAGPUR**

**BACHELOR OF HOTEL MANAGEMENT AND  
CATERING TECHNOLOGY**

**(SEMESTER PATTERN)**

**2016-2017**



**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR**  
**(Established by Government of Central Provinces Education Department by**  
**Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University**  
**governed by Maharashtra Universities Act, 1994)**

---

**FACULTY OF HOME SCIENCE**

**DIRECTION NO. 74 OF 2016**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE  
OF BACHELOR OF HOTEL MANAGEMENT AND CATERING TECHNOLOGY**

**(SEMESTER PATTERN)**

**(Issued under section 14(8) of the Maharashtra University Act 1994)**

Whereas the Maharashtra Universities act No. XXXV of 1994 has come into force with effect from 22<sup>nd</sup> July, 1994 and was amended from time to time.

**AND**

WHEREAS, the University Grants Commission, New Delhi vide letter No.D.O.No.F-2/2008/(XI Plan), dated 31<sup>st</sup> January 2008 regarding new initiatives under the XI Plan – Academic reforms in the University has suggested for improving quality of higher education and to initiate the academic reform at the earliest,

**AND**

Whereas the Task Force in Hotel Management & Catering Technology in the Faculty of Home Science at its meeting held on 25.08.2016, have recommended for starting of semester pattern and prepared the syllabus and scheme of examination for Bachelor of Hotel Management and Catering Technology, commensurate with the governing guidelines.

**AND**

Whereas the Coordinator, Faculty of Home Science concurred with the recommendations of the Task Force in Hotel Management and Catering Technology in the Faculty of Home science vide her observations dated 25.08.2016.

**AND**

Whereas, the new draft direction and scheme of examination as per semester pattern is to be implemented from the academic session 2016-2017 for Bachelor of Hotel Management and Catering Technology which is to be regulated by this direction and as such there is no existence and framing of an ordinance for the above examination,

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Academic Council on 7-10- 2016 under section 14(7) of Maharashtra University Act 1994.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Management Council under section 14(7) of Maharashtra University Act 1994.

**AND**

Whereas, the framing of an ordinance as required under provision of Act is a time consuming process, now therefore, I, Dr. Siddharthavinayaka P. Kane, the Vice Chancellor of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers vested under Section 14(8) of the Act do hereby issue the following Direction.

**Title of the direction**

1. This Direction may be called "Direction governing the Examination leading to the Degree of Bachelor of Hotel Management & Catering Technology (Semester Pattern), in the Faculty of Home Science, R.T.M. Nagpur University, Nagpur".
2. The direction shall come into force from the date of its issue by Hon'ble Vice Chancellor and shall remain in force till the relevant ordinance comes into being in accordance with the provisions of the Act.

**3. Nature of course**

The duration of the Bachelor of Hotel Management and Catering Technology course shall be of four academic years consisting of eight semesters with University examinations at the end of each semester namely:

- a. Bachelor of Hotel Management and Catering Technology, Semester-I Exam.
- b. Bachelor of Hotel Management and Catering Technology, Semester- II Exam.
- c. Bachelor of Hotel Management and Catering Technology, Semester- III Exam.
- d. Bachelor of Hotel Management and Catering Technology, Semester- IV Exam.
- e. Bachelor of Hotel Management and Catering Technology, Semester-V Exam.
- f. Bachelor of Hotel Management and Catering Technology, Semester VI Exam.
- g. Bachelor of Hotel Management and Catering Technology, Semester- VII Exam.
- h. Bachelor of Hotel Management and Catering Technology, Semester-VIII Exam.

The examinations shall be held at such places and dates which shall be notified by the university.

The period of Academic Session shall be such as may be notified by the university.

**4.** The Examination specified in proceeding section shall be held twice a year at such places on such dates as may be decided by the University. The main examination of semester I, III, V and VII shall be held in winter whereas the examination for semester II, IV, VI and VIII shall be held in summer. The supplementary examination of semester I, III, V and VII will be held in summer whereas supplementary examination for semester II, IV, VI, VIII will be held in winter. There shall be no practical examination during semester I, III, V and VII. Practical examination will be held during semester II, IV, VI, VIII only considering complete curriculum and term work of both the semesters of that particular year.

## **5. Eligibility Criteria**

Subject to the compliance with provisions of this direction and of other ordinances in force from time to time, a candidate for admission to the examination shall:

- a. In the case of Bachelor of Hotel Management & Catering Technology Semester – I, have passed XII Standard Examination of Maharashtra State Board of Secondary & Higher Secondary Education or an examination recognized as equivalent thereto under the following faculties – Science / Home Science / Commerce / Arts with compulsory English with not less than 45% marks (40% marks for backward class candidates) In addition the rules notified by government of Maharashtra from time to time.

## **OR**

The candidate should have passed the Indian School Certificate (Std. XII) Examination or any other equivalent Higher Secondary (Std.XII) Examination of a Council or Board outside Maharashtra State with English, Science, Home Science, Commerce, Arts and with not less than 45% marks (40% marks for backward class candidates from Maharashtra State only) in the Faculties of Science/Home Science/Commerce/Arts with English. Admission to BHMCT Semester—I shall be after appearing for MAH-HM-CET.

## **OR**

- b) In the case of Bachelor of Hotel Management & Catering Technology Semester-III, have passed the Bachelor of Hotel Management & Catering Technology, Semester - I and 50% of the subjects Semester-II Examination of the University or an examination recognized as equivalent thereto.
- c) In case of Bachelor of Hotel Management & Catering Technology-semester-V, have passed the Bachelor of Hotel Management & Catering Technology Semester -

III and 50% of the subjects Semester-IV Examination of the University or an examination recognized as equivalent thereto.

- d) In case of Bachelor of Hotel Management & Catering Technology semester VII, have passed the Bachelor of Hotel Management & Catering Technology Semester - V and 50% of the subjects Semester-VI Examination of the University or an examination recognized as equivalent thereto.
6. Without prejudice to the other provisions of the Ordinance No.6 relating to the examination in general the provision of paragraph 5, 7, 8, 10 and 32 of the said ordinance of ATKT as well as reassessment / provisional admission as issued from time to time, shall apply to every collegiate candidate.
- b) The ATKT rules for admission for the Course Bachelor of Hotel Management and Catering Technology shall be as given in the following table:-

Admission to semester	Candidate should have passed in all the subjects of the following examination of R.T.M. Nagpur University	Candidate should have passed at least half of the passing heads of the following examinations of R.T.M. Nagpur University
Semester I	As provided in the para 5 of the direction	-----
Semester II	-----	-----
Semester III	-----	Semester I and II 50%
Semester IV	-----	Semester I, II, III 50%
Semester V	Semester (I, II) Ist year	Semester III, IV 50%
Semester VI	----	Semester III, IV, V 50%
Semester VII	Semester III, IV) II year	Semester V, VI 50%
Semester VIII	----	Semester V, VI, VII 50%

## 8. Fee Structure:

The fees for the examinations shall be as prescribed by the University, from time to time and whenever, any change is made in the fees prescribed for any particular examination that shall be notified through a notification for the information of the examinees.

9. Every candidate for Bachelor of Hotel Management & Catering Technology Examination shall be examined in the subjects as set out in the Appendix to Directions Appendix A1, A2, A3, A4, A5, A6, A7 & A8

- i. The scope of the subjects shall be as indicated in the respective syllabus in force from time to time.
  - ii. Medium of examination shall be English.
10. An applicant for admission to an Examination shall satisfy the Head of the Department / Principal as regards the Sessional examinations /Internal assessment conducted

during the academic year regarding her / his suitability to take the University examination.

11. In order to pass in the Examination an examinee shall obtain in each subject not less than the minimum marks as indicated in the Appendices.
12. The Head of the Department / Principal shall maintain in her/his office the complete record of the marks obtained by the candidate in the sessional examinations/internal assessment that shall be submitted, before the commencement of the University examination, to the Controller of Examination, in a sealed cover.
13. There shall be no classification of successful examinees at I, II, III, IV, V, VI, VII semester of Bachelor of Hotel Management and Catering Technology examinations in the Faculty of Home Science.
14. Division of examinees successful at the VIII th semester of Bachelor of Hotel Management and Catering Technology shall be determined on the basis of the aggregate marks obtained at all the semesters of Bachelor of Hotel Management & Catering Technology.
15. Those obtaining 60% or more marks in aggregate shall be placed in First Division and all other successful examinees in the Second Division respectively.
16. An examinee who is successful at an examination and obtained not less than 75% or more of the marks prescribed in a subject shall be declared to have passed the examination with Distinction in that subject.
17. Provision of Ordinance No. 3 of 2007 relating to the condonation of Deficiency of marks for passing an examination and of ordinance No. 10 relating to examinations and compartments as amended from time to time shall apply to the Examination under this direction.
18. An unsuccessful examinee at any of the examination of Bachelor of Hotel Management & Catering Technology shall have an option to carry her/his Sessional Examination/Internal assessment college assessment marks for Theory/Practical examinations to her/his successive attempt(s) at the examination. The examinee however can forgo her/his Sessional Examination/Internal assessment marks in subject/subjects in which case she/he shall be examined for total marks comprising of theory /practical and college assessment together at her/his successive attempt(s).
19. As soon as possible after the examinations but not later than 30<sup>th</sup> June next following in case of examination held in March-April and 26<sup>th</sup> February next following, in case of examination held in October-November, the Board of Exams shall publish a list of successful examinees. List of successful examinees at the Eighth semester of Bachelor of Hotel Management & Catering Technology examination shall be arranged in the First and Second Division as envisaged in clause 14 of the ordinance and names of examinee passing the said examination as whole in the minimum prescribed period

and obtaining the prescribed number of places in the first or second Division shall be arranged in order of Merit as provided in the examination in General Ordinance No. 6.

20. Notwithstanding anything to the contrary in this direction, no person shall be admitted to this examination, if she/he already passed the same examination or an equivalent examination thereto of other statutory university.
21. That educational tour or visit comprising of 8-10 days shall be compulsory for the students during III / IV semester of the course. A short tour / factory visit of 2-3 days shall be arranged during the course.
22. After completion of semester II and semester VI examination an Internship comprising of 10 weeks each vocational training into the Hotel Organization recognized by the Head of the Institution shall be a compulsory part as prescribed in the Appendices.
23. Successful examinees at the I, II, III, IV, V, VI, VII, VIII semesters of Bachelor of Hotel Management and Catering Technology Examination shall be entitled to receive certificate signed by Registrar, titled Bachelor of Hotel Management and Catering Technology, Semester I, II, III , IV, V, VI, VII, VIII respectively and those successful at all the exams of Bachelor of Hotel Management and Catering Technology shall on payment of the prescribed fee receive a degree in the prescribed form, signed by the Vice-Chancellor, at the convocation to be held by the University.
24. The Scheme of Examination shall be as per Appendix: 1, 2, 3, 4, 5, 6, 7 8 and 9 (Semester pattern). The details / title of the theory papers can be suitably modified considering the need of the subject without disturbing the main structure.
25. With the issuance of this Direction, the Direction No. 24 of 2016, governing the examinations leading to award of Bachelor of Hotel Management & Catering Technology in the Faculty of Home Science shall stand repealed.

I, further, direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant Ordinance comes into being, in accordance with the provisions of the Maharashtra Universities Act, 1994.

Nagpur  
Date: 7-10-2016

Sd/-  
(Dr.Siddharthavinayaka P. Kane)  
Hon'ble Vice Chancellor

### APPENDIX A (1)

#### **EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -I**

Sr. No	Subject (Theory)	Sessi-onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
1-T-I	<b>Food Production Foundation -I</b>	20	80	100	40	4	--	3
1-T-II	<b>Food &amp; Beverage Service Foundation - I</b>	20	80	100	40	4	--	3
1-T-III	<b>Housekeeping Foundation -I</b>	20	80	100	40	4	--	3
1-T-IV	<b>Front Office Foundation -I</b>	20	80	100	40	4	--	3
1-T-V	<b>English and Communication Skills</b>	20	80	100	40	4	--	3
1-T-VI	<b>Hygiene and Food Safety in Hospitality</b>	20	80	100	40	4	--	3
	<b>Library</b>					2		
	<b>Total</b>			<b>600</b>		<b>24+2 =26</b>		

#### **PRACTICAL**

Sr. No	Subject Practical	Term Work Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
1-P-I	<b>Food Production Foundation -I</b>	--	--	--	--	--	<b>8</b>	--
1-P-II	<b>Food &amp; Beverage Service Foundation - I</b>	--	--	--	--	--	<b>4</b>	--
1-P-III	<b>Housekeeping Foundation -I</b>	--	--	--	--	--	<b>4</b>	--
1-P-IV	<b>Front Office Foundation -I</b>	--	--	--	--	--	<b>4</b>	--
1-P-V	<b>Communication Skills</b>	--	--	--	--	--	<b>2</b>	--
							<b>22</b>	

**Note:- Outdoor Catering 5 times**

**One Practical batch will consist of 16 students.**

**APPENDIX A (2)**  
**EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -II**

Sr. No	Subject (Theory)	Sessi- onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
2-T-I	<b>Food Production Foundation -II</b>	20	80	100	40	4	-	3
2-T-II	<b>Food &amp; Beverage Service Foundation -II</b>	20	80	100	40	4	-	3
2-T-III	<b>House Keeping Foundation -II</b>	20	80	100	40	4	-	3
2-T-IV	<b>Front Office Foundation -II</b>	20	80	100	40	4	-	3
2-T-V	<b>English &amp; Generic Skill</b>	20	80	100	40	4	-	3
2-T-VI	<b>Food &amp; Science and Nutrition</b>	20	80	100	40	4	-	3
	<b>Library</b>					<b>2</b>		
	<b>Total</b>			<b>600</b>		<b>24+2 =26</b>		

**PRACTICAL**

Sr. No	Subject Practical	Term Work Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
2-P-I	<b>Food Production Foundation -II</b>	20	80	100	50	-	8	3
2-P-II	<b>Food &amp; Beverage Foundation -II</b>	20	80	100	50	-	4	3
2-P-III	<b>House Keeping Foundation -II</b>	20	80	100	50	-	4	3
2-P-IV	<b>Front Office Foundation -II</b>	20	80	100	50	-	4	3
2-P-V	<b>Communication, Generic Skills &amp; Personality development</b>	20	80	100	50	-	2	3
				<b>500</b>			<b>22</b>	

- Compulsory 2½ months (10 weeks) Industrial Training in Hotel/Hospitality Organization.
- Log Book on training should be maintained by the student and signed by Training Co-ordinator / Head of the Deptt./Head of Institution
- Grade should be allotted as:- Excellent A, Very Good-B, Good-C, Fair-D, Poor-E.

**One Practical batch will consist of 16 students.**

### APPENDIX A (3)

#### **EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -III**

Sr. No	Subject (Theory)	Sessi- onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
3-T-I	<b>Food Production Operation -I</b>	20	80	100	40	4	-	3
3-T-II	<b>Food &amp; Beverage Operation -I</b>	20	80	100	40	4	-	3
3-T-III	<b>Housekeeping Operation - I</b>	20	80	100	40	4	-	3
3-T-IV	<b>Front Office Operations -I</b>	20	80	100	40	4	-	3
3-T-V	<b>French</b>	20	80	100	40	4	-	3
3-T-VI	<b>Hotel Engineering &amp; Facility Management</b>	20	80	100	40	4	-	3
	<b>Library</b>					<b>2</b>		
	<b>Total</b>			<b>600</b>		<b>24+2=</b> <b>26</b>		

#### **PRACTICAL**

Sr. No	Subject Practical	Term Work Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
3-P-I	<b>Food Production Operation -I</b>	--	--	--	--	--	<b>8</b>	--
3-P-II	<b>Food &amp; Beverage Operation -I</b>	--	--	--	--	--	<b>4</b>	--
3-P-III	<b>House Keeping Operation - I</b>	--	--	--	--	--	<b>4</b>	--
3-P-IV	<b>Front Office Operations -I</b>	--	--	--	--	--	<b>4</b>	--
3-P-V	<b>French -I</b>	--	--	--	--	--	<b>2</b>	--
							<b>22</b>	

**Note:- Outdoor Catering 5 times**

**One Practical batch will consist of 16 students.**

## APPENDIX A (4)

### EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -IV

Sr. No	Subject (Theory)	Sessi- onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
4-T-I	<b>Food Production Operations -II</b>	20	80	100	40	4	-	3
4-T-II	<b>Food &amp; Beverage Operations -II</b>	20	80	100	40	4	-	3
4-T-III	<b>Housekeeping Operations - II</b>	20	80	100	40	4	-	3
4-T-IV	<b>Front Office Operations -II</b>	20	80	100	40	4	-	3
4-T-V	<b>Principles of Management</b>	20	80	100	40	4	-	3
4-T-VI	<b>Basic Hotel Accounting</b>	20	80	100	40	4	-	3
				<b>600</b>		<b>24</b>		

### **PRACTICAL**

Sr. No	Subject Practical	Term Work Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
4-P-I	<b>Food Production Operation -II</b>	20	80	100	50	-	8	3
4-P-II	<b>Food &amp; Beverage Operation -II</b>	20	80	100	50	-	4	3
4-P-III	<b>Housekeeping Operation - II</b>	20	80	100	50	-	4	3
4-P-IV	<b>Front Office Operations -II</b>	20	80	100	50	-	2	3
4-P-V	<b>Hotel Engineering &amp; Facility Management</b>	10	40	50	25	-	4	3
4-P-VI	<b>French -I</b>	10	40	50	25	-	2	3
				<b>500</b>			<b>24</b>	

**Note:- Outdoor Catering 5 times**

**One Practical batch will consist of 16 students.**

## APPENDIX A (5)

### EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -V

Sr. No	Subject (Theory)	Sessi- onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
5-T-I	<b>Food Production Management-I</b>	20	80	100	40	4	-	3
5-T-II	<b>Food &amp; Beverage Management-I</b>	20	80	100	40	4	-	3
5-T-III	<b>Housekeeping Management-I</b>	20	80	100	40	4	-	3
5-T-IV	<b>Front Office Management-I</b>	20	80	100	40	4	-	3
5-T-V	<b>Application of Computer-I</b>	20	80	100	40	4	-	3
5-T-VI	<b>Financial Management</b>	20	80	100	40	4	-	3
				<b>600</b>		<b>24</b>		

### **PRACTICAL**

Sr. No	Subject Practical	Term Work Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi- cals	Time for Exam.
5-P-I	<b>Food Production Management-I</b>	--	--	--	--	--	<b>8</b>	--
5-P-II	<b>Food &amp; Beverage Management-I</b>	--	--	--	--	--	<b>4</b>	--
5-P-III	<b>Housekeeping Management-I</b>	--	--	--	--	--	<b>4</b>	--
5-P-IV	<b>Front Office Management-I</b>	--	--	--	--	--	<b>4</b>	--
5-P-V	<b>Application of Computer-I</b>	--	--	--	--	--	<b>4</b>	--
							<b>24</b>	

**Note:- Outdoor Catering 5 times**

**One Practical batch will consist of 16 students.**

## APPENDIX A (6)

### EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -VI

Sr. No	Subject (Theory)	Sessi-onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
6-T-I	<b>Food Production Management -II</b>	20	80	100	40	4	-	3
6-T-II	<b>Food &amp; Beverage Service Management -II</b>	20	80	100	40	4	-	3
6-T-III	<b>Housekeeping Management -II</b>	20	80	100	40	4	-	3
6-T-IV	<b>Front Office Management -II</b>	20	80	100	40	4	-	3
6-T-V	<b>Application of Computer - II</b>	20	80	100	40	4	-	3
6-T-VI	<b>Hospitality Marketing</b>	20	80	100	40	4	-	3
				600		24		

### **PRACTICAL**

Sr. No	Subject Practical	Terms Works Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
6-P-I	<b>Food Production Management -II</b>	20	80	100	50	-	8	3
6-P-II	<b>Food &amp; Beverage Service Management -II</b>	20	80	100	50	-	4	3
6-P-III	<b>House Keeping Management -II</b>	20	80	100	50	-	4	3
6-P-IV	<b>Front Office Management -II</b>	20	80	100	50	-	4	3
6-P-V	<b>Applications of Computers-I &amp; II</b>	20	80	100	50	-	4	3
				500			24	

- Compulsory 2½ months (10 weeks) Industrial Training in Hotel/Hospitality Organization.
- Log Book on training should be maintained by the student and signed by Training Co-ordinator / Head of the Deptt./Head of Institution
- Grade should be allotted as :- Excellent A, Very Good-B, Good-C, Fair-D, Poor-E.

**One Practical batch will consist of 16 students.**

## APPENDIX A (7)

### **EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -VII**

Sr. No	Subject (Theory)	Sessi-onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
7-T-I	<b>Food Production Management -III</b>	20	80	100	40	4	-	3
7-T-II	<b>Food &amp; Beverage Service Management -III</b>	20	80	100	40	4	-	3
7-T-III	<b>Housekeeping Management -III</b>	20	80	100	40	4	-	3
7-T-IV	<b>Public Relation</b>	20	80	100	40	4	-	3
7-T-V	<b>Entrepreneurship Development</b>	20	80	100	40	4	-	3
7-T-VI	<b>Research Methodology</b>	20	80	100	40	4	-	3
	<b>Library</b>	--	--	-	--	<b>2</b>	--	
				<b>600</b>		<b>24+2 =26</b>		

### **PRACTICAL**

Sr. No	Subject Practical	Term Work Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
7-P-I	<b>Food Production Management -III</b>	--	--	--	--	--	<b>8</b>	--
7-P-II	<b>Food &amp; Beverage Service Management -III</b>	--	--	--	--	--	<b>4</b>	--
7-P-III	<b>Housekeeping Management -III</b>	--	--	--	--	--	<b>4</b>	--
7-P-IV	<b>Public Relation</b>	--	--	--	--	--	<b>4</b>	--
7-P-V	<b>Computer Based Training Presentation</b>	--	--	--	--	--	<b>2</b>	--
							<b>22</b>	

**One Practical batch will consist of 16 students.**

## APPENDIX A (8)

### **EXAMINATION LEADING TO BACHELOR OF HOTEL MANAGEMENT & CATERING TECHNOLOGY, SEMESTER -VIII**

Sr. No	Subject (Theory)	Sessi-onal	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
8-T-I	<b>Advance Food Production</b>	20	80	100	40	4	-	3
8-T-II	<b>Advance Food &amp; Beverage Service</b>	20	80	100	40	4	-	3
8-T-III	<b>Advance Accommodation Management</b>	20	80	100	40	4	-	3
8-T-IV	<b>Travel &amp; Tourism</b>	20	80	100	40	4	-	3
8-T-V	<b>Human Resource Management</b>	20	80	100	40	4	-	3
8-T-VI	<b>Hospitality Laws &amp; Licenses</b>	20	80	100	40	4	-	3
				600		24		

### **PRACTICAL**

Sr. No	Subject Practical	Terms Works Marks	Marks Paper	Total	Passing Marks	No. of Theory	Periods Practi-cals	Time for Exam.
8-P-I	<b>Advance Food Production</b>	20	80	100	50	-	8	3
8-P-II	<b>Advance Food &amp; Beverage Service</b>	20	80	100	50	-	4	3
8-P-III	<b>Advance Accommodation Service Management</b>	20	80	100	50	-	4	3
8-P-IV	<b>Public Relation &amp; Travel &amp; Tourism</b>	20	80	100	50	-	2	3
8-P-V	<b>Project work &amp; Training Presentation</b>	20	80	100	50	-	6	3
				500			24	

- On completion of 5 month training presentation will be evaluated by External & Internal examiners.

**One Practical batch will consist of 16 students.**

## **APPENDIX A (9)** **General Rules and Regulations**

### **A) Pattern of Question Paper**

1. The Syllabus of every subject is divided into 5 units.
2. Students have to solve 5 questions. One question each from each unit.
3. All questions should have equal weightage.
4. Each paper will be of 3 hours duration.

### **B) Absorption scheme:**

- 1) While switching over to semester pattern, the failure students of yearly pattern will be given FIVE chances, to clear the examination.
- 2) If an examinee failed to pass the under graduate programme within EIGHT successive years (for Eight semesters degree) from the date of his / her first admission to particular programme he/ she shall be declared as "Not Fit for the Course (NFC)" and he/she will not be allowed to appear further for any previous examination of the course.
- 3) After four years from the date of implementation of semester pattern, any student passing-

**FIRST** year of Bachelor of Hotel Management & Catering Technology should be admitted to third semester.

**SECOND** year of Bachelor of Hotel Management & Catering Technology should be admitted to fifth semester.

**THIRD** year of Bachelor of Hotel Management & Catering Technology should be admitted to seventh semester.

# **Bachelor of Hotel Management and Catering Technology**

## **Semester-I**

### **FOOD PRODUCTION AND PATISSERIES FOUNDATION- I**

#### **1-T-1**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<p><b>Introduction to Cookery and Culinary History</b></p> <ul style="list-style-type: none"> <li>• Definition of cooking</li> <li>• Culinary history-Development of the culinary art from the middle ages to modern cookery (Escoffier, Marie Antonie Careme, Michelin Star)</li> <li>• Introduction to Nouvelle cuisine and Professional Cookery and their basic Characteristics</li> <li>• Weight &amp; volumes Equivalent(conversion tables) (American ; British)</li> <li>• Temperature conversion °C to °F.</li> </ul> <p><b>Aims &amp; Objectives Of Cooking Food</b></p> <ul style="list-style-type: none"> <li>• Aims and objectives of cooking food</li> <li>• Various textures and Consistencies</li> <li>• Techniques used in Pre-preparation</li> </ul>	16
II	<p><b>Introduction To Professional Kitchen</b></p> <ul style="list-style-type: none"> <li>• Levels of skills and experiences</li> <li>• Attitudes and behavior in the kitchen</li> <li>• Personal hygiene</li> <li>• Uniforms &amp; protective clothing</li> <li>• Safety procedure in handling equipment</li> </ul>	16
III	<p><b>Hierarchy Area Of Department And Kitchen</b></p> <ul style="list-style-type: none"> <li>• Classical Brigade</li> <li>• Modern staffing in various category hotels</li> <li>• Duties and responsibilities of various Kitchen Personnel</li> <li>• Co-operation with other departments Attitude &amp; Skill in Kitchen.</li> </ul>	16
IV	<p><b>A Classification Of Foundation Materials According To Their Types and Functions</b></p> <ul style="list-style-type: none"> <li>• Foundation material</li> <li>• Salt</li> <li>• Liquid</li> <li>• Sweetening</li> <li>• Fats &amp; Oils</li> <li>• Raising Agents</li> <li>• Thickening Agents</li> <li>• Flavors</li> </ul>	16

	<ul style="list-style-type: none"> <li>• Seasonings</li> <li>• Essences, Essences oil</li> </ul>	
V	<p><b>Basic Methods of Cooking</b></p> <ul style="list-style-type: none"> <li>• Heat Transfer</li> <li>• Conduction, Convection; Radiation</li> <li>• Methods: Boiling, Baking; Simmering; Stewing; Braising; Broiling; Poaching; Grilling; Roasting; Frying, Steaming.</li> <li>• Advantages and Disadvantages, Principles of each of the above ,Care and precautions to be taken ,Selection of food for each type of cooking</li> </ul> <p><b>Fuels: Advantages</b> &amp; Disadvantage of fuels used in kitchen</p> <ul style="list-style-type: none"> <li>• Gas</li> <li>• Charcoal</li> <li>• Electricity</li> <li>• Tools and utensils used in kitchen</li> </ul>	16

### Books Recommended

1. Bali, P. S. (2009). *Food Production Operations* . New Delhi: Oxford University Press.
2. Bali, P. S. (2012). *Quantity Food production*. New Delhi: oxford university press.
3. S.Bali, P. (2012). *International Cuisine & Food Production*. New Delhi: Oxford University Press.
4. Thagan, P. (1999). *Modern Cookery Vol I & II*. New delhi: Orient Longman Ltd.
5. Arora, K. (2000). *Theory of Cookery*. New Delhi: frank Bros & Co (Publishers) ltd.
6. Wayne, G. (1995). *Professional Cooking*. USA: John Wiley & Sons.
7. *Larousse Gastronomique*. (2001). USA: Hamlyn- a division of Octopus Publishing group Ltd.
8. Kalra, I. (2000). *Prasad - Cooking with indian Masters*. New delhi: Allied Publishers ltd.
9. Saraswat, A. (2003). *Professional Chef*. New Delhi: UBS Publishers distributors Pvt Ltd .
10. David Foskett, V. C. (2003). *The Theory Of Catering*. London: Book Power Publishers.
11. Mohini Sethi, S. M. (1997). *catering Management - An Integral Approach* . New Delhi: New Age International (P) Ltd.
12. Wayne, G. (1995). *Professional Baking* . USA: John Wiley & Sons

## Food and Beverage Service Foundation –I

### 1-T-II

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Topics</b>	<b>Marks</b>
<b>I</b>	<b>The Food &amp; Beverage Service Industry</b> <ul style="list-style-type: none"> <li>• Introduction to the Food &amp; Beverage Industry</li> <li>• Classification of Catering Establishments</li> <li>• (Commercial &amp; Non-Commercial, residential &amp; Non-residential)</li> <li>• Inter-departmental relationships (Within F&amp;B and other department)</li> </ul>	<b>16</b>
<b>II</b>	<b>The Food &amp; Beverage Service Areas</b> <ul style="list-style-type: none"> <li>• Restaurant</li> <li>• Coffee shop</li> <li>• Room Service</li> <li>• Bars</li> <li>• Banquets</li> <li>• Snack Bar</li> <li>• Executive Lounges</li> <li>• Discotheque</li> <li>• Night Club</li> <li>• Specialty Restaurant</li> <li>• Cafeteria service</li> <li>• Fast food service</li> </ul> <b>Auxiliary areas</b> <ul style="list-style-type: none"> <li>• Still Room/Pantry</li> <li>• Store Room/ Silver Room / Plate room</li> <li>• Linen room</li> <li>• Kitchen stewarding</li> </ul>	<b>16</b>
<b>III</b>	<b>The Food &amp; Beverage Service equipments</b> Types & Usage of Equipments- Furniture, cutlery, flatware, Silverware & Glassware, hollow ware, Linen, Special Equipment, Care & maintenance	<b>16</b>
<b>IV</b>	<b>Food &amp; Beverage Service Personnel</b> Food & Beverage Service Organization Structure - Duties & responsibilities of F&B staff Attributes of a waiter Basic Etiquettes	<b>16</b>
<b>V</b>	<b>The Food &amp; Beverage Service Method</b> <ul style="list-style-type: none"> <li>• Table Service : Silver, English, American, Russian, French</li> <li>• Self Service : Buffet &amp; Cafeteria</li> <li>• Specialized Service : Géuridon, Lounge &amp; Butler</li> <li>• Single Point Service : Takeaway, Vending, Kiosks, Food Courts &amp; Bars</li> </ul>	<b>16</b>

**Books Recommended:**

- Food and Beverage Service – Lillicrap. D.R. ; Edward Arnold Ltd. London
- Professional Food and Beverage Service Management – Verghese Brian; Macmillan India Ltd.
- Food and Beverage management and Service –Waiter; Barrie & Jenkins London 1965.
- The Waiter – Fuller John & Currie. A.J ; Hutchinson
- Food and Beverage Service- Dhawan Vijay; Franc Bros & Co.
- The Steward, Dias. P

**Hotel Housekeeping Foundation -I**  
**1-T-III**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Contents</b>	<b>Marks</b>
1	<p>Introduction</p> <ul style="list-style-type: none"> <li>• Introduction and Importance of Hotel House-Keeping Department</li> <li>• Basic layout of House-keeping Department</li> <li>• Co-ordination of House-Keeping with other departments of the hotel</li> <li>• Organization structure of HK department. (Large / medium/Small)</li> <li>• Aims of professional House keeper</li> <li>• Qualities of House Keeping staff.</li> </ul>	16
2	<p>Housekeeping Desk</p> <ul style="list-style-type: none"> <li>• Importance, Role, Co-ordination, Role during Emergencies.</li> <li>• General operations of control desk( Service by Desk)</li> <li>• Handling telephone calls</li> <li>• Handling Lost &amp; Found – Guest articles &amp; Hotel articles.</li> <li>• Reports, Forms, &amp; Registers maintained at House Keeping desk.</li> <li>• Daily routine and system</li> </ul>	16
3	<p>Cleaning of guest Room and Public Areas</p> <ul style="list-style-type: none"> <li>• Principles of Cleaning</li> <li>• Daily cleaning -(Occupied / Departure / Vacant/ Under Repair /VIP/DND rooms)</li> <li>• Weekly cleaning</li> <li>• Spring cleaning <ul style="list-style-type: none"> <li>• Public area cleaning (Lobby/cloakroom/Restaurant/ Bar/Banquet Halls / Admin officer lifts &amp; Elevations / staircase /Back areas / Front areas/ Corridor</li> </ul> </li> <li>• Definition of Contract cleaning</li> <li>• Evening Service (Turn down)</li> <li>• Second Service</li> <li>• Individual Cleaning and team (Group) Cleaning.</li> </ul>	16
4.	Hotel Guest Room	

	<ul style="list-style-type: none"> <li>• Types of rooms</li> <li>• Basic layout of guest room</li> <li>• Layout of corridor;</li> <li>• Rules on guest floor</li> <li>• Furniture in Guest room</li> <li>• Beds, Mattress and Bedding</li> <li>• Fixture , Fittings Soft furnishings , Accessories</li> <li>• Guest supplies and Amenities in a guest Room</li> <li>• Types of Linen and their sizes</li> <li>• Replacement of Guest supplies and amenities (STD room, VIP room, VVIP room)</li> </ul>	16
5	<p>Cleaning equipments</p> <ul style="list-style-type: none"> <li>• Types of equipments: Manual &amp; Mechanical</li> <li>• Types of trolleys and caddies</li> <li>• Storage, use, upkeep, Maintenance</li> <li>• Selection</li> <li>• Pantry replacement</li> </ul>	16

#### **Books Recommended:-**

1. Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.
2. Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.
3. Raghulanan, G. (2011). *Hotel Housekeeping Operations and Management*. New Delhi, India: Oxford University Press.
4. Singh, M. (2012). *Hotel Housekeeping*. New Delhi: Tata McGraw-Hill.

**FRONT OFFICE FOUNDATION-I**  
**1-T-IV**

Theory – 80  
 Sessional -20  
 TOTAL 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>M A R K S</b>
I	<p><b>Introduction To Hotel Industry</b></p> <ul style="list-style-type: none"> <li>•Definition of Hotel • Development of Hotel industry with reference to India and world • Classification of Hotel • Star classification • Locations • Size • Type of Clientele</li> </ul> <p><b>Different Department of Hotel</b></p> <ul style="list-style-type: none"> <li>Introduction to Front Office Department</li> <li>Importance of Front Office Department</li> <li>•Different sections of front office department</li> <li>•Layout of Front Office (lobby and back office )</li> <li>•Equipments and furniture of Front Office</li> </ul>	16
II	<p><b>• Staff organization of front office (small, medium, large, hotels)</b></p> <ul style="list-style-type: none"> <li>• Food Plans</li> <li>• Symbols and abbreviations used operations in Front office operations</li> <li>• Importance and Role of Front Office staff.</li> <li>• Personality traits of front office staff</li> <li>• Duties and responsibilities of Receptionist</li> <li>• Job description of front office Manager</li> <li>• Lobby manager • Receptionist • Reservationists</li> </ul>	16
III	<p><b>Hotel Brochures and Tariffs.</b></p> <p>Different types of room rates Basis of charging tariffs Use of brochure and tariffs</p> <p><b>Communication</b></p> <p>Co-ordination of front office with other departments.          Handling of Telephone Manners          Front Office responsibilities          Communication – internal and interdepartmental.          Guest services – basic information.</p>	16
IV	<p><b>Reservation</b></p> <ul style="list-style-type: none"> <li>○ Meaning and Need of Reservation</li> <li>○ Sources of Reservation</li> <li>○ Reservation Process</li> <li>○ Advance letting out chart</li> <li>○ Density chart</li> <li>○ Booking diary</li> <li>○ Reservation form</li> <li>○ Whitney system of Reservation</li> <li>○ Whitney rack</li> <li>○ Whitney slip</li> <li>• Changing system of reservations</li> </ul>	16

V	<b>Registration</b> <ul style="list-style-type: none"> <li>• Meaning and importance of Registration Procedure –</li> <li>• Arrival stage</li> <li>• Guest with advance reservation</li> <li>• Walk-in guest –</li> <li>• Right for reservation, advance payment policy.</li> <li>• Registration Records –</li> <li>• Registration Form,</li> <li>• Front office terminology.</li> </ul>	16
---	---	----

**Books Recommended:-**

- Andrews, S. (1999). *Hotel front office training manual*. New Delhi: Tata Publishing Company limited.
- D.Collins. (1967). *Accomodation Operations*. New Delhi: Plymouth macdonald Evans.
- Jatashankar.R.Tiwari. (2009). *Hotel front Office Operations and Management*. New Delhi: Oxford University press.
- S.K.Bhatnagar. (2002). *Front Office Management* . New Delhi: Frank Bros.& co(publishers)ltd.
- Singh, D. R. (2000). *Front Office management*. New Publication: Aman Publication.

### **ENGLISH & COMMUNICATION SKILL**

#### **1-T-V**

Theory – 80  
Sessional -20  
Total – 100

UNIT	<b>C O N T E N T</b>	<b>Marks</b>
1	<p><b>Listening Skills</b></p> <p><b>Communication -Types and Process</b></p> <ul style="list-style-type: none"> <li>• Introduction, definition</li> <li>• Process of communication</li> <li>• Direction of communication – up – wards, downward, horizontal, vertical and diagonal</li> <li>• Types of communication – formal, informal, verbal, non-verbal, oral and written</li> <li>• Interpersonal communication – one way / two way elements of communication</li> </ul> <p><b>Importance of Listening Skills</b></p> <p>Developing Listening Skills</p> <p><u>Sessional Work</u></p> <p>Activities related to Listening Skills</p> <p>a)Telephonic conversation</p> <p>b)Situational listening Skills</p> <p>(Meeting, Dialogue, Seminars etc)</p>	16

2	<p><b>Effective Public Speaking</b></p> <p>1) Voice training and expression 2) Presentation Techniques 3) <b>Non verbal communication:</b></p> <p><b>Types of Non Verbal Communication:</b> Two types of Non Verbal Communication Haptics, Chronemics, Kinesis, artefacts, and <u>oculesics</u></p>	16
3	<p><b>Grammar</b></p> <p>1) Articles 2) Preposition 3) Active and Passive Voice 4) Subject Verb Agreement 5) Tenses 6) Correction of Errors</p> <p><b>GRAMMAR EXERCISE</b></p>	16
4	<p>1. Paragraph Writing 2. Précis Writing 3. Comprehension Passage 4. Advertisements</p>	16
5	<p>1. Hotel Related Generic Vocabulary for Eg: amenities, brochures, damage charge, housekeeping, maid, kitchenette, vending machine, wake up call</p> <p>2. Business Letters</p> <ul style="list-style-type: none"> <li>• Complaint letter</li> <li>• Enquiry letter</li> <li>• E-mail writing</li> <li>• Quotation letter</li> </ul>	16

#### **Books Recommended:-**

1. Wren and Martin – English Grammar
2. Examine your English by Margaret M. Malson, published by Orient Longman
3. Common Mistakes in English by T.J.Fitkies, Published by Orient Longman
4. Developing Communication Skills by Krishna Menon and Meera Banerjee, Published by Macmillan India Ltd.
5. Communications in Tourism and Hospitality, Lynn Van Der Wagen, Hospitality Press.
6. Professional Communication Skills : By Pravin S.R.Bhatia, A.M Sheikh: S.Chand and company
7. English Grammar Composition and Effective Business Communication By M.A. Pink, S.E.Thomas : S.Chand
8. Contemporary English Grammar Structures and Compositions by David Green Macmillan Publication

9. English At The Workplace Department of English, University of Delhi , Chief Editor: Mukti Sanyal Macmillan Publication
10. Presentations (The Business Skills Series) by Anne Laws Orient Black Swan
11. Applied English Grammar and Composition Dr. P.C.Das New Central Book Agency(P) Ltd
12. Business Benchmark, Upper – Intermediate Student's Book Guy Brook- Hart Cambridge University Press
13. 7 Habits of Highly effective people :Steven Covey, Effective Technical Communication, M Ashraf Rizvi, Mc Graw Hill Education (India) Pvt. Ltd New Delhi

## **Hygiene and Food Safety in Hospitality**

### **1-T-6**

Theory: 80  
Internal: 20  
Total: 100

<b>Unit</b>	<b>Content</b>	<b>Marks</b>
I	<b>Introduction To Hygiene in Hospitality Sector</b> <ul style="list-style-type: none"> <li>➤ Introduction and Importance of hygiene in hotel industry</li> <li>➤ Personal Hygiene.</li> <li>➤ Food Hygiene.</li> <li>➤ Work place Hygiene</li> <li>➤ Food Safety Management System- food safety elements, implementation of FSMS, Prerequisites</li> </ul>	16
II	<b>Implementing principles of hygiene in the various departments of a hotel</b> <ul style="list-style-type: none"> <li>➤ Food &amp; Beverage production (Kitchen)</li> <li>➤ Food &amp; Beverage Service</li> <li>➤ Housekeeping</li> <li>➤ Front office</li> <li>➤ Engineering</li> <li>➤ Training and HR</li> </ul>	16
III	<b>Purchasing, Receiving And Storage of Foods</b> <ul style="list-style-type: none"> <li>➤ Procedures while purchasing and receiving foods</li> <li>➤ Importance of storage of food</li> <li>➤ Points to be considered while storing food</li> <li>➤ Classification of food according to ease of spoilage</li> <li>➤ Storage of leftover food, hot food and cooling of foods</li> <li>➤ Various storage zones-dry, refrigerator, freezer- special reference to temperatures</li> <li>Sanitary procedure followed while preparing and storing foods</li> </ul>	16

IV	<b>Contamination And Spoilage</b> ➤ Contamination and food spoilage ➤ Conditions which lead to spoilage ➤ Signs of spoilage in various foods ➤ Microbes and their role in food spoilage ➤ Factors affecting and controlling microbial growth ➤ Food borne illness and remedies	16
V	<b>Food laws and regulations</b> ➤ The need for food laws, ➤ AGMARK, ISI, ISO ➤ HACCP ➤ The Food Safety and Standards Act-2006 – General Principles of Food Safety, Responsibilities of the food business operator, Enforcement of the Act, Offences and penalties ➤ Codex Alimentarius	16

**Books Recommended:**

1. Jill, T. (1992). *Food hygiene for food handlers- second edition.* . The Macmillan press Ltd.
2. Kinton,R. (2001).*Theory of Catering-Ninth Edition.* East Lothian, Scotland. Scotprint
3. Roday,S. (2008).*Food Science & Nutrition.*New Delhi. Oxford University Press
4. Roy, H. (1988.). *Safety in Catering – A guide for supervisors and managers.* The Macmillon press Ltd. .
5. Southgate, J. S. (1986). *The science of catering 2nd edition* . Edward Arnold.
6. Sussams, M. C. (1988). *Success in principles of catering second edition*
7. Sapra N,. (2015). The Hospitality Industry, Significance and Application of HACCP.

## FOOD PRODUCTION FOUNDATION

### 1-P-I

PRACTICAL	CONTENT
I	<b>Cut of vegetable</b> 1. intro to equip / Rota / Indenting
II	<b>Indian Menus</b> – 5 (Six Course Menu) <ul style="list-style-type: none"> <li>• Roties - 4 Varieties</li> <li>• Dal - 3 Varieties</li> <li>• Vegetable 3 / Paneer 2 Varieties</li> <li>• Meat 2/Chicken2/Fish2 Varieties</li> <li>• Rice-4 Varieties</li> <li>• Sweets -4 Varieties</li> </ul>
III	<b>Continental</b> -4(Six course menu) Soup (Thick, Thin, Cream soups) Main course (Four vegetarian, Four non-vegetarian) Accompaniments(vegetables, salads, potatoes ) Desserts (Caramel Custard, Honeycomb mould, coffee mousse)
IV	<b>Snack Menu</b> – 2 South Indian Parathas
V	<b>Quick Bread</b> - Pour batters(waffles/pancakes/popovers) Drop batters (muffins/coffee cakes/biscuits)
VI	<b>Cakes</b> With Shortening – pound cake, cup cake, Un-shortened- Sponge Cake Combination- Chiffon Cake
VII	<b>Cookies</b> Drop Cookies Bagged out cookies Coconut Macaroon

## **FOOD & BEVERAGE SERVICE FOUNDATION – I**

### **1-P-II**

<b>Sr.No</b>	<b>Content</b>
1.	Familiarization of F&B Service equipment, Care & Maintenance of F&B Service equipment
2.	Stacking Sideboard
3.	Napkin Folds
4.	Carrying a Tray / Salver
5.	Laying a Table Cloth, Changing a Table Cloth during service
6.	Service of Water
7.	Holding Service Spoon & Fork
8.	Compilation and service of Menu 3 Course 4 Course 5 Course 6 course 7 course
9.	Changing dirty ashtray
10.	Crumbing and clearance

## **Housekeeping Foundation –I**

### **1-P-III**

<b>Sr. no</b>	<b>Practical</b>
1	Handling telephone calls Handling of lost and found Filling Forms and registers at the desk
2	Cleaning of room Cleaning of bathroom Making of bed
3	Mechanical cleaning- sweeping, mopping, washing of floors Vacuum cleaning- floors, carpets, upholstery

**FRONT OFFICE FOUNDATION-I**  
**1-P-IV**

<b>SR. No</b>	<b>C O N T E N T</b>
1	Do's and Don'ts of Front desk Back office Front desk
2	Grooming of Front office staff i) General hygiene ii) Posture iii) Personal Grooming
3	Handling of Brochures Handling Tariff cards
4	Industrial Visit to hotel :- Front Office
5	Telephone handling - Telephone manners, How to Handle calls, Screening calls and Transferring calls
6	Information regarding Hotel and facilities offered on telephone and in person.
7	<b>Assignments:</b> Visit to hotels of city and draw the layout of the lobby of the hotel. Collection of tariff card and brochures of the hotel. Tourism information of Indian States and Capital, Railway information. Local City Knowledge. 10 Names of national and international hotel chain with their company name.

**COMMUNICATION SKILLS**

**1-P-V**

**10 Marks each**

- 1) Telephonic conversation
- 2) PPT Presentation
- 3) Grammar
- 4) Advertisement Copy
- 5) Hotel Related Generic Vocabulary

**Semester- II**  
**FOOD PRODUCTION FOUNDATION**  
**2-T-I**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<p><b>Foundation of continental cookery</b></p> <ul style="list-style-type: none"> <li>Stocks: Definitions; classification, Preparation, recipe of 1 lt. storage, uses, care, (7) golden rules of stock making.</li> <li>Soups : Definitions ; Classification, Consommé (recipe 1 lt.), garnishes for all kinds of soups, accompaniments for soups</li> </ul>	16
II	<p><b>Foundation of continental cookery</b></p> <ul style="list-style-type: none"> <li>Sauces : Definition: Classification/ compositions, recipe of mother sauces – 1 lt. Derivatives- any 7</li> <li>Fumets, Glazes, Essences, Aspics</li> </ul>	16
III	<p><b>Kitchen Layouts</b></p> <ul style="list-style-type: none"> <li>Layout of receiving areas.</li> <li>Layouts of service and wash up.</li> <li>Butchery and vegetable mis-en place area.</li> <li>Cold kitchen, Hot kitchen, Garde manger, Bakery and Confectionery</li> </ul> <p><b>Kitchen Stewarding</b></p> <ul style="list-style-type: none"> <li>Organization Layout</li> <li>Equipment required</li> <li>Importance of kitchen stewarding</li> </ul>	16
IV	<p><b>Vegetable And Fruit Cookery</b></p> <ul style="list-style-type: none"> <li>Introduction – Classification of vegetables</li> <li>Pigments and color changes</li> <li>Effects of heat on vegetables and Fruits</li> <li>Classification of fruits</li> <li>Uses of fruit &amp; vegetables in cookery</li> </ul>	16
V	<p><b>Rice, Cereals &amp; Pulses</b></p> <ul style="list-style-type: none"> <li>Introduction</li> <li>Classification and identification</li> <li>Cooking of rice, cereals and pulses</li> <li>Varieties of rice and other cereals</li> </ul>	16

**Books Recommended**

- Bali, P. S. (2009). *Food Production Operations*. New Delhi: Oxford University Press.
- Bali, P. S. (2012). *Quantity Food production*. New Delhi: oxford university press.

- S.Bali, P. (2012). *International Cuisine & Food Production*. New Delhi: Oxford University Press.
- Thagan, P. (1999). *Modern Cookery Vol I & II*. New delhi: Orient Longman Ltd.
- Arora, K. (2000). *Theory of Cookery*. New Delhi: frank Bros & Co (Publishers) ltd.
- Wayne, G. (1995). *Professional Cooking*. USA: John Wiley & Sons.
- Larousse Gastronomique. (2001). USA: Hamlyn- a division of Octopus Publishing group Ltd.
- Kalra, I. (2000). *Prasad - Cooking with indian Masters*. New delhi: Allied Publishers ltd.
- Saraswat, A. (2003). *Professional Chef*. New Delhi: UBS Publishers distributors Pvt Ltd.

## **FOOD & BEVERAGE SERVICE FOUNDATION-II 2-T-II**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Topics</b>	<b>Marks</b>
I	Mise-en-Scene <ul style="list-style-type: none"> <li>• Mise-en-place</li> <li>• Receiving the Guest</li> <li>• Points to be remembered while laying a Table</li> <li>• Points to be observed while waiting at a table</li> </ul>	<b>16</b>
II	<b>Non-Alcoholic Beverages</b> Classification (Nourishing, Stimulating and Refreshing beverages) A. Tea - Types & Brands, B. Coffee - Types & Brands, C. Juices, Soft Drinks, Mock tails, mineral water.	<b>16</b>
III	<b>Room Service/ In Room Dining Service</b> Introduction, general principles, pitfalls to be avoided Cycle of Service, scheduling, staffing, Room service menu planning Forms and Formats, thumb rules ,Use of technology for room service Order Taking, Suggestive Selling, breakfast cards, Time management- lead time from order taking to Clearance, amenity vouchers	<b>16</b>
IV	<b>Menu</b> Origin of Menu, Objectives of menu, Types –Ala Carte, Table D'hôte, carte du jour, plat du jour. Menu Planning, considerations and constraints,13 Course French Classical Menu , French name of dishes Menu terminology <b>Simple control system</b> Necessity and functions of a control system, Billing Methods – Duplicate & Triplicate System, KOTs & BOTs,	<b>16</b>

	Computerized KOTs (Kitchen Order Ticket, Beverage Order Ticket), Presentation of bill.	
V	<b>Tobacco</b> History / Country / Types Cigarettes – Types and Brand names Cigars – shapes, sizes, colors and Brand names Storage of cigarettes & cigars	<b>16</b>

**Books Recommended:-**

- Andrews, S. (2003). *Food and Beverage Service (Training Manual)*. New Delhi : Tata Mc Graw-hill .
- Dennis Lillicrap, J. C. (2002). *Food and Beverage Service*. London : Hodder and Stoughton Educational.
- Dhawan, V. (2003). *Food & Beverage Service* . New Delhi : Fraank Bros & co. (Publishers) ltd.
- Singaravelavan, R. (2011). *Food and Beveragae Service*. New Delhi : Oxford University press.'
- Ahmed, M. (2005). *Food and Beverage Services*. New Delhi : Anmol Publication
- Verghese, B. (1999). *Professional Food and Beverage Service Management*. Bangalore: Macmillan Indian ltd.

## **Housekeeping Foundation-II** **2-T-III**

Theory – 80  
Sessional -20  
Total – 100

Unit	Contents	Marks
1	<b>Cleaning Agents</b> <ul style="list-style-type: none"> <li>• Types of cleaning agents</li> <li>• Characteristics of good cleaning agent</li> <li>• Ph scale and cleaning with their application</li> <li>• Cleaning products (Domestic / Industrial)</li> <li>• Distribution &amp; Control</li> <li>• Green cleaning</li> <li>• Blue Cleaning</li> </ul>	16
2	<b>Composition ,Care and cleaning of Different surfaces</b> <ul style="list-style-type: none"> <li>• Metals</li> <li>• Glass</li> <li>• Ceramics</li> <li>• Wood</li> <li>• Stone</li> <li>• Leather</li> <li>• Rubber</li> </ul>	16
3.	<b>Textiles</b> <ul style="list-style-type: none"> <li>• Types of Fabrics</li> <li>• Properties of Fabric</li> <li>• Fabric identification</li> <li>• Characteristics of various fabrics</li> </ul> <b>Linen Room</b>	16

	<ul style="list-style-type: none"> <li>• Types of linen Room</li> <li>• Layout of linen Room</li> <li>• Equipments &amp; accessories in linen Room</li> <li>• Organization (staffing) of linen Room</li> <li>• Storage facilities &amp; conditions</li> <li>• Linen exchange procedure</li> <li>• Selection of linen and purchase of linen</li> <li>• Linen Inventory; par stock –</li> <li>• Factors affecting par stock; calculation</li> </ul>	
4	<p><b>Uniform Room</b></p> <ul style="list-style-type: none"> <li>• Layout of uniform Room</li> <li>• Equipment &amp; accessories required</li> <li>• Organization (staffing) of uniform Room</li> <li>• Storage facilities and conditions</li> <li>• Exchange procedure</li> <li>• Types and selection of uniform</li> <li>• Maintenance and care of uniforms</li> <li>• Inventory; par stock – Factors affecting par stock; calculations.</li> <li>• Uniform designing :- Importance, types, characteristics</li> </ul> <p><b>Tailor Room</b></p> <ul style="list-style-type: none"> <li>• Functions of tailor room, tasks in tailor room</li> <li>• Equipments used in tailor Room</li> </ul>	16
5	<p><b>Laundry</b></p> <p>Laundering of Hotel linen</p> <ul style="list-style-type: none"> <li>• In house Vs contracting, merits &amp; Demerits</li> <li>• Equipments used in a Laundry: (Washing machine, Hydro extractor, Tumble, Dryer, calendar or flat work Iron , steam press ,Collar press ,pressing tables.)</li> <li>• Cleaning agents</li> <li>• Dry cleaning</li> <li>• Blueing</li> <li>• Starching</li> <li>• Procedures of a Laundry (work flow)</li> <li>• Wash cycle: Independent, Continuous batch process</li> <li>• Linen and load calculations</li> <li>• Linen life span</li> <li>• Lay out</li> <li>• Stains &amp; stain Removal</li> </ul> <p><b>Laundering of Guest linen</b></p> <ul style="list-style-type: none"> <li>• Guest Laundry form</li> <li>• Guest laundry handling: collection, delivery cycle, billing, complaints regarding laundry: missing and mending</li> <li>• Care labels</li> </ul>	16

**Books Recommended:-**

- Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.  
 Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.  
 Raghulanan, G. (2011). *Hotel Housekeeping Operations and Management*. New Delhi, India: Oxford University Press.  
 Singh, M. (2012). *Hotel Housekeeping*. New Delhi: Tata McGraw-Hill.

**Front Office Foundation-II**  
**2-T-IV**

Theory – 80  
 Sessional -20  
 Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	<p><b>Reservations</b></p> <p>Importance of guest cycle (Various stages, sectional staff in contact during each stage)</p> <p>Modes and sources of reservation.</p> <p>Procedure for taking reservations</p> <p>(Reservation form, conventional chart, density chart, booking diary with their detailed working and formats)</p> <p>Computerized system (CRS, Instant reservations)</p> <p>Types of reservation (guaranteed, confirmed, groups, FIT)</p> <p>Procedure for amendments, cancellation and overbooking.</p>	16
II	<p><b>Pre-Arrival Procedures</b></p> <p>Pre arrival activities(Preparing an arrival list, notification etc)</p> <p>Procedure for VIP arrival.</p> <p>Procedure for group arrival(special arrangements, meal coupons, etc)</p>	16
III	<p><b>Guest Arrival</b></p> <p>Types of registration.(Register, Loose Leaf, Registration Cards)</p> <p>Receiving guests.</p> <p>Arrival procedure for various categories of guests (Foreigners along with C-forms, FITs- walkin , with confirmed reservation)</p> <p>Notification of guest arrival.</p> <p>Criteria for taking advance.(Walk-ins, Scanty Baggage etc)</p> <p>Front office terminology related to :</p> <p>Reservation, Reception and Registration</p>	16
IV	<p><b>Guest Stay</b></p> <p>Rooming a guest (introduction to the hotel facilities, orientation of the room)</p> <p>Procedure for room change</p> <p>Safe deposit procedure.</p> <p>Assisting guest with all possible information and help (medical etc.)</p> <p>Handling guest messages.</p>	16

V	<b>Guest Departure</b> Departure notification Task performed at bell desk, cashier /reception. Express check outs Late check outs and charges. Methods of Payment Credit card handling Traveler cheques, Personal checks Handling cash Indian , Foreign currency Other methods of payment [Travel agent , Bill to Company etc-] Front office terminology related to : Reservation Reception Registration	16
---	---	----

**Books Recommended:**

- Andrews, S. (1999). *Hotel front office training manual*. New Delhi: Tata Publishing Company limited.
- D.Collins. (1967). *Accomodation Operations*. New Delhi: Plymouth macdonald Evans.
- Jatashankar.R.Tiwari. (2009). *Hotel front Office Operations and Management*. New Delhi: Oxford University press.
- S.K.Bhatnagar. (2002). *Front Office Management* . New Delhi: Frank Bros.& co( publishers)ltd.
- Singh, D. R. (2000). *Front Office management*. New Publication: Aman Publication.

## **Communication, Generic Skills & Personality Development**

### **2-T-V**

Theory – 80  
Sessional -20  
Total – 100

**Unit I**

- 1)Bio-data /Resume
- 2)Job Application
- 3)Technical report writing
  - Official Report Writing
    - Industrial Visit Report
    - Travel Report
    - Workplace Report
    - Inventory Report
    - Feasibility Report
    - Summer Training
  - 4)Creating a write up for an event:
    - 1) Notices
    - 2) Press notes
    - 3) Circulars
    - 4) Memos

**Sessional Work**

Job Application  
Report Writing  
Notices/ Circulars

## **Unit II**

### **Grammar Unit**

- 1) Correction of Errors
- 2) Direct and Indirect Speech
- 3) Active and Passive Voice
- 4) Transformation of Sentences

### **Communication and Barriers of Communication**

- Non-verbal communication – bar chart, pie chart, organizational chart, the importance of non verbal communication
- Difference between verbal and non-verbal communication  
Types of barriers – physical, mechanical, semantic, cultural

### **Sessional Work**

How to overcome barriers of Communication

## **Unit III**

- 1) Dialogue writing
- 2) Group Discussion
- 3) Role Playing

### **Sessional Work**

Dialogue writing  
Group Discussion

## **Unit IV**

- 1) Professional Manners and Etiquettes
- 2) Personal Interview Techniques
- 3) Meeting Agendas and Minutes writing

### **Sessional Work**

Role Playing  
Mock personal interviews  
Mock Professional situations

## **Unit V**

### **Soft Skill Development**

- 1) Goal Setting
- 2) Team Building
- 3) Time Management
- 4) Stress Management
- 5) Health and Hygiene

Seminar Presentation Techniques

### **Sessional Work**

Presenting a seminar on a selected topic

### **Books Recommended**

- Professional Communication Skills : By Pravin S.R.Bhatia, A.M Sheikh: S.Chand and company
- English Grammar Composition and Effective Business Communication By M.A. Pink, S.E.Thomas : S.Chand
- Contemporary English Grammar Structures and Compositions by David Green Macmillan Publication

- English At The Workplace Department of English, University of Delhi , Chief Editor: Mukti Sanyal Macmillan Publication
- Presentations (The Business Skills Series) by Anne Laws Orient Black Swan
- Applied English Grammar and Composition Dr. P.C.Das New Central Book Agency(P) Ltd
- Business Benchmark, Upper – Intermediate Student's Book Guy Brook- Hart Cambridge University Press
- 7 Habits of Highly effective people :Steven Covey Effective Technical Communication, M Ashraf Rizvi, Mc Graw Hill Education (India) Pvt. Ltd New Delhi

## **Food Science & Nutrition**

### **2-T-VI**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	<p><b>NUTRITION.</b> Introduction Definition of term "nutrition", nutrients Importance of food - physiological, psychological &amp; sociological importance.</p> <p><b>Energy,</b> Unit, Factors affecting energy requirements, Dietary sources of energy, and concept of energy balance. Balanced diet , Definition , Importance of balanced diet Basic five food groups. Malnutrition &amp; its prevention. Menu planning - factors affecting meal planning</p>	16
II	<p><b>Food adulteration</b> Definition ,Its effect on our health. • Common adulterants</p> <p><b>Emulsions</b> • Types of emulsions • Emulsifying agents • use of food emulsion with special reference to mayonnaise</p> <p><b>Browning reaction</b>, causes, desirable and undesirable effects in food preparation, Prevention of undesirable browning.</p>	16
III	<p><b>Carbohydrates</b></p> <ul style="list-style-type: none"> <li>• Definition, composition, classification</li> <li>• Functions of carbohydrates in the body</li> <li>• Dietary sources &amp; Daily requirements</li> <li>• Effects of deficiency and excess</li> </ul> <p><b>Lipids</b> Definition , Functions ,Classification: saturated and unsaturated fat. Dietary sources and requirements Effects of deficiency and excess Cholesterol , Effects of increasing in cholesterol contents in the diet factors increasing its level in Blood.</p>	16

<p><b>IV</b></p> <p><b>Proteins .</b> Definition ,Composition ,Classification based on nutritional quality Mutual supplementation to improve the quality of vegetable proteins with low budget Functions , dietary sources , Requirements; effects of deficiency and excess</p> <p><b>Vitamins</b> Classification of vitamins Functions, sources and deficiency of fat soluble vitamins – A, D, E, K Functions, sources &amp;- deficiency of water soluble vitamins – Vitamin c, Thiamine, Riboflavin, Niacin, B 12, Folic acid.</p> <p><b>Minerals.</b> Functions and classification of minerals in general Functions, food sources, requirements of calcium, iron, iodine, fluorine and na (sodium)</p>	<p><b>16</b></p>
<p><b>V</b></p> <p>Water ,Importance of water in health ,Water balance ,Dehydration, heat cramps and methods to prevent</p> <p><b>Nutritional losses upon cooking and the methods to prevent the same</b> [Mechanical , Leaching ,Enzymatic action , Oxidation , Heat ,,,Acid and alkalis]</p> <p><b>Effect of heat</b> on proteins: denaturation, coagulation, Change in starch on cooking • Gelatinization of starch Rancidity: factors affecting rancidity, prevention of rancidity , hydrogenation</p>	<p><b>16</b></p>

**Books Recommended:**

- Michael Colleer and Coline Sussams, Success in Principles of Catering 2<sup>nd</sup> edition (1988)
- J.A. Stretch and H.A. Southgate, The Science of Catering. 2<sup>nd</sup> edition (1986)
- W.C. Frazier, D.D. Westhoff, Food Microbiology – 3<sup>rd</sup> edition (1991)
- Meyer, Food Chemistry.
- M. Swaminathan- Essentials of food and Nutrition, Volume I and II, Ganesh and Company, Madras.
- 6. Food and Nutrition- A text book of Home Science for senior students, Arya Publishing House, New Delhi.
- Joshi Shubangini, Nutrition and Dietetics; Tata McGraw-Hill Publishing Company Limited.
- C. Gopalan, B.V. Rama Shastri and S.C. Balasubramanian; Nutritive value of India Foods, National Institute of Nutrition (ICMR), Hyderabad, India.

## FOOD PRODUCTION FOUNDATION-II

### 2-P-1

Term Work Marks-20

Practical – 80

Total- 100

PRACTICAL	CONTENT
I	<b>Indian Menus</b> – 5 (Six Course Menu) <ul style="list-style-type: none"> <li>• Roties - 4 Varieties</li> <li>• Dal - 3 Varieties</li> <li>• Vegetable 3 / Paneer 2 Varieties</li> <li>• Meat 2/Chicken2/Fish2 Varieties</li> <li>• Rice-4 Varieties</li> <li>• Sweets -4 Varieties</li> </ul>
II	<b>Continental</b> -4(Six course menu) <ul style="list-style-type: none"> <li>• Soup (Thick, Thin, Cream soups)</li> <li>• Main course (Four vegetarian, Four non-vegetarian)</li> <li>• Accompaniments(vegetables, salads, potatoes )</li> <li>• Desserts (Sundae, Trifle pudding, fresh fruit platter, Chocolate pudding)</li> </ul>
III	<b>Snack Menu</b> -2 <ul style="list-style-type: none"> <li>• North Indian</li> <li>• Poha/Cutlet</li> </ul>
IV	<b>Cakes</b> <ul style="list-style-type: none"> <li>• With Shortening – Fruit cake, Layer cake</li> <li>• Un-shortened- Angel cake</li> </ul>
V	<b>Cookies</b> <ul style="list-style-type: none"> <li>• Short dough cookies</li> <li>• Rolled Cookies</li> <li>• Ice box Cookies</li> </ul>
	<b>Pastries</b> (Demonstrations) <ul style="list-style-type: none"> <li>• Short Crust</li> <li>• Danish</li> <li>• Flaky</li> <li>• Choux</li> </ul>

## **FOOD & BEVERAGE SERVICE – II**

### **2-P-II**

Term Work Marks-20

Practical – 80

Total- 100

<b>Sr.No</b>	<b>Content</b>
1	Dining & Service etiquettes
2	Receiving the guest, presenting the menu, taking orders
3	Compilation and service of French Classical Menu
4	<ul style="list-style-type: none"> <li>• Tea Service</li> <li>• Coffee Service</li> <li>• Mock tails- Preparation &amp; Service</li> <li>• Service of Juices, Soft drinks, Mineral water, Tonic water</li> <li>• Cocoa &amp; Malted Beverages Service</li> </ul>
5	Telephone handling in room dinning
6	Tray/Trolley Set-Up & Service:- <ul style="list-style-type: none"> <li>• Room Service Tray Setup</li> <li>• Room Service Trolley Setup</li> </ul>
7	Handling Guest Complaints
8	Table Exhibits/ Layouts & Service <ul style="list-style-type: none"> <li>• A La Carte Cover</li> <li>• Table d' Hotel Cover</li> <li>• English Breakfast Cover</li> <li>• Continental Breakfast Cover</li> </ul> Afternoon Tea Cover/High Tea Cover
9	Presenting the Bills

## **Housekeeping Foundation II**

### **2-P-III**

Term Work Marks-20

Practical – 80

Total- 100

<b>Sr. no</b>	<b>Practical</b>
1	Metal cleaning Glass cleaning Wood cleaning Leather Rubber
02	Designing uniform For F&B, FO, HHK, FP 7 Bakery, security- for managers, supervisors and low level management. Understanding equipments used in tailor room
03	Hand washing

	Machine washing Bluing
04	Stain removal

## **Front Office Foundation -II**

### **2-P-IV**

Term Work Marks-20

Practical – 80

Total- 100

<b>S no</b>	<b>C O N T E N T</b>
1	Knowledge of records and formats used in reservation
2	Basic knowledge of records of pre registration and arrival
3	Check in procedures
4	Procedure for room change.
5	Paging.
6	Message handling-in house and out-house
7	Checkout procedures
6	Assignments Knowledge of countries, Capital and currencies, Languages, Music, Dance and festivals Of India. Hotel Chains ( National & International)

## **ENGLISH & GENRIC SKILLS**

### **2-P-V**

Term Work Marks-20

Practical – 80

Total- 100

- 1) Technical report writing
- 2) Grammar
- 3) Role Playing
- 4) Meeting Agendas and Minutes writing
- 5) Presenting a seminar on a selected topic
- 6) Technical report writing
- 7) Grammar
- 8) Role Playing
- 9) Meeting Agendas and Minutes writing
- 10) Presenting a seminar on a selected topic

**Semester III**  
**FOOD PRODUCTION OPERATION**  
**3-T-I**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<p><b>Classical Indian National Cookery</b></p> <ul style="list-style-type: none"> <li>• Introduction to Cuisines of India – Kashmir, UP, Punjab, W.B., Assam, Orissa, Goa, Rajasthan, Maharashtra, Gujarat, Kerala, Tamil Nadu, Andhra Pradesh, Karnataka.</li> <li>• Factors affecting eating habits, geographic location, Historical background &amp; seasonal availability of raw materials</li> <li>• Traditional preparation <b>for festivals &amp; special Occasion</b></li> <li>• Utensils, special equipments</li> <li>• staple diet, Snacks.</li> <li>• Service in that particular state</li> <li>• Sweets</li> </ul>	16
II	<p><b>Basic Spices &amp; Condiments</b></p> <ul style="list-style-type: none"> <li>• Spices used in Indian cookery</li> <li>• Role of spices in Indian cookery</li> <li>• Indian equivalent of spices (names)</li> </ul> <p><b>Masalas used in Indian Cookery</b></p> <ul style="list-style-type: none"> <li>• Blending of spices &amp; concept of masala</li> <li>• Different masalas used in Indian cooking -wet &amp; dry - Dhansak, Goda etc.</li> <li>• Varieties of masalas available in different regional areas-</li> <li>• </li> </ul>	16
III	<p><b>A. Indian pastes &amp; gravies</b></p> <ul style="list-style-type: none"> <li>• Basic Indian pastes used in Indian Cookery</li> <li>• Different gravies used in Indian Cookery : Red-Makhani, Kadhai, Green, White, Yellow</li> <li>• Recipes of each Gravy for 100 Pax.</li> <li>• Examples of dishes of each Gravy</li> </ul> <p><b>B. Ethnic traditions</b> of Muslims, Jains, Christians, Parsis, Buddhist, Hindus, Sikhs</p>	16
IV	<p><b>Kitchen Equipments used in Quantity Cookery</b></p> <ul style="list-style-type: none"> <li>• Different types of equipments (<b>Heat generating and Refrigeration equipments</b>)</li> <li>• Storage tables and hand tools</li> <li>• Uses, Maintenance, and Criteria for selection Kitchen Equipment used in Quantity Cookery</li> </ul>	16

V	<p><b>Quantity Kitchen Management</b></p> <ul style="list-style-type: none"> <li>• Layout of (large) Qty Kitchens, Institutional / Industrial &amp; Flt. Kitchen</li> <li>• Work flow in quantity kitchens</li> </ul> <p><b>Parameters for Quantity Menu Planning</b></p> <ul style="list-style-type: none"> <li>• Canteens for school &amp; college</li> <li>• Philanthropic institution</li> <li>• Industrial canteen</li> <li>• Airlines</li> <li>• Seaways</li> <li>• Hospitals</li> <li>• Function Catering (outdoor Parties)</li> </ul> <p>Menu planning for each of above</p>	16
---	--	----

#### **Books Recommended**

- Bali, P. S. (2009). *Food Production Operations*. New Delhi: Oxford University Press.
- Bali, P. S. (2012). *Quantity Food production*. New Delhi: oxford university press.
- S.Bali, P. (2012). *International Cuisine & Food Production*. New Delhi: Oxford University Press.
- Thagan, P. (1999). *Modern Cookery Vol I & II*. New delhi: Orient Longman Ltd.
- Arora, K. (2000). *Theory of Cookery*. New Delhi: frank Bros & Co (Publishers) ltd.
- Wayne, G. (1995). *Professional Cooking*. USA: John Wiley & Sons.
- Larousse Gastronomique. (2001). USA: Hamlyn- a division of Octopus Publishing group Ltd.
- Kalra, I. (2000). *Prasad - Cooking with indian Masters*. New delhi: Allied Publishers ltd.
- Saraswat, A. (2003). *Professional Chef*. New Delhi: UBS Publishers distributors Pvt Ltd .
- David Foskett, V. C. (2003). *The Theory Of Catering*. London: Book Power Publishers.
- Mohini Sethi, S. M. (1997). *catering Management - An Integral Approach* . New Delhi: New Age International (P) Ltd.
- Wayne, G. (1995). *Professional Baking* . USA: John Wiley & Sons

## FOOD & BEVERAGE OPERATION- I

### 3-T-II

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Topics</b>	<b>Marks</b>
I	<b>Alcoholic Beverage (Wines )</b> <ul style="list-style-type: none"> <li>• Introduction, definition, History, classification;</li> <li>• Structure of grapes,</li> </ul> Old World wines (Principal wine regions, wine laws, grape varieties, production and brand names) <ul style="list-style-type: none"> <li>• France- Champagne</li> </ul>	<b>16</b>
II	Wines of <ul style="list-style-type: none"> <li>• Germany</li> <li>• Italy- Asti Spumante, Chianti, Marsala</li> <li>• Spain- Sherry</li> <li>• Portugal- Port and Madeira</li> <li>• Australia</li> </ul>	<b>16</b>
III	<b>New World Wines (Principal wine regions, grape varieties and brand names)</b> <ul style="list-style-type: none"> <li>• USA</li> <li>• Australia</li> <li>• India</li> <li>• Chile</li> <li>• South Africa</li> </ul> Food & Wine Harmony; Storage of wines, Wine terminology (English & French)	<b>16</b>
IV	<b>Aperitifs</b> History / Origin, Definition, Production, Types / classification           Name of aperitifs and Liqueurs along with <ul style="list-style-type: none"> <li>• Country of origin</li> <li>• Pre-dominant flavors</li> <li>• Service</li> <li>• Brand names</li> </ul>	<b>16</b>
V	<b>Beer</b> <ul style="list-style-type: none"> <li>• Introduction -</li> <li>• Ingredients</li> <li>• Manufacture</li> <li>• Types &amp; brands – Indian and international, Special beers</li> <li>• Storage &amp; service</li> </ul> Brief introduction about Other fermented and brewed beverages           – Sake, Cider, Perry           Other Alcoholic Beverages- Absinthe, Ouzo, Aquavit, Slivovitz, Arrack	<b>16</b>

## **Housekeeping Operation – I**

### **3-T-III**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Contents</b>	<b>Marks</b>
1	Interior Designing <ul style="list-style-type: none"> <li>• Objectives of Interior Design</li> <li>• Basic types of design</li> <li>• Elements of design</li> <li>• Principles of design</li> <li>• Units of design</li> </ul>	16
2	Colour <ul style="list-style-type: none"> <li>• Colour wheel</li> <li>• Importance &amp; Characteristics</li> <li>• Colour scheme</li> <li>• Properties of colour</li> <li>• Effects of colour</li> </ul>	16
3	Lighting, Heating and Ventilation : <ul style="list-style-type: none"> <li>• Importance of Lighting</li> <li>• Types ( Classification)</li> <li>• Methods of Lighting</li> <li>• Lighting plans</li> </ul> Heating and Ventilation	16
4	Floor finishes: <ul style="list-style-type: none"> <li>• Types</li> <li>• Characteristics</li> <li>• maintenance</li> </ul> Wall coverings <ul style="list-style-type: none"> <li>• Types</li> <li>• Characteristics</li> <li>• maintenance</li> </ul>	16
5	Window treatment <ul style="list-style-type: none"> <li>• Types of windows</li> <li>• Classification of window treatment</li> <li>• Curtains headings and accessories</li> <li>• Measurement and installation of drapes</li> </ul>	16

#### **Books Recommended:**

- Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.
- Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.
- Raghulanan, G. (2011). *Hotel Housekeeping Operations and Management*. New Delhi, India: Oxford University Press.
- Singh, M. (2012). *Hotel Housekeeping*. New Delhi: Tata McGraw-Hill.

## FRONT OFFICE OPERATIONS-I

### 3-T-IV

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	<p><b>Function of Reception</b></p> <ul style="list-style-type: none"> <li>• Meaning and importance of Reception department</li> <li>• Handling of Hotel Mail / staff mail • Hotel Mail and key rack • Handling of black list and no shows</li> <li>• Key handling and different types of key • Importance of key control • Paging system • Wake-up calls. • Handling of emergencies •</li> </ul>	16
II	<p><b>Bell Desk Operations</b> Importance of bell desk, Bell boy control, Handling of luggage, Left luggage, procedure Handling of group luggage, concierge, Handling of scanty baggage, Paging systems</p> <p><b>Reservation Activities</b></p> <ul style="list-style-type: none"> <li>• Group booking procedure</li> <li>• Computerized reservation</li> <li>• Centralized reservation</li> <li>• Complete procedure of Whitney system of reservation. • Guaranteed and Non Guaranteed reservation</li> <li>• Overbooking • Forecasting</li> </ul>	16
III	<p><b>Registration</b></p> <ul style="list-style-type: none"> <li>• Handling Registration for individuals • Handling Registration for groups • Handling Registration foreigners • Room change Procedure • Knowledge of passport, VISA for registration purpose.</li> </ul>	16
IV	<p><b>Departure Procedure</b></p> <ul style="list-style-type: none"> <li>• Meaning of check-out • Express check-out Procedure • Late check-out • Late charges</li> </ul> <p><b>Front Office Billing</b></p> <ul style="list-style-type: none"> <li>• Introduction to cashier section • Credit in Hotel • Modes of settlement of bills • Handling of Guest Valuables</li> </ul>	16
V	<p><b>Front Office accounting system</b></p> <p>Handling of credit instruments. Procedure of Handling of credit cards Handling of foreign exchange, FXA, FXB, Billing procedure, Mechanical billing NCR Computerized Billing</p>	16

#### **Books Recommended:**

- Andrews, S. (1999). *Hotel front office training manual*. New Delhi: Tata Publishing Company limited.
- D.Collins. (1967). *Accommodation Operations*. New Delhi: Plymouth macdonald Evans.

- Jatashankar.R.Tiwari. (2009). *Hotel front Office Operations and Management*. New Delhi: Oxford University press.
- S.K.Bhatnagar. (2002). *Front Office Management* . New Delhi: Frank Bros.& co( publishers)ltd.
- Singh, D. R. (2000). *Front Office management*. New Publication: Aman Publication

## **FRENCH**

### **3-T-V**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
<b>I</b>	• The Alphabets • Accents • Numbers • Articles- Definite/ Indefinite •	16
<b>II</b>	• Days of the week/months/date • Nouns/prepositions • Glossary of general food items Auxiliary Verbs • Adjectives of profession/ nationality • Time	16
<b>III</b>	• Ist Group Verbs • Feminine and Phralisation of nouns • Culinary terms in French • Feminine and Pluralisation of Adjectives • IIInd group verb • "Formules de Politesse"	16
<b>IV</b>	• Future and past tense • Currency/weights and measures • Negation & Interrogation • Adverbs and Pronouns • Basic French conversation with guests • IIIrd group Verbs	16
<b>V</b>	• Translation • Glossary terms- Brigade/equipments/ingredients/ classical menus/wine	16

# HOTEL ENGINEERING & FACILITY PLANNING

## 3-T-VI

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	<p><b>Maintenance Department</b></p> <ul style="list-style-type: none"> <li>• Definition, scope, objectives</li> <li>• Importance of maintenance dept. in hotel industry</li> <li>• Organization of maintenance dept. in 3/4/5 Star Hotel.</li> <li>• Duties and responsibilities of engineering dept</li> <li>• Types of maintenance <ul style="list-style-type: none"> <li>- Preventive maintenance</li> <li>- Breakdown maintenance</li> <li>- Predictive maintenance</li> <li>- Contract maintenance</li> </ul> </li> </ul> <p><b>Energy Management</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Importance of energy conservation</li> <li><input type="checkbox"/> Use of solar energy for various activities</li> <li><input type="checkbox"/> Energy conservation program for <ul style="list-style-type: none"> <li>o Front office</li> <li>o Kitchen</li> <li>o F and B</li> <li>o Housekeeping</li> <li>o Laundry and Sanitation</li> <li>o Guestrooms</li> </ul> </li> </ul>	16
II	<p><b>Water , Sanitation and Waste treatment</b></p> <ul style="list-style-type: none"> <li>• Water purification methods</li> <li>• Methods of water softening(Ion exchange, Zeolite process)</li> <li>• Cold and hot water distribution system</li> <li>• Various plumbing fixtures</li> <li>• Types of sanitary traps and their applications</li> <li>• Types of water closets and flushing</li> <li>• Classification of solid waste</li> <li>• Garbage collection and disposal system</li> </ul>	16
III	<p><b>Electrical Systems</b></p> <ul style="list-style-type: none"> <li>• Switch, Plug, Socket</li> <li>• AC and DC system.</li> <li>• Single and three phase system</li> <li>• Types of Electrical safety devices <ul style="list-style-type: none"> <li>Fuses</li> <li>Earthing</li> <li>Circuit breakers</li> </ul> </li> <li>• Methods of lighting</li> <li>• Calculation of electricity bill</li> </ul>	16

IV	<b>Heating, ventilation, refrigeration and air conditioning</b> <ul style="list-style-type: none"> <li>• Heating system</li> <li>• Heat insulation</li> <li>• Types of ventilation</li> <li>• Definitions –heat, temp, specific heat, sensible heat, latent heat,relative</li> <li>• humidity, dry bulb temp, wet bulb temp ,tons of refrigeration</li> <li>• Refrigerant-types, properties of good refrigerants</li> <li>• Refrigeration cycle</li> <li>• Factors affecting human comfort</li> <li>• Types of ac systems-unitary and centralized</li> <li>• Window AC</li> <li>• Walk in freezer and cold storage</li> </ul>	16
V	<b>Designing of facilities</b> <ul style="list-style-type: none"> <li>• Designing of building and civil infrastructure – Roof, Exterior Walls, Elevator</li> <li>• Shafts and Landscaping</li> <li>• Designing of parking areas – Standard Parking Space allotment, Layout</li> <li>• Considerations</li> <li>• Designing of Lodging Facilities – Designing of Guest Room, Suites,Lobbies,</li> <li>• Recreational facilities</li> <li>• Designing of Food and Beverage area –Concept of Designing Food and Beverage Production and Service Areas</li> </ul>	16

**Books Recommended:**

- Hospitality Facilities Management and Design -David M. Stipanuk, Harold Roffmann; Publication : Educational Institute, AHMA
- How Things Work – The Universal Encyclopedia of Machines , Volume 1 and 2
- The Management of Maintenance and Engineering Systems in the Hospitality Industry - Frank D. Borsenik , Alan T. Stutts, John Wiley & Sons Inc., New York.
- Air Conditioning Engineering; W. P. Jones, English Language Book Society
- Refrigeration and Air Conditioning - Domkundwar
- A Text Book of Hotel Maintenance- Goyal and Arora

## **FOOD PRODUCTION OPERATION-I 3-P-I**

<b>PRACTICAL</b>	<b>CONTENT</b>
<b>Regional Menues</b>	
I	Kashmir(Min. 10 dishes)
II	Uttar Pradesh/ Avadh (Min. 10 dishes)
III	West Bengal(Min. 10 dishes)

IV	Assam (Min. 10 dishes)
V	Goa (Min. 10 dishes)
VI	Kerala (Min. 10 dishes)
VII	Karnataka (Min. 10 dishes)
VIII	Yeast based product
IX	Breakfast – croissants, Danish, Brioche, Sandwich Bread loaf
X	Lunch- Sliced Bread (loaves) / French bread, Brown Bread, Whole wheat bread. Marbled bread, Display of Bread Basket, Rolls – Atleast - 2 Types, Soup / Bread sticks,
	High Tea – Mini croissants Baget

## **FOOD & BEVERAGE OPERATION – I**

### **3-P-II**

<b>Sr.No</b>	<b>Content</b>
1.	Planning ,Taking order and service of 13 course French classical menu along with Wines
2.	Special Food Service - (Cover, Accompaniments & Service) Classical Hors d' oeuvre :- <ul style="list-style-type: none"> <li>• Caviar, Smoked Salmon, Pate de Foie Gras, Melon</li> </ul>
3.	Service of Beer <ul style="list-style-type: none"> <li>• Service of Bottled &amp; canned Beers</li> <li>• Service of Draught Beers</li> </ul>
4.	Service of Aperitifs <ul style="list-style-type: none"> <li>• Service styles – neat/on-the-rocks/with cream/en frappe</li> <li>• Service from the Bar</li> </ul>
5	Service of Old World Wines <ul style="list-style-type: none"> <li>• Service of Red Wine</li> <li>• Service of White/Rose Wine</li> <li>• Service of Sparkling Wines</li> <li>• Service of Fortified Wines</li> <li>• Service of Aromatized Wines</li> </ul>

## **HOUSEKEEPING OPERATION-I**

### **3-P-III**

<b>Sr.no</b>	<b>Content</b>
01	Colour wheel , At least 5 color schemes to be made for hotel rooms
02	Plan a hotel suite on paper and chalk out a lighting plan for the same
03	At least 5 types of window treatment to be made on 5 types of windows found in hotels.

## **FRONT OFFICE OPERATIONS-I**

### **3-P-IV**

<b>Sr.no</b>	<b>Content</b>
1	Handling of hotel mail Wake-up call handling Handling of scanty baggage guest Handling of left luggage Reservation Procedures i) On Telephone ii) In person iii) Mail Whitney System Reservation Maintaining and Handling records of reservation and registration Cancellation of reservation Handling of Group Booking Check-in procedure for WALK-IN guests Check in procedure for group Check in procedure for VIP Check in procedure for Foreigners Religion of India Currencies , countries and their capitals Festivals of India Front office emergencies

## **FRENCH-I**

### **3-P-V**

<b>Sr.</b>	<b>C O N T E N T</b>
I	Self introduction, description of a person, speaking about time, weather, months, season, days and number, family and home colors
II	Role plays (conversation) with guest about room booking at a hotel, table reservation at a restaurant, booking ticket at cinema.
III	Read and translate – English to French and French to English. Topics – menus, recipe, French dishes, wines, cheese and vocabulary based on hotel and restaurant.
IV	Speech on a topic (based on)- - Describe a hotel, restaurant, menu, city and country.

**Books Recommended:**

- La langue et La civilisation Francaises- G. Mauger,; Hachette, 79, Bou levard St.Germain, Paris.
- Le Fran, cais de l'Hotellerie et du Tourisme - Max DANY
- Jean Robert la lay, Hachette (part I part II, all the conversational up to pg. 106. This book is to be used for conversation and translations.)

**SEMESTER IV**  
**FOOD PRODUCTION OPERATIONS II**  
**4-T-I**

Theory – 80  
Sessional -20  
Total – 100

UNIT	CONTENT	MARKS
I	<p><b>Egg Cookery</b></p> <ul style="list-style-type: none"> <li>• Introduction – Classification of Eggs</li> <li>• Structure of an egg</li> <li>• Selection of egg</li> <li>• Methods Of Cooking (Effects of heat)</li> </ul> <p>Uses of egg in cookery and bakery</p>	16
II	<p><b>Fish Cookery</b></p> <ul style="list-style-type: none"> <li>• Introduction to fish cookery</li> <li>• Classification of fish with examples</li> <li>• Cuts of fish with menu examples</li> <li>• Selection of fish and shell fish</li> <li>• Cooking of fish (effects of heat)</li> </ul>	16
III	<p><b>Indenting and Stores</b></p> <p>Indenting, Principles of Indenting Qty. &amp; portions for Bulk production Practical difficulties involves in Indenting</p> <ul style="list-style-type: none"> <li>• Conversion of Recipes</li> </ul> <p><b>Stores</b></p> <ul style="list-style-type: none"> <li>• Principles of storage,</li> <li>• Types of stores</li> <li>• Layout of Dry and cold room</li> <li>• Staff Hierarchy,</li> <li>• Guidelines for efficient storage</li> <li>• Control procedures</li> <li>• Inventory Procedures</li> <li>• EOQ– Economic order Quantity</li> <li>• Re-order levels</li> <li>• Bin Cards</li> <li>• Form and formats</li> <li>• Function of a store Manager</li> <li>• Computerized store control system.</li> <li>• Standard purchase specification</li> <li>• Dealing with suppliers.</li> </ul>	16
IV	<p><b>Introduction to Bakery &amp; confectionery</b></p> <ul style="list-style-type: none"> <li>• Definition of baking</li> <li>• Principles of baking</li> <li>• Bakery Equipment (5 small &amp; 5 large) and Tools</li> </ul> <p>Characteristics Functions of ingredients in Bakery &amp; Confectionery</p> <ul style="list-style-type: none"> <li>• Flour, Shortening agents</li> <li>• Sweetening agents</li> <li>• Raising agents</li> <li>• Dairy products</li> </ul>	16

V	<b>Pastries Making</b> <ul style="list-style-type: none"> <li>• Types-Short crust, Laminated, Choux, Hot water/Rough puff</li> <li>• Methods of preparation, Recipes and Evaluation</li> <li>• Differences and faults</li> <li>• Uses of each pastry</li> <li>• Care to be taken while preparing pastry</li> <li>• Temperature of baking pastry</li> </ul>	16
---	--	----

## **FOOD & BEVERAGE OPERATIONS-II**

### **4-T-II**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Topics</b>	<b>Marks</b>
I	<b>Alcoholic beverage - Spirits</b> Introduction & Definition Production of Spirit <ul style="list-style-type: none"> <li>• Pot-still method</li> <li>• Patent still method</li> </ul>	<b>10</b>
II	<b>Production of spirits (History, Manufacture, Regions, Types and brands )</b> Whisky-Scotch ,Irish, American ,Canadian Rum Brandy	<b>20</b>
III	<b>Production of spirits (History, Manufacture, Regions, Types and brands )</b> Gin Vodka Tequila	<b>20</b>
IV	<b>Liqueurs</b> History / Origin, Definition, Production, Types / classification Name of Liqueurs along with <ul style="list-style-type: none"> <li>• Country of origin</li> <li>• Pre-dominant flavors</li> <li>• Service</li> </ul> Brand names	<b>14</b>
V	<b>Cocktails</b> Introduction to Cocktails History, Types and Preparation Classical Cocktails and Innovative cocktails, Recipes of Classical Cocktails – 5 cocktails of each base.	<b>16</b>

#### **Books Recommended:-**

- Roger B. Boulton, V. L. (2005). *Principles and Practices of Winemaking*. New York : S.K. Jain for CBS Publisher .
- Broom, D. (2013). *The Complete Bartender's Guide*. china: Carlton Books Limited .
- Cullen, P. (2001). *The Food and Beverage Manaager* . New Delhi: Global Books & Subscription Services.

- Dennis Lillicrap, J. C. (2002). *Food and Beverage Service*. London : Hodder and Stoughton Educational.
- Dhawan, V. (2003). *Food & Beverage Service* . New Delhi : Fraank Bros & co.
- ( Publishers) ltd.
- Singaravelavan, R. (2011). *Food and Beveragae Service*. New Delhi : Oxford University press.'
- Jones, P. (1988). *Food Service Operations*. London : Cassell Wellington House.
- Verghese, B. (1999). *Professional Food and Beverage Service Management*. Bangalore: Macmillan Indian ltd.

## **HOUSEKEEPING OPERATIONS -II**

### **4-T-III**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Contents</b>	<b>Marks</b>
<b>1</b>	Furniture <ul style="list-style-type: none"> <li>• Types of furniture</li> <li>• Types of Joints in furniture.</li> <li>• Selection</li> <li>• Materials used</li> <li>• Furniture care &amp; cleaning</li> <li>• Selection of furniture for hotels (Commercial / Resort)</li> <li>• Furniture's Arrangement in hotels</li> </ul>	16
<b>2</b>	Renovation <ul style="list-style-type: none"> <li>• Reasons to renovate</li> <li>• Types of renovation</li> <li>• Subsidiary processes in Renovation</li> <li>• Refurbishing</li> <li>• Redecoration</li> </ul>	16
<b>3</b>	Flower arrangement <ul style="list-style-type: none"> <li>• Concept and Importance</li> <li>• Types and shapes</li> <li>• Principles</li> <li>• Conditioning of plant material</li> <li>• Tool, equipments and Accessories</li> <li>• Color schemes in Flower Arrangement</li> </ul>	16
<b>4</b>	Housekeeping Supervision <ul style="list-style-type: none"> <li>• Importance of inspection</li> <li>• Checklist for inspection, typical areas usually neglected</li> <li>• Self supervision techniques for cleaning staff</li> </ul>	16
<b>5</b>	Pest control <ul style="list-style-type: none"> <li>• Types of pests</li> <li>• Pest control Goals</li> <li>• Common pests and their control</li> <li>• Integrated Pest management</li> <li>• Methods of Pest Control</li> </ul>	

**Books Recommended:**

- Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.
- Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.
- Raghulanan, G. (2011). *Hotel Housekeeping Operations and Management*. New Delhi, India: Oxford University Press.
- Singh, M. (2012). *Hotel Housekeeping*. New Delhi: Tata McGraw-Hill.

## **FRONT OFFICE OPERATIONS-II**

### **4-T-IV**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	Reports and Statistics • Averages • Occupancy • Guest • Rooms • Graphical representation-1)mean 2)median 3)mode Yield Management	16
II	Cashier and Night Auditing Duties of cashier Job description of Night Auditors Duties of cashier Recapitulation Sheet Transcript Night Receptionist Report	16
III	HOTEL MARKETING • Marketing- meaning, definition • Hotel Marketing • Marketing in Hotel - specific features of Hotel Marketing • Hotel as marketing Product	16
IV	SELLING BY RECEPTION STAFF • Reception as a sales department • Selling techniques for reception • Points for sale • Room assignment • Selling to different type of clientele UPSELLING • Up selling - meaning, qualities to be acquired by Front Office staff for up selling • Up selling- non pressure technique • Selling to different type of clientele, FIT's, Travel Group • Terms and conditions between Travel Agency and Hotels	16
V	UPSELLING • Up selling - meaning, qualities to be acquired by Front Office staff for up selling • Up selling- non pressure technique • Selling to different type of clientele, FIT's, Travel Group • Terms and conditions between Travel Agency and Hotels	16
	PROMOTIONAL ACTIVITY • Meaning and understanding of Promotion • Purpose of promotion • Types of promotional activities • Promotional activities used in general • Promotional activities used by Hotel • In house promotional activities	

**Books Recommended:**

- Andrews, S. (1999). *Hotel front office training manual*. New Delhi: Tata Publishing Company limited.
- D.Collins. (1967). *Accomodation Operations*. New Delhi: Plymouth macdonald Evans.
- Jatashankar.R.Tiwari. (2009). *Hotel front Office Operations and Management*. New Delhi: Oxford University press.
- S.K.Bhatnagar. (2002). *Front Office Management* . New Delhi: Frank Bros.& co ( publishers)ltd. Singh, D. R. (2000). *Front Office management*. New

## **PRINCIPLES OF MANAGEMENT**

### **4-T-V**

Theory- 80  
Sessional - 20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<p><b>CONCEPT OF MANAGEMENT</b></p> <p>Nature , function, definition, Characteristics and importance of management, levels of Management, the process of management:- planning, organizing, staffing, directing and controlling. Is Management a science or art? Management as profession, Management and administration.</p> <p><b>DEVELOPMENT OF MANAGEMENT THOUGHT</b></p> <p>Scientific management: contribution of Taylor,Fayol, Drucker.</p>	16
II	<p><b>PLANNING</b></p> <p>Meaning, nature and importance of planning, type of plans, characteristics of planning advantages and disadvantages of planning, steps in planning, components of planning.</p> <p><b>DECISION MAKING</b> Types of decisions, step-by-step decision making process, review of decision.</p> <p><b>ORGANISATION</b></p> <p>Meaning, nature and importance of organization, principles of organization, organization charts and manuals, formal and informal organization, types of organization:- functional, line and staff and committee, Span of management, Delegation,:-Centralization and decentralization.</p>	16
III	<p><b>STAFFING</b></p> <p>Meaning, manpower planning, job analysis, recruitment, selection, training, promotion, performance appraisal, job evaluation and merit rating,</p> <p><b>DIRECTING:</b></p> <p>Meaning, nature of directing, characteristics of directing, principles of directing, importance of directing, techniques of directing orders, chain of command, authority-responsibility-accountability relationship, supervision.</p>	16
IV	<p><b>LEADERSHIP</b></p> <p>Definition, different styles of leadership, Qualities of leader, difference between leader and manager, Leadership theories.</p> <p><b>MOTIVATION</b></p> <p>Meaning, nature and objectives of motivation, benefits of motivation, theories of motivation, Maslow's theory of need hierarchy.</p>	16

	Herzberg's hygiene-motivation theory. Vroom's expectancy theory – Mc Gregory's theory 'X' and theory 'Y',	
V	<p><b>COMMUNICATION</b></p> <p>Meaning and nature of communication, types of communication: upward / downward, verbal / non-verbal, formal-informal, barriers to communication, communication process.</p> <p>CONTROLLING Meaning, control process, need for control, control techniques, budgetary and non-budgetary control, marketing control-production control-quality control, financial control-information control, concept of strategic control, control &amp; accountability and pressure to perform.</p>	16

**Books Recommended:**

- Principles of management, Dr(Mrs). Pratibha M. Siriya
- Management – Stoner & Freeman
- Essentials of Management – Koontz & O'donnell
- Management and Organisation – M. Louis Allen
- Management Theory and Practice – Ernest Dale
- Management tasks- Peter F Drucker
- Management Process – Davar R.
- Fundamentals of Management – J.S.
- Principles of management – P.N. Reddy
- Essentials of Management – Chatterji
- Personnel Management & Industrial Relations- Verma & Agarwal

## **BASIC HOTEL ACCOUNTING**

### **4-T-VI**

Theory- 80  
Sessional - 20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	<p><b>Introduction of Basic Accounts and Journal.</b></p> <ul style="list-style-type: none"> <li>□ Meaning, Scope (area of application), Objective, Advantages and Disadvantages.</li> <li>□ Book-Keeping and Accountancy: Meaning and their systems with features.</li> <li>□ Double Entry System : Principles, Application, Nature, Advantages and limitations.</li> <li>□ Classification of Accounts, Principles and Rules (simple problems only).</li> <li>• Journal : Meaning of Journal &amp; its Advantages, Format of Journal with the utility of each column. Requirement of Journal entries. (simple problem only)</li> </ul>	16

<b>II</b>	<b>Subsidiary Book, ledger and Trial Balance</b> <ul style="list-style-type: none"> <li>• Meaning and Advantages of subsidiary book Kinds of Subsidiary Book.</li> <li>• Petty Cash Book- Meaning advantages (simple Problems).</li> <li>• Ledger: Meaning of ledger, Division of ledger. Rules of Posting. Balancing of ledgers, Kinds of Balances [simple problem only]</li> <li>• Trial Balance: Meaning, Objectives and Advantages of Trial Balance. System of preparation / Presentation of Trial Balance. Preparation of Trial Balance [Simple problem only]</li> </ul>	16
<b>III</b>	<b>Final Accounts of Hotel Industry :</b> <ul style="list-style-type: none"> <li>• Meaning of Final Account, Need and Advantages.</li> <li>• Component and their importance- Trading Account, Profit and Loss Account, Profit and Loss Appropriation Account &amp; Balance Sheet. Meaning of Adjustments and their Treatment in Final Accounts.</li> <li>• Simple Problems on Final Accounts.</li> </ul>	16
<b>IV</b>	<b>Guest Records and Billing</b> <ul style="list-style-type: none"> <li>• Hotels : Definition, Characteristics, Classification of Hotels, Rooms and Guest : (under different categories)</li> <li>• Departments in a hotel as operating and Non-operating, Revenue Producing and Non-Revenue Producing.</li> <li>• Basis of Charging Room Rates. (Simple Problems Only)</li> <li>• Guest Weekly Bill : Format (Computerized and Manual) (simple problems only)</li> </ul>	16
<b>V</b>	<b>Auditing and Hotel Statistics</b> <ul style="list-style-type: none"> <li>• Meaning, Scope and Advantages of Auditing.</li> <li>• Meaning of Night Auditor, His Duties, Function and Responsibilities.</li> <li>• Various Reports to be prepared by Night Auditor : List and Their Draft (Format)</li> <li>• House Count. Ratios on 1. Occupancy 2. Room Rate –Average per Guest. 3. Covers.</li> </ul>	16

**Books Recommended:**

1. Hotel Accounting & financial control, Ozi A. D'cunha & Gleson O. D'cunha,; The Dickeys Enterprise, Mumbai,
2. Modern Accountancy (Vol I & II), A. Mukherjee,; Tata-Mc Graw- Hill Publishing company Ltd. Calcutta.
3. Accountancy for C.A. Foundation, P.C. Tulsian.; Tata-Mcgraw-hill publishing company Ltd. New Delhi.

## **FOOD PRODUCTION OPERATIONS-II**

### **4-P-I**

Term Work Marks -20  
Practical-80  
 Total-100

<b>PRACTICAL</b>	<b>CONTENT</b>
<b>Regional Menus</b>	
<b>I</b>	Punjab (Min. 10 dishes)
<b>II</b>	Orissa (Min. 10 dishes)
<b>III</b>	Rajasthan (Min. 10 dishes)
<b>IV</b>	Maharashtra / Malavani (Min. 10 dishes)
<b>V</b>	Gujrat / Bohri / Parsi (Min. 10 dishes)
<b>VI</b>	Tamil Nadu (Min. 10 dishes)
<b>VII</b>	Andhra Pradesh / Hyderabadi (Min. 10 dishes)
<b>IX</b>	Biryanis
<b>X</b>	Fried Snacks
<b>XI</b>	Tandoori Snacks

## **FOOD & BEVERAGE OPERATIONS-II**

### **4-P-II**

Term Work Marks -20  
Practical-80  
 Total-100

Sr.No	Content
1.	Service of Spirits Service styles – neat/on-the-rocks/with appropriate mixers <ul style="list-style-type: none"> <li>• Service of Whisky</li> <li>• Service of Vodka</li> <li>• Service of Rum</li> <li>• Service of Gin</li> <li>• Service of Brandy</li> </ul>
2.	Cocktails demonstration <ul style="list-style-type: none"> <li>• Making of 5 cocktail of each base.</li> <li>• Classical / contemporary cocktails</li> </ul>
3.	Service of Liqueurs <ul style="list-style-type: none"> <li>• Service styles – neat/on-the-rocks/with cream/en frappe</li> <li>• Service from the Bar</li> </ul>

## **HOUSEKEEPING OPERATIONS-II**

### **4-P-III**

Term Work Marks -20

Practical-80

Total-100

Sno	Practical
01	Use of checklist by supervisor to check any 5 situations in housekeeping Classification of waste
02	Plan furniture arrangement for 2 types of rooms and public area
03	Western flower arrangement Ikebana – shohin type arrangement

## **FRONT OFFICE OPERATIONS-II**

### **4-P-IV**

Term Work Marks -20

Practical-80

Total-100

S no	C O N T E N T
1	Handling of different types of guest, Handling of VI P's, Handling a black list
2	Calculation of reports / statistics
3	Preparing of Reports
4	Preparing promotional Material
5	Preparation of final bill
6	Procedure for handling credit card

Assignment:

- 1) Dances of India
- 2) Wild Life sanctuaries of India.

Books Recommended:

- Andrews, S. (1999). *Hotel front office training manual*. New Delhi: Tata Publishing Company limited.
- D.Collins. (1967). *Accomodation Operations*. New Delhi: Plymouth macdonald Evans.
- Jatashankar.R.Tiwari. (2009). *Hotel front Office Operations and Management*. New Delhi: Oxford University press.
- S.K.Bhatnagar. (2002). *Front Office Management* . New Delhi: Frank Bros.& co( publishers)ltd.
- Singh, D. R. (2000). *Front Office management*. New Publication: Aman Publication.

## **HOTEL ENGINEERING & FACILITY MANAGEMENT**

### **4-P-V**

Term Work Marks -10  
Practical-40  
Total-50

1. Calculation of Electricity Bill
2. Study of Maintenance Schedule of
  - Kitchen
  - Guest Room
  - Refrigerator
  - Fire Extinguisher
  - Housekeeping
3. Electrical Accessories: Fuse, Switch, Socket, Plug etc.
4. Lighting Systems and types of lamps
5. Signs and Symbols
6. Hot and Cold Water Distribution System
7. Plumbing Fixtures
8. Different types of taps: Bib tap, Pillar tap, Waste – not tap
9. Refrigerator / Vapour Compression system in hotel
10. Air Conditioner: Window AC
11. Maintenance Tools: Tester, Screw driver, Wire cutter, Plier, Chisel, Rip saw, Hack saw, Claw hammer

**SEMESTER- V**  
**FOOD PRODUCTION MANAGEMENT-I**  
**5-T-I**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<b>International Cooking</b> France, Italy, China, Russia, Spain : Geographical location, historical background, staple food with regional influence, ingredients, methods of Cooking, specialties, special equipment	16
II	<b>Meat Cookery</b> <ul style="list-style-type: none"> <li>• Introduction to meat cookery</li> <li>• Types, Selection and Storage of Meat</li> <li>• Cuts of beef/veal</li> <li>• Cuts of lamb/mutton</li> <li>• Cuts of pork</li> <li>• Variety meats (Offal's)</li> </ul>	16
III	<b>Poultry</b> <ul style="list-style-type: none"> <li>• Types of Poultry</li> <li>• Cuts of Poultry</li> <li>• Uses of Poultry</li> <li>• Selection and Storage of Poultry</li> <li>Cooking Methods</li> </ul>	16
IV	<b>Cake Making</b> <ul style="list-style-type: none"> <li>• Role of ingredients</li> <li>• Recipe balancing</li> <li>• Method of cake making</li> <li>• Cake icing and decoration</li> <li>Faults &amp; remedies</li> </ul> <b>Cookies Making</b> <ul style="list-style-type: none"> <li>• Types: Dropped, Piped, Hand rolled, Cutter cut, Sheet, Frozen and cut, Stencil, Sandwich, Festive.</li> <li>• Methods of mixing &amp; Baking</li> <li>• Uses of cookies</li> <li>• Preparation and evaluation</li> <li>• Common Faults</li> </ul>	16
V	<b>Bread Making/Yeast Dough's (Fermented Goods)</b> <ul style="list-style-type: none"> <li>• Role of ingredients</li> <li>• Types – (Rich / lean)</li> <li>• Methods of bread making</li> <li>• Stages in bread making</li> <li>• Effect of over fermentation &amp; under fermentation</li> <li>• Over &amp; under proving of dough's of bread &amp; fermented goods</li> <li>• Faults and remedies</li> <li>• Bread Disease</li> <li>• Bread Improvers</li> </ul>	

**Books Recommended**

- Bali, P. S. (2009). *Food Production Operations*. New Delhi: Oxford University Press.
- Bali, P. S. (2012). *Quantity Food production*. New Delhi: oxford university press.
- S.Bali, P. (2012). *International Cuisine & Food Production*. New Delhi: Oxford University Press.
- Thagan, P. (1999). *Modern Cookery Vol I & II*. New delhi: Orient Longman Ltd.
- Arora, K. (2000). *Theory of Cookery*. New Delhi: frank Bros & Co (Publishers) ltd.
- Larousse Gastronomique*. (2001). USA: Hamlyn- a division of Octopus Publishing group Ltd.
- Kalra, I. (2000). *Prasad - Cooking with indian Masters*. New delhi: Allied Publishers ltd.
- Saraswat, A. (2003). *Professional Chef*. New Delhi: UBS Publishers distributors Pvt Ltd
- David Foskett, V. C. (2003). *The Theory Of Catering*. London: Book Power Publishers.
- Mohini Sethi, S. M. (1997). *catering Management - An Integral Approach*. New Delhi: New Age International (P) Ltd.
- Wayne, G. (1995). *Professional Baking*. USA: John Wiley & Sons

## **FOOD AND BEVERAGE MANAGEMENT-I**

### **5-T-II**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Topics</b>	<b>Marks</b>
I	<b>Introduction to Bar</b> <ul style="list-style-type: none"> <li>• Types of bar           <ul style="list-style-type: none"> <li>• Cocktail</li> <li>• Dispense</li> </ul> </li> <li>• Parts of Bar           <ul style="list-style-type: none"> <li>• Front Bar</li> <li>• Back Bar</li> <li>• Under Bar ( speed rack, garnish containers, Ice well, etc )</li> </ul> </li> </ul>	<b>16</b>
II	<b>Bar Planning &amp; Operation</b> <p>Bar staffing Opening and closing duties • Control Methods &amp; Licenses Basic of layout and designs considering such as target clientele, décor, Area size, Location, plumbing, lighting and flooring Requirements of the relevant state / Territory Liquor Act in relation to service of alcohol.</p>	<b>16</b>
III	<b>Equipments and Beverage List</b> <p>Bar equipments and tools Wine service equipment Beer service equipment Cocktail bar equipment Beverage list</p>	<b>16</b>

	Planning and designing the Beverage list Bar accompaniments & garnishes Bar accessories & disposables.	
IV	<b>Beverage Control</b> Objectives of Beverage Control, Purchasing, Receiving, Storing, Issuing control, Standard Drink list, Standard Portion Size, Bar Frauds, Books Maintained.	<b>16</b>
V	<b>Inventory Control</b> Importance, Objectives, Methods, determining stock Levels, Perpetual and Monthly inventory, Pricing of beverages, corkage etc.	<b>16</b>

## **HOUSEKEEPING MANAGEMENT -I**

### **5-T-III**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Contents</b>	<b>Marks</b>
1	<b>Internal Environment</b> <ul style="list-style-type: none"> <li>• Noise</li> <li>• Air conditioning</li> <li>• Light</li> </ul>	16
2	<b>Contract cleaning</b> <ul style="list-style-type: none"> <li>• Define outsourcing</li> <li>• Considerations for contracts</li> <li>• Contract services in housekeeping</li> <li>• Steps while outsourcing</li> <li>• Contract specification</li> <li>• Pricing contracts</li> <li>• Advantages and Disadvantages of outsourcing</li> </ul>	16
3	<b>Planning and organizing Housekeeping Department</b> <ul style="list-style-type: none"> <li>• Division of work</li> <li>• Area inventory list</li> <li>• Frequency schedules</li> <li>• Performance standards</li> <li>• Productivity standards</li> <li>• Inventory levels – determining par levels,</li> <li>• Work schedules</li> </ul>	16
4	<b>Safeguarding assets</b> <ul style="list-style-type: none"> <li>• Concept of safeguarding Assets</li> <li>• Security from theft – by staff , by guest</li> <li>• Security in Hotel guest rooms</li> </ul>	16
5	<b>Safety awareness &amp; First aid</b> <ul style="list-style-type: none"> <li>• Concept and Importance</li> <li>• Safety : Accidents, Fires ( cause, Procedure, Accident report form)</li> </ul> <p>First aid: Concept and Emergency Procedures( Heart attack, Artificial Respiration, Burns and scalds, fainting, fracture.)</p>	16

**Books Recommended:**

1. Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.
2. Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.
3. Raghulanan, G. (2011). *Hotel Housekeeping Operations and Management*. New Delhi, India: Oxford University Press.
4. Singh, M. (2012). *Hotel Housekeeping*. New Delhi: Tata McGraw-Hill.

## **FRONT OFFICE MANAGEMENT -I**

### **5-T-IV**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	Environmental Management Environmental and Ecology, Environmental Pollution- air, water Environmental Education and Environmental Legislations Environmental Management in Hospitality Industry Green Practices in Front Office	16
II	Total Quality Management Guests Perception of Quality, Total Quality Management, Practices in Total Quality Management	16
III	Japanese 5 S Practice, Business Process Re-engineering, Quality Control Circles, Kaizen, Bench Marking Benefits TQM	16
IV	Budget Types of Budget Budgetary Factors affecting budget	16
V	Sales of Marketing of Hospitality Products Sales and marketing team Sales and marketing techniques New trends in sales	16

**Books Recommended:**

- Andrews, S. (1999). *Hotel front office training manual*. New Delhi: Tata Publishing Company limited.
- D.Collins. (1967). *Accomodation Operations*. New Delhi: Plymouth macdonald Evans.
- Jatashankar.R.Tiwari. (2009). *Hotel front Office Operations and Management*. New Delhi: Oxford University press.
- S.K.Bhatnagar. (2002). *Front Office Management* . New Delhi: Frank Bros.& co (publishers) ltd. Singh, D. R. (2000). *Front Office management*. New

## **APPLICATION OF COMPUTER -I**

### **5-T-V**

Theory: 80  
Sessional : 20  
Total 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<b>Computer Fundamentals and Applications</b> <ul style="list-style-type: none"> <li>➤ Evolution and development of computer</li> <li>➤ Understanding the characteristics of computers</li> <li>➤ Understanding Block Diagram of Computer</li> <li>➤ Function of each block and its components</li> <li>➤ Application areas of computer</li> <li>➤ Benefit and limitations of computers</li> <li>➤ Types of Computers short introduction</li> </ul>	16
II	<b>Computers Hardware and its Application</b> <b>Various types of input and output devices</b> <ul style="list-style-type: none"> <li>➤ Keyboard</li> <li>➤ Mouse</li> <li>➤ Card Reader</li> <li>➤ Printer</li> <li>➤ Monitor</li> <li>➤ Scanner etc.</li> <li>➤ Storage devices and its use.</li> </ul>	16
III	<b>Computers Software</b> <ul style="list-style-type: none"> <li>➤ Operating System Software – Windows and Linux.</li> <li>➤ Application Software- Ms-Office, PDF Generator</li> <li>➤ Software used in Hotels.</li> <li>➤ SPSS for data Analysis.</li> <li>➤ Antivirus and its types.</li> </ul>	16
IV	<b>Modern Computing</b> <ul style="list-style-type: none"> <li>➤ Internet.</li> <li>➤ Browsing.</li> <li>➤ E-Mail.</li> <li>➤ Network Topologies.</li> <li>➤ Threats in new age computing – Spyware, Adware, SPAM and phishing.</li> </ul> <b>E-Commerce</b> <ul style="list-style-type: none"> <li>➤ Introduction to e-Commerce and its types</li> <li>➤ Business on the net.</li> <li>➤ Mobile Computing</li> </ul>	16
V	<b>Micro Soft Office-WORD</b> <ul style="list-style-type: none"> <li>➤ Introduction to word processing.</li> <li>➤ File Commands, Print, Page Setup.</li> <li>➤ Editing - Cut, Copy, Paste, Find, Replace, etc.</li> <li>➤ Formatting Commands – Fonts, Bullets, Borders, Columns, Tabs, Indents, Paragraph formatting.</li> <li>➤ Tables, Auto Text, Auto Correct</li> <li>➤ Using References tools</li> <li>• Hyperlinks</li> </ul>	16

**Books Recommended:**

1. C.S.V.Murthy. (2001). *Data Communicationb and Networking*. New Delhi: Himalaya Publishing House.
2. Jawadekar, W. S. (2004). *Management Information System*. New Delhi: Tata McGraw-Hill Publishing Company Limited.
3. L, A., & Leon, M. (2002). *Introduction to Computers*. Chennai: Vijay Nicole Imprints Pvt. Ltd.
4. Rajaraman, V. (2004). *Fundamentals of Computer*. New Delhi: Prentice-Hall of India Private Limited.
5. Shroff, R. (2004). *Computer Systems and Applications*. Mumbai: Himalaya Publishing House.
6. Sinha, P. K., & Sinha, P. (2007). *Computer Fundamentals*. New Delhi: BPB Publications. .
7. Lonnie E. Moseley & David M. Boodey. *Mastering MS-OFFICE*. New Delhi: BPB Publication
8. Any other – which are available in the area and city – which the faculty deem fit

**FINANCIAL MANAGEMENT****5-T-VI**

Theory: 80  
Sessional : 20  
Total 100

<b>Unit &amp; contents</b>	<b>Marks</b>
<b>Unit 1. Working Capital &amp; Cash Management:</b> <b>1.1 Working Capital:</b> (08 marks) <ul style="list-style-type: none"> <li>➤ Meaning, Scope and Factors affecting the working capital for Hospitality and Other Industries. Kinds of Working Capital. Meaning, Effects, Remedies and Points of Distinction between Fixed &amp; Working Capital, Over &amp; Under Working Capital.</li> <li>➤ Problems based on forecasting of working capital (Requirement).</li> </ul> <b>1.2 Cash Budget:</b> (08 marks) <ul style="list-style-type: none"> <li>➤ Nature of cash, Motives for holding cash, Determining optimum cash balance, Methods of accelerating and slowing cash flow. Meaning, Objectives, Functions, Advantages, Limitations and Prerequisites for cash budget [receipt and payment technique].</li> <li>➤ Preparation of cash budget.</li> </ul>	<b>16</b>
<b>Unit 2. Business Budgets:</b> <b>2.1 Budget &amp; Budgetary Control:</b> (08 marks) <ul style="list-style-type: none"> <li>➤ Meaning of Budget, Features, and Requirements for ideal Budgets (Key Factors). Kinds of Budget with distinction, Advantages and Disadvantages. Significance for Hospitality Industry.</li> <li>➤ Meaning, Objectives, Functions, Advantages, Limitations and Prerequisites or essentials of Budgetary Control.</li> </ul> <b>2.2 Flexible and Operational Budget:</b> (08 marks) <ul style="list-style-type: none"> <li>➤ Meaning, Objectives, Functions, Advantages, disadvantages, Limitations and Prerequisites (if any) for Flexible, Production, Purchase &amp; Sales budget.</li> </ul>	<b>16</b>

<ul style="list-style-type: none"> <li>➤ Simple Problems on Flexible Budgets, Operational / functional Budgets [Production, Purchase &amp; Sales].</li> </ul> <p><b>Unit 3. Process, Service &amp; Operation Costing:</b></p> <p><b>3.1 Process Cost:</b> (08 marks)</p> <ul style="list-style-type: none"> <li>➤ Meaning, application, features advantages and disadvantages, Suitability to Hospitality Industry.</li> <li>➤ Normal and Abnormal Loss and Gains, Wastage and Scrap, By – Product / Joint Product.</li> <li>➤ Simple Problems on Process Costing.</li> </ul> <p><b>3.2 Operation Costing:</b> (08 marks)</p> <ul style="list-style-type: none"> <li>➤ Meaning, application, features, advantages, disadvantages, Suitability to Hospitality Industry and different methods of allocation.</li> <li>➤ Classification of cost as Standing, Running and Capital cost/outlay.</li> <li>➤ Preparation of Hotel, Taxi and Canteen operation cost sheet.</li> </ul>	<b>16</b>
<p><b>Unit 4. : Break Even Point [Marginal Costing]:</b></p> <p><b>4.1 Break Even Point [Cost Volume Profit Analysis]:</b> (16 marks)</p> <ul style="list-style-type: none"> <li>➤ Meaning of BEP (CVP), P/V Ratio, and Margin of Safety: Objectives, application, assumptions, advantages and Disadvantages. Graphical presentation of CVP / BEP Charts.</li> <li>➤ Meaning, Necessity, Scope, advantages and disadvantages of Marginal Costing &amp; its Significance to Hospitality Industry.</li> <li>➤ Computation of P/V Ratio, BEP, MOS, Expected Profit and Expected Sales for desired amount.</li> <li>➤ Problems on - Make / Hire or Buy. Dropping or choosing a Line / Product. Acceptance of an order at a special Price. Role of Key / Limiting factor in decisions.</li> </ul>	<b>16</b>
<p><b>Unit 5. Variance Analysis (Standard Costing)::</b></p> <p><b>5.1 Variance Analysis:</b> (16 marks)</p> <ul style="list-style-type: none"> <li>➤ Meaning, Features, Area of Application, Advantages and Disadvantages. Significance of Variance Analysis to Hospitality Industry.</li> <li>➤ Points of Distinction between: Standard Cost, Historical Cost and Estimated Cost. Normal Standards and Revised Standards. Controllable and uncontrollable factors / elements.</li> <li>➤ Problems on Material and Sales Variances only.</li> </ul>	<b>16</b>

#### **Books Recommended:**

1. Ozi A. D'cunha & Gleson O.D'cunha, Hotel Accounting & Financial Control, The Dicky's Enterprise, Mumbai.
2. D.K. Mittal & Luv Mittal, Cost Accounting; Galgotia Publishing Company, New Delhi,
3. R.K. Sharma & Shashi K. Gupta, Management Accounting; Kalyani Publishers, H.O. Ludhiana,
4. S.C. Kuchhal, Financial Management; Chaitanya Publishing House Allahabad.

## FOOD PRODUCTION MANAGEMENT-I

### 5-P-I

PRACTICAL	CONTENT
	<b>International cuisine</b> (Six Course Menus)
I	France – 2 menus
II	Italy – 2 menus
III	China – 2 menus
IV	Russia – 1 menu
V	<b>Fatless sponge</b> - Black forest, pineapple sponge, Sponge Fruit Flan
VI	<b>Fatless sponge</b> - Chocolate Pyramid, Angel Food Cake
VII	<b>Butter sponge</b> - Check-mate Gateau, Caramel chip Gateau, Banana Bread,
VIII	<b>Butter sponge</b> - Brownies, Novelty Cake made using Victoria sponge.

## FOOD & BEVERAGE MANAGEMENT – I

### 5-P-II

Sr. No	Content
1.	Planning different types of bar for different occasions
2.	Different bar equipment – care and use
3.	Setting a Bar for Wine service, Beer service, Cocktail demonstration, etc along with their specific equipment
4.	Dispense Bar <ul style="list-style-type: none"> <li>• Function / Operation</li> <li>• Storage of Alcoholic Beverage</li> <li>• Service from Dispense Bar</li> </ul>
5.	Taking Inventory

## HOUSEKEEPING MANAGEMENT-I

### 5-P-III

01	Learning about recent security systems used in hotels. ( either by visit /internet usage/ magazines )
02	List of 5 leading organizations of India which take contracts for at least 5 services
03	First aid in collaboration with any Doctor.

## **FRONT OFFICE MANAGEMENT-I**

### **5-P-IV**

S no	C O N T E N T
1	Inovative sales technique
2	Task for sales team
3	Preparing Budget
4	TQM
5	Evaluation of guest satisfaction

## **APPLICATION OF COMPUTER -I**

### **5-P-V**

#### **PRACTICAL / ASSIGNMENTS**

INTERNET:-

- To search and download information from the internet as a topic and submit (Hard / Soft copy).
- Create email id, send mail to friends as an assignment.

WORD: -

- Type recipe of any dish, with its image, with ingredients in a table.
- Different formats used in hotels.
- Students' Resumes with students' photograph. (WORD)
- Writing of Resume, Bio-Data and CV.

**SEMESTER VI**  
**FOOD PRODUCTION MANAGEMENT-II**  
**6-T-I**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<p><b>Pasta</b></p> <ul style="list-style-type: none"> <li>• Types, storage, manufacture of pasta</li> <li>• Methods of cooking</li> <li>• Accompanying sauces used</li> </ul>	16
II	<p><b>Desserts</b></p> <ul style="list-style-type: none"> <li>• Classification of Hot and Cold Desserts</li> <li>• Hot Desserts: Hot Puddings, Soufflés, Tarts and Pies, Crapes and Pancakes, Laminated Pastries and Fruit based hot desserts.</li> <li>• Cold Desserts: Cold Puddings, Fruit Based, Custard and Cream Based Tarts, Pies and Flans, Jellies, Sponges and Yeast Leavened Desserts, Meringue based Desserts.</li> </ul> <p>Presentation of dessert</p> <p><b>Ice creams and frozen desserts</b></p> <ul style="list-style-type: none"> <li>• Churn frozen desserts</li> <li>• Still frozen desserts</li> <li>• Bombe, Mousses, Soufflés &amp; Bavarois</li> <li>• Classical frozen desserts</li> <li>• Equipments used in Frozen Desserts</li> <li>• Storage and service of Frozen Desserts.</li> </ul>	16
III	<p><b>Sandwiches</b></p> <ul style="list-style-type: none"> <li>○ Parts of Sandwiches</li> <li>○ Types of Bread</li> <li>○ Types of filling – classification</li> <li>○ Spreads and Garnishes</li> <li>○ Types of Sandwiches</li> <li>○ Making of Sandwiches</li> <li>○ Storing of Sandwiches</li> </ul>	16
IV	<p><b>Appetizers &amp; Garnishes</b></p> <ul style="list-style-type: none"> <li>○ Classification of Apptizers</li> <li>○ Examples of Appetizers</li> <li>○ Historic importance of culinary Garnishes</li> <li>○ Explanation of different Garnishes</li> </ul> <p><b>• Quenelles, Parfaits, Roulades</b></p> <ul style="list-style-type: none"> <li>○ Preparation of Quenelles, Parfaits and Roulades</li> </ul>	16
V	<p><b>Modern Techniques in preparation</b></p> <ul style="list-style-type: none"> <li>• Microwave</li> <li>• Infra-red</li> <li>• Vacuum reduction</li> <li>• Cook chill &amp; Cook freeze</li> <li>• Rechaffe cookery</li> </ul>	

**Books Recommended**

- Bali, P. S. (2009). *Food Production Operations*. New Delhi: Oxford University Press.
- Bali, P. S. (2012). *Quantity Food production*. New Delhi: oxford university press.
- S.Bali, P. (2012). *International Cuisine & Food Production*. New Delhi: Oxford University Press.
- Thagan, P. (1999). *Modern Cookery Vol I & II*. New delhi: Orient Longman Ltd.
- Arora, K. (2000). *Theory of Cookery*. New Delhi: frank Bros & Co (Publishers) ltd.
- Wayne, G. (1995). *Professional Cooking*. USA: John Wiley & Sons.
- *Larousse Gastronomique*. (2001). USA: Hamlyn- a division of Octopus Publishing group Ltd.
- Kalra, I. (2000). *Prasad - Cooking with indian Masters*. New delhi: Allied Publishers ltd.
- Saraswat, A. (2003). *Professional Chef*. New Delhi: UBS Publishers distributors Pvt Ltd .
- David Foskett, V. C. (2003). *The Theory Of Catering*. London: Book Power Publishers.

**FOOD & BEVERAGE SERVICE MANAGEMENT -II  
6-T-II**

Theory – 80

Internal -20

Total – 100

Unit	CONTENT	
I	<b>SALES CONTROL</b> <ul style="list-style-type: none"><li>• Procedure of Cash Control</li><li>• Machine System</li><li>• ECR</li><li>• NCR</li><li>• Preset Machines</li><li>• POS</li><li>• Reports</li><li>• Thefts</li><li>• Cash Handling</li></ul>	16
II	<b>Banquets</b> History, Types, Organization of Banquet department, Duties & responsibilities of Banquet staff, Booking procedure, Tentative and Guaranteed bookings, Function Prospectus/ Banquet Performa/ Banquet Event order, Letter of agreement, registration and confirmation forms.	16
III	<b>Banquet protocol</b> Space / Area requirement, Table plans/ Seating arrangement , Misc-en-place , Service , Toasting, Toast master & Toast procedures <b>Informal Banquet</b> <ul style="list-style-type: none"><li>• Reception</li></ul>	16

	<ul style="list-style-type: none"> <li>• Cocktail parties</li> <li>• Convention</li> <li>• Seminar</li> <li>• Exhibition</li> <li>• Fashion shows</li> <li>• Trade Fair</li> <li>• Wedding</li> <li>• Outdoor catering</li> </ul>	
<b>IV</b>	<b>Buffets</b> Introduction, Types of Buffet, Popular buffets, different Factors to consider while planning buffets, Space and staff requirement, Sequence of food, Menu planning, Equipment and buffet presentation , Supplies, Check list, Place cards/ Signages, Pre and post event duties of the waiting staff.	16
<b>V</b>	<b>Outdoor Catering/ Off Premises Catering</b> History, Types, speculative business nature, Preliminary survey to be taken for an outdoor catering, Equipment, Supplies, use of Check list, problems of outdoor catering.	16

**Books Recommended:-**

1. Cousins, D. L. (2010). *Food and Beverage Service*. London: Hodder Education
2. Cullen, P. (2001). *The Food and Beverage Manager*. New Delhi: Global Books & Subscription Services.
3. Dennis Lillicrap, J. C. (2002). *Food and Beverage Service*. London : Hodder and Stoughton Educational.
4. Dhawan, V. (2003). *Food & Beverage Service* . New Delhi : Fraank Bros & co.
5. ( Publishers) ltd.
6. Singaravelavan, R. (2011). *Food and Beveragae Service*. New Delhi : Oxford University press.'
7. Tharakkan, Y. G. (2004). *A Guide to Food & Beverage* . Bangalore: Tata McGraw-Hill .
8. Jones, P. (1988). *Food Service Operations*. London : Cassell Wellington House.
9. Ahmed, M. (2005). *Food and Beverage Services*. New Delhi : Anmol Publication
10. Verghese, B. (1999). *Professional Food and Beverage Service Management*. Bangalore: Macmillan Indian ltd.

## HOUSEKEEPING MANAGEMENT-II

### 6-T-III

Theory – 80  
Internal -20  
Total – 100

<b>Unit</b>	<b>Contents</b>	<b>Marks</b>
<b>1</b>	<b>Housekeeping in other Areas</b> <ul style="list-style-type: none"> <li>• Airlines</li> <li>• Malls</li> <li>• Hospitals</li> <li>• Cruises</li> <li>• Hostels</li> </ul>	16
<b>2</b>	<b>Housekeeping in Leisure facilities</b> <ul style="list-style-type: none"> <li>• Swimming pool</li> <li>• Spa &amp; Sauna</li> <li>• Gyms</li> <li>• Health Clubs</li> <li>• Safety in leisure facilities</li> </ul>	16
<b>3</b>	<b>Facilities for physically challenged guest</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Types of physically challenged guests</li> <li>• Guidelines for planning Facilities for different types of physically challenged guests:- public entrance, interior, bathroom, WC.</li> </ul>	16
<b>4</b>	<b>Horticulture and landscaping</b> <ul style="list-style-type: none"> <li>• Essential components of Horticulture</li> <li>• Landscaping</li> <li>• Indoor plants</li> <li>• Bonsai in Hotel properties</li> </ul>	16
<b>5</b>	<b>Purchasing in Housekeeping</b> <ul style="list-style-type: none"> <li>• Principles of purchasing</li> <li>• Stages in Purchasing</li> <li>• Types of purchasing</li> <li>• Annual Purchases -of guestroom supplies, cleaning supplies and linen</li> </ul>	16

#### **Books Recommended:**

1. Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.
2. Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.
3. Raghulanan, G. (2011). *Hotel Housekeeping Operations and Management*. New Delhi, India: Oxford University Press.
4. Singh, M. (2012). *Hotel Housekeeping*. New Delhi: Tata McGraw-Hill.

## **FRONT OFFICE MANAGEMENT II**

### **6-T-IV**

Theory – 80  
Internal -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>M A R K S</b>
<b>I</b>	Computer Application in front office Property management system ,PMS- Application in front office Reservation module Front desk module	16
<b>II</b>	Room module Back office module Different property management system Micros, Amadeus PMS, IDS Fortune, ShawMan, and modern software's	16
<b>III</b>	Evaluating Hotel Performance Methods of measuring Hotel Performance, Occupancy Ratios, Average Daily Rate per guest, Revenue per available room(Rev-Par), Evaluation of Hotels by Guests	
<b>IV</b>	Yield Management and Forecasting Yield Management- Measuring Yield in Hotel Industry, Yield Management in Hotel Industry, Elements and Benefits of Yield Management, Yield Management Strategies	16
<b>V</b>	Forecasting Benefits of Forecasting Room Availability and forecasting Factors affecting forecasting	

## **APPLICATION OF COMPUTER -II**

### **6-T-V**

Theory :80  
Internal :20  
Total: 100

<b>UNIT</b>	<b>CONTENTS</b>	<b>M A R K S</b>
<b>I</b>	<b>Management Information System</b> ➤ Concept of MIS ➤ Definition of MIS ➤ Role of MIS ➤ Impact of MIS ➤ MIS and It's USERS	16
<b>II</b>	<b>Hotel Information System</b> ➤ PMS ➤ Front office and Back Office Uses of PMS ➤ Application in other areas of hotel ➤ Advantages and Limitations.	16
<b>III</b>	<b>Micro Soft Office EXCEL</b> ➤ Introduction to excel, its features and Applications,	16

	<ul style="list-style-type: none"> <li>➤ Auto Fill, Custom Lists etc.</li> <li>➤ Cell Reference – Relative &amp; Absolute (\$)</li> <li>➤ Formulae, Functions (Math/Stats, Text, Date, IF)</li> <li>➤ Charts – Types, Parts of the Chart</li> <li>➤ Databases (Create, Sort, AutoFilter, Sub Total)</li> </ul>	
IV	<p><b>Micro Soft Office POWERPOINT</b></p> <ul style="list-style-type: none"> <li>➤ Introduction to presentation concept</li> <li>➤ Different Slide Layouts and views of slides.</li> <li>➤ Inserting ClipArt, Pictures, Organizational Chart, Graphs and Tables.</li> <li>➤ Custom Animations, Slide Timings, Slide Show.</li> <li>➤ Using Multimedia in Presentation.</li> </ul>	16
V	<p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>➤ Understanding Multimedia</li> <li>➤ Multimedia and computer system</li> <li>➤ Multimedia components <ul style="list-style-type: none"> <li>○ Text</li> <li>○ Graphics</li> <li>○ Animation</li> <li>○ Audio</li> <li>○ Video</li> </ul> </li> <li>➤ Multimedia applications</li> </ul>	16

#### **RECOMMENDED BOOKS:**

1. C.S.V.Murthy. (2001). *Data Communicationb and Networking*. New Delhi: Himalaya Publishing House.
2. Jawadekar, W. S. (2004). *Management Information System*. New Delhi: Tata McGraw-Hill Publishing Company Limited.
3. L, A., & Leon, M. (2002). *Introduction to Computers*. Chennai: Vijay Nicole Imprints Pvt. Ltd.
4. Rajaraman, V. (2004). *Fundamentals of Computer*. New Delhi: Prentice-Hall of India Private Limited.
5. Shroff, R. (2004). *Computer Systems and Applications*. Mumbai: Himalaya Publishing House.
6. Sinha, P. K., & Sinha, P. (2007). *Computer Fundamentals*. New Delhi: BPB Publications. .
7. Lonnie E. Moseley & David M. Boodey. *Mastering MS-OFFICE*. New Delhi: BPB Publication
8. Any other – which are available in the area and city – which the faculty deem fit

# HOSPITALITY MARKETING

## 6-T-VI

**Theory -80**  
**Sessional-20**  
**Total – 100**

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	<p><b>Market &amp; Marketing</b></p> <ul style="list-style-type: none"> <li>• <b>Market</b>- Meaning ,Definition ,Types</li> <li>• <b>Marketing</b>- Meaning and Definition Origin of Marketing Marketing Concept Marketing Process</li> <li>• <b>Marketing Mix</b> -Meaning and Definition 4 P's of Marketing mix 7 P's of Services marketing</li> <li>• <b>Marketing Environment</b>- Meaning ,Definition, Types</li> <li>• <b>Market Analysis</b>- Meaning, Definition</li> </ul>	16
II	<ul style="list-style-type: none"> <li>• <b>Marketing Strategy</b> Meaning ,Definition <b>Market segmentation</b>, Criteria for Segmentation Hotel Market <b>Target Market</b>, Developing Target Market Strategy <b>Positioning</b>- Meaning ,Definition</li> <li>• <b>Marketing Research</b> Concept ,Meaning , Process, Need ,Method, Scope</li> </ul>	16
III	<ul style="list-style-type: none"> <li>• <b>Consumer Behaviour and Consumer Goods</b></li> <li>• <b>Consumer Behaviour</b> Buyer Behaviour and psychology Buyer Motives Buying Decision Making Process</li> <li>• <b>Consumer Goods</b> -Definition, Classification of consumer goods Product Planning, concept, Development Product Life Cycle Channels of distribution – Meaning and types Storages and ware houses – storages situation, Advantages and essentials of good storages</li> </ul>	16
IV	<ul style="list-style-type: none"> <li>• <b>Sales Management and Promotion</b> <b>Sales Management</b> -Meaning and definitions of sales management Nature and importance of sales management Importance of sales manager</li> <li>• <b>Sales Promotion</b> Meaning and definition Objectives of promotion Relation between promotion and marketing mix elements Sales promotion tools – coupons, brochures, point of purchase display</li> </ul>	16

V	<ul style="list-style-type: none"> <li>• <b>Sales Organization</b> Introduction to sales organization Need and Importance of sales organization Functions of sales organization Types of sales organization</li> <li>• <b>Budget</b> Benefits of budgeting Budget for sales department activities The budgeting process Flexibility in budgeting</li> </ul>	16
---	---	----

**Books Recommended:**

- Abbey, J. R. (2003). *Hospitality Sales and Marketing*. American Hotel & Lodging Educational Institute.
- Davar, R. (1993). *Modern Marketing Management*. Universal Book Traders.
- Kotler, P. (2016). *Marketing for Hospitality and Tourism*. Pearson Education, Limited.
- Kotler, P. (2007). *Marketing Management: Analysis Planning Implementation and Control*. Prentice Hall of India.
- Negi, J. (2002). *Marketing And Sales Strategies For Hotels And Travel Trade*. New Delhi: S. Chand Limited.
- R. S. N. Pillai, R. P. (1987). *Modern Marketing: Principles and Practices*. New Delhi: S. Chand Limited.

## **FOOD PRODUCTION MANAGEMENT-II**

### **6-P-I**

Term Work Marks -20  
Practical-80  
 Total-100

PRACTICAL	CONTENT
	<b>International cuisine</b> (Six Course Menus)
I	France – 2 menus
II	Italy – 2 menus
III	China – 1 menus
IV	Spain – 1 menus
V	<b>Pastries</b> (4 Varieties each)
VI	Flaky Pastry – Palmiers, Turn overs, Vol-au-vents, Cream horns
VII	Short crust pastry – Banquette, Chocolate meringue pie, Mushroom quiche
VIII	Choux Pastry – Chocolate éclairs. Creams puff, Profit rolls, Pyramid
IX	Rough Puff Pastry - One variety

## **FOOD & BEVERAGE SERVICE MANAGEMENT- II**

### **6-P-II**

Term Work Marks -20  
Practical-80  
Total-100

<b>Sr. No</b>	<b>Content</b>
1.	Function organization of banquet
2.	Planning & Operating Food & Beverage Outlets <ul style="list-style-type: none"><li>• Case study of Food &amp; Beverage outlets - Hotels &amp; Restaurants</li></ul>
3.	Function Catering – Banquets <ul style="list-style-type: none"><li>• Planning &amp; organizing Formal &amp; Informal Banquets</li><li>• Planning &amp; organizing Outdoor caterings</li></ul>
4.	Function Catering – Buffets <ul style="list-style-type: none"><li>• Planning &amp; organizing various types of Buffet Compiling menu for special occasion Like corporate, association, social</li></ul>
5.	Drawing of table plan
6.	Seating arrangement
7.	Clearance and rearranging
8.	Calculation of Crockery for banquets as per menu and service
9.	Use of checklist for outdoor catering

## **HOUSEKEEPING MANAGEMENT -II**

### **6-P-III**

Term Work Marks -20  
Practical-80  
Total-100

SR. No.	Practical
01	Report on any 2 other than hotel areas where housekeeping is carried out (gymnasium/ airlines/ malls/ cruises/Hostels)
02	Landscape designing
03	Report on facilities for physically challenged guest in any one mall / hotel in the city

## **Front Office Management-II**

### **6-P-IV**

Term Work Marks -20  
Practical-80  
 Total-100

UNIT	C O N T E N T
I	Computer Application in FO-- PMS
II	Yield management and Forecasting
III	Green practices in front office
IV	Selling by front office Staff,
V	Up Selling Techniques used by front office staff
VI	Handling Complaints
VII	Promotion and marketing of hotel

Assignments:

- 1) Beaches of India
- 2) Hill Stations of India

Books Recommended:

## **APPLICATION OF COMPUTER -II**

### **6-P-V**

Term Work Marks -20  
Practical-80  
 Total-100

#### **SUGGESTED PRACTICAL / ASSIGNMENTS**

EXCEL:-

- List of employees, with salary and other details.
- KOT,
- Different formats used in hotels.
- Report Card with Pass / Fail Result,
- Bills with details of Hotel Rooms,
- Charts.

POWERPOINT:-

- To present the above information as a presentation as an assignment.
- Use different layouts, organizational chart, design templates, in the presentation.
- Using audio and video in presentations.

**SEMESTER VII**  
**FOOD PRODUCTION MANAGEMENT III**  
**7-T-I**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<p><b>International Cuisine</b></p> <ul style="list-style-type: none"> <li>• Thai, Mexican, Greek, German, Great Britain, Lebanese (Mediterranean); Geographical location, historical background, staple food with regional influence, ingredients, methods of Cooking, specialties, special equipment.</li> <li>• Menu Examples of Japanese cuisine (Only theory) Snacks &amp; Fast Food</li> </ul>	16
II	<p><b>Larder Organization</b></p> <ul style="list-style-type: none"> <li>• <b>Introduction of Larder Work</b> <ul style="list-style-type: none"> <li>○ Definition</li> <li>○ Equipments used in the larder</li> <li>○ Layout of a typical larder with equipment and various sections</li> </ul> </li> <li>• <b>Terms &amp; Larder Control</b> <ul style="list-style-type: none"> <li>○ Common terms used in the Larder and Larder control</li> <li>○ Essentials of Larder Control</li> <li>○ Importance of Larder Control</li> </ul> </li> </ul> <p>Hors d'oeuvres, Salads, Cold buffet, Farcis and terrines, Cold sauces and dips.</p> <p><b>Non-Edible Display :</b>Ice-carving, Tallow sculpture, fruit &amp; vegetable display</p>	16
III	<p><b>Charcuterie</b></p> <ul style="list-style-type: none"> <li>• Sausage : <ul style="list-style-type: none"> <li>○ Introduction to Charcuterie</li> <li>○ Sausage: Types &amp; Varieties</li> <li>○ Casings: Types &amp; Varieties</li> <li>○ Fillings :Types &amp; Varieties o Additives &amp; Preservatives</li> </ul> </li> <li>• Force-meats <ul style="list-style-type: none"> <li>○ Types of Force-meats</li> <li>○ Preparation of Force-meats</li> <li>○ Uses of Force-meats</li> </ul> </li> <li>• Brines, Cures &amp; Marinades <ul style="list-style-type: none"> <li>○ Types of Brines</li> <li>○ Preparation of Brines</li> <li>○ Methods of Curing</li> <li>○ Types of Marinades</li> <li>○ Uses of Marinades</li> <li>○ Difference between Brines, Cures &amp; Marinades</li> </ul> </li> </ul>	16
IV	<ul style="list-style-type: none"> <li>• <b>Ham, Bacon &amp; Gammon</b> <ul style="list-style-type: none"> <li>○ Cuts of Ham, Bacon &amp; Gammon.</li> <li>○ Differences between Ham, Bacon &amp; Gammon</li> <li>○ Processing of Ham &amp; Bacon</li> <li>○ Making of galantines</li> </ul> </li> </ul>	16
V	<ul style="list-style-type: none"> <li>• Pates <ul style="list-style-type: none"> <li>○ Types of Pate</li> </ul> </li> </ul>	16

	<ul style="list-style-type: none"> <li>○ Pate de foie gras</li> <li>○ Making of Pate</li> <li>○ Commercial pate and Pate Maison</li> <li>○ Truffle – Sources, Cultivation and uses and Types of truffle.</li> <li>● Mousse &amp; Mousseline           <ul style="list-style-type: none"> <li>○ Types of mousse</li> <li>○ Preparation of mousse</li> <li>○ Preparation of mousseline</li> <li>○ Difference between mousse and mousseline</li> </ul> </li> <li>● Chaud Froid           <ul style="list-style-type: none"> <li>○ Meaning of Chaud froid</li> <li>○ Making of Chaud froid &amp; Precautions</li> <li>○ Types of Chaud froid</li> <li>○ Uses of Chaud froid</li> </ul> </li> <li>● Aspic &amp; Gelee           <ul style="list-style-type: none"> <li>○ Definition of Aspic and Gelee</li> <li>○ Difference between the two</li> <li>○ Making of Aspic and Gelee</li> <li>○ Uses of Aspic and Gelee</li> </ul> </li> </ul>	
--	--	--

### **Books Recommended**

- Bali, P. S. (2009). *Food Production Operations*. New Delhi: Oxford University Press.
- Bali, P. S. (2012). *Quantity Food production*. New Delhi: oxford university press.
- S.Bali, P. (2012). *International Cuisine & Food Production*. New Delhi: Oxford University Press.
- Thagan, P. (1999). *Modern Cookery Vol I & II*. New delhi: Orient Longman Ltd.
- Arora, K. (2000). *Theory of Cookery*. New Delhi: frank Bros & Co (Publishers) ltd.
- Wayne, G. (1995). *Professional Cooking*. USA: John Wiley & Sons.
- *Larousse Gastronomique*. (2001). USA: Hamlyn- a division of Octopus Publishing group Ltd.
- Kalra, I. (2000). *Prasad - Cooking with indian Masters*. New delhi: Allied Publishers ltd.
- Saraswat, A. (2003). *Professional Chef*. New Delhi: UBS Publishers distributors Pvt Ltd .
- David Foskett, V. C. (2003). *The Theory Of Catering*. London: Book Power Publishers.
- Mohini Sethi, S. M. (1997). *catering Management - An Integral Approach* . New Delhi: New Age International (P) Ltd.
- Wayne, G. (1995). *Professional Baking* . USA: John Wiley & Sons.
- Sapra, D. (2015). *The Hospitality Industry , Significance And Application Of HACCP*. Nagpur: Swaprakashan Publication.
- Lora Arduser, D. R. (2000). *HACCP & Sanitation Restaurant and Food Service Operations*. Atlantic Publishing Group ,inc.
- Usha Raina, S. K. (2003). *Basic Food Preparation*. New Delhi: Orient Longman Private Ltd.

## **Food & Beverage Service Management III**

### **7-T-II**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>CONTENT</b>	<b>MARKS</b>
I	<b>Gueridon Service</b> Introduction, History, Definition, Staffing, Equipment used, General Principles of operations, Advantages & Disadvantages, Factors to create impulse buying, Types of trollies used in Gueridon service, open kitchen, Use of liquor in Gueridon service, Complete procedure of Gueridon service.	20
II	<b>Kitchen Stewarding</b> Importance, Opportunities in kitchen stewarding, Record maintaining, Machine used for cleaning and polishing.	10
III	<b>Planning &amp; Operating Various F&amp;B Outlet Such As Commercial Restaurants, Fast Food Outlets, Mobile Catering On The Basis Of</b> Physical layout ,Objectives , Steps in planning, Factors to be considered while planning, Various set ups for seating, Planning staff requirement, Menu planning, Selecting and planning of heavy duty and light equipment, Requirement of quantities of equipment required like crockery, Glassware, Cutlery - steel or silver etc.	20
IV	<b>Menu Management</b> <b>(Menu Merchandising And Menu Engineering)</b> Menu control, Menu structure, Basic criteria and General Presentation of menu, Menu as a In house Marketing tool, Menu Engineering- Definition and Objectives, methods and advantages.	20
V	<b>Hazards In Bars , Restaurants, Stewarding And Cellar</b> Structure and Environment, Machinery and equipments, Glassware, Handling and lifting, Inspection checklist	10

#### **Books Recommended**

- Dhawan, V. (2003). *Food & Beverage Service* . New Delhi : Fraank Bros & co. ( Publishers) ltd.
- Singaravelavan, R. (2011). *Food and Beveragae Service*. New Delhi : Oxford University press.
- Tharakan, Y. G. (2004). *A Guide to Food & Beverage* . Bangalore: Tata McGraw-Hill .
- Jones, P. (1988). *Food Service Operations*. London : Cassell Wellington House.

## **HOUSEKEEPING MANAGEMENT III**

### **7-T-III**

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Contents</b>	<b>Marks</b>
<b>1</b>	<b>Ergonomics in Housekeeping</b> <ul style="list-style-type: none"> <li>• Definition</li> <li>• Principles</li> <li>• Significance and need of Ergonomics in Housekeeping</li> <li>• Analysis of risk factor in Housekeeping</li> <li>• Mitigation of risk factor in Housekeeping</li> </ul>	16
<b>2</b>	<b>Full Circle of management</b> <ul style="list-style-type: none"> <li>• Problem solving</li> <li>• Managerial styles</li> <li>• Development of others</li> <li>• Personal development</li> <li>• Housekeeping managers of the future</li> </ul>	16
<b>3</b>	<b>Standard operating Procedures</b> <ul style="list-style-type: none"> <li>• Standardisation</li> <li>• Structured versus Unstructured operations</li> <li>• Suitable subjects for standard operating procedures in hotels</li> <li>• Examples of standard operating procedures.</li> </ul>	16
<b>4</b>	<b>Ecotels</b> <ul style="list-style-type: none"> <li>• Ecotel certification</li> <li>• Choosing eco-friendly site</li> <li>• Energy conservation</li> <li>• Water conservation</li> <li>• Waste management</li> <li>• Environment friendly housekeeping</li> </ul>	16
<b>5</b>	<b>Electronic Housekeeping &amp; Software's used in Housekeeping</b> <ul style="list-style-type: none"> <li>• IT –savvy Housekeeping</li> <li>• Managing Labour costs with Technology</li> <li>• Accounting and Budgeting with Technology</li> </ul>	16

#### **Books Recommended:**

- Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.  
 Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.  
 Raghulaban, G. (2011). *Hotel Housekeeping Operations and Management*. New Delhi, India: Oxford University Press.  
 Singh, M. (2012). *Hotel Housekeeping*. New Delhi: Tata McGraw-Hill.

## Public Relations

### 7-T-IV

Theory – 80  
Internal -20  
Total – 100

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	Evolution of Public relation <ul style="list-style-type: none"> <li>• Definition of Public relation</li> <li>• Growth of public relation</li> </ul>	16
II	Importance of Public relation <ul style="list-style-type: none"> <li>• Qualities of public relation personnel</li> <li>• Public relation in an organization</li> </ul>	16
III	Tools of Public Relation <ul style="list-style-type: none"> <li>• Advertising , publicity, publication , oral communication,</li> <li>• Public relation management Ethics of PR Organization</li> <li>• Public relation and publicity</li> </ul>	16
IV	<ul style="list-style-type: none"> <li>• Public relation &amp; internal publics</li> <li>• Public relation &amp; external publics</li> <li>• Public relation in crisis</li> </ul>	16
V	<ul style="list-style-type: none"> <li>• Planning of public relation</li> <li>• Public relation and communication, Public relation and advertising Purpose of public relation advertising, Budgeting of public relation</li> </ul>	16

#### **Books Recommended:**

- Iqbal.s.Sachdeva. (2009). *Public Relations Principles and Practices*. New Delhi: Oxford University Press.
- Sam, B. (1970). *Practical Public Relation*. New Delhi: Sir Issar Pitman and SonsLtd
- Glenn.F.Ross. (1998). *The Psychology Of Tourism*. New delhi: Hospitality Press, Victoria, Australia.
- S.K.Bhatnagar. (2002). *Front Office Management* . New Delhi: Frank Bros.& co ( publishers)ltd.

## **ENTREPRENEURSHIP DEVELOPMENT**

### **7-T-V**

Theory – 80  
Internal -20  
Total – 100

<b>Units</b>	<b>Content</b>	<b>Marks</b>
1.	<b>Meaning,</b> characteristics, functions and types of entrepreneur. Entrepreneurship scope, role in economical development, barriers and obstacles to Entrepreneur development. Factors affecting Entrepreneurship growth.	<b>20</b>
2.	<b>ENTREPRENEURSHIP DEVELOPMENT PROGRAMMES (EDPs)</b> <ul style="list-style-type: none"> <li>• Need of EDPs</li> <li>• Objectives of EDPs</li> <li>• Role and problem of SSI in India</li> <li>• Franchising dealership</li> </ul> Forms of commercial organization, sale trades, proprietorship, partnership and joint stock companies.	<b>20</b>
3.	<b>PROJECT IDENTIFICATION AND SELECTION (PIS)</b> <ul style="list-style-type: none"> <li>• Meaning of project</li> <li>• Project identification</li> <li>• Project selection</li> </ul>	<b>08</b>
4.	<b>PROJECT FORMULATION AND PROJECT APPRAISAL</b> <ul style="list-style-type: none"> <li>• Meaning of project report</li> <li>• Significance of project report</li> <li>• Contents of a project report</li> <li>• Formulation of a project report</li> <li>• Specimen of a project report</li> <li>• Common errors in project formulation</li> <li>• Concept of project appraisal</li> <li>• Method of project appraisal</li> </ul>	<b>16</b>
5.	<b>FINANCING OF ENTERPRISE</b> Need for financial planning Sources of finance Capital structure Term-Loans Sources of short-Term finance <b>INSTITUTIONAL FINANCE TO ENTREPRENEURS</b> Industrial development Bank of India (IDBI) Industrial finance cooperation of India (IFCI) Industrial credit and investment corporation of India (ICICI) Industrial reconstruction bank of India (IRBI) Life insurance corporation of India (LIC) Unit trust of India (UTI) State financial corporation's (SFCs)	<b>16</b>

#### **Books Recommended**

- Entrepreneurship Development- S.S. Khanka, S Chand & Company Ltd.
- Dynamics of Entrepreneurial Development and Management- Vasant Desai, Himalaya Publishing House
- Entrepreneurship-Rajeev Roy, Oxford University Press

## **RESEARCH METHODOLOGY**

### **7-T-VI**

Theory – 80  
Internal -20  
Total – 100

<b>Units</b>	<b>Content</b>	<b>Marks</b>
1	1. Meaning, and definition of Research statement of research problem and <ul style="list-style-type: none"> <li>o Research objectives</li> <li>o Selection of title</li> <li>o Application of Research</li> </ul> 2. Research Design and Data Collection	<b>16</b>
2	ED and Research Project Introduction <ul style="list-style-type: none"> <li>i) Meaning &amp; definition of Research</li> <li>ii) Statement of Research problem and Research objectives</li> <li>iii) Selection of title</li> <li>iv) Application of Research</li> </ul>	<b>16</b>
3	Research Design and data collection <ul style="list-style-type: none"> <li>i) Primary Research</li> <li>ii) Secondary Research</li> <li>iii) Research approaches –observation, Experiment, survey</li> <li>iv) Research Instrument – Questionnaire, Mechanical</li> </ul>	<b>16</b>
4	Sampling Plan <ul style="list-style-type: none"> <li>i) Sampling unit</li> <li>ii) Sampling size</li> <li>iii) Sample selection process</li> </ul> Data Analysis <ul style="list-style-type: none"> <li>i) Classification</li> <li>ii) Tabulation</li> <li>iii) Analysis and Interpretation</li> </ul>	<b>16</b>
5	Report Writing <ul style="list-style-type: none"> <li>i) Report Format</li> <li>ii) Executive Summary,</li> <li>iii) Literature of review</li> <li>iv) Finding</li> <li>v) Conclusions &amp; Recommendations</li> <li>vi) Bibliography</li> </ul>	<b>16</b>

## **FOOD PRODUCTION MANAGEMENT- III**

### **7-P-I**

PRACTICAL	CONTENT
I	<b>Microwave Menu</b> (6 Course)- 2 menus
II	<b>Snacks &amp; fast Food</b> - 2 menus
III	<b>Breakfast Cookery</b> -2menus
IV	<b>Bread-Enriched Dough</b>
V	<b>Pizzas</b> - 2 varieties
VI	<b>Cold Buffet</b> - 2 menus(include Cold cuts , Canapes, Terrines& Galantine)
VII	<b>Demo on Non- Edible display</b>
VII	<b>Chocolate</b> - Filled Chocolates& Chocolate Decoration
VIII	<b>Marzipan</b> -Almond paste, Marzipan shapes
IX	<b>Fondant</b> – as icing, and as filling
X	<b>Meringue</b> – as icing and used as/in product
XI	<b>Sugar boiled candies</b> - 5 Varieties

## **FOOD & BEVERAGE SERVICE MANAGEMENT- III**

### **7-P-II**

UNIT	Content
1.	Equipment for Gueridon service – care and use
2.	Gueridon Service <ul style="list-style-type: none"> <li>• Organizing Mis-en-place for Gueridon Service</li> <li>• Preparation of Following Dishes</li> <li>• Crepe suzette</li> <li>• Banana au Rhum</li> <li>• Peach Flambé</li> <li>• Rum Omelette</li> <li>• Steak Diane</li> <li>• Pineapple flambe</li> </ul>
3.	Designing different types of Menu card for service purpose <ul style="list-style-type: none"> <li>• Psychology</li> <li>• Graphic Design</li> </ul>
4.	HACCP practices inside Bar and Restaurant Hazardous materials:- <ul style="list-style-type: none"> <li>• Inspection checklist</li> <li>• Hazards &amp; dealing with hazardous materials</li> </ul>

## **Housekeeping Management -III**

### **7-P-III**

Sr. No	Practical
1	Design a questionnaire for hotel housekeepers to analyze work place pain and hazards
2	Developing SOP for any 2 activities of housekeeping
3	Enlist electronic facilities in housekeeping (through internet/magazines/ visits)

## **Public Relation**

### **7-P-IV**

<b>UNIT</b>	<b>C O N T E N T</b>
I	Developing Corporate communication skills
II	Group Discussion and personal interview techniques
III	Developing presentation skills and C.V.
IV	Organizing press conference
V	Preparation of promotional brochures.
VI	Crisis handling in PR

## **COMPUTER BASED TRAINING PRESENTATION**

### **7-P-V**

The training presentation has to be a Multimedia PowerPoint presentation using a computer or a laptop connected to LCD / projection system depending upon the available resources. The students could show it in their personal laptop also. Log book shall also be evaluated. The training report will be evaluated.

The seminar will be scheduled by the college based on the training report and the final viva-voce will be commenced.

**SEMESTER -VIII**  
**ADVANCE FOOD PRODUCTION**  
**8-T-I**

Theory – 80  
Sessional -20  
Total – 100

<b>UNIT</b>	<b>CONTENT</b>	<b>MARKS</b>
<b>I</b>	<p><b>Food presentation principles</b></p> <ul style="list-style-type: none"> <li>• The Concept of Plate Presentation <ul style="list-style-type: none"> <li>◦ Colour</li> <li>◦ Garnish (Unconventional garnishes, Role &amp; uses of garnishes Food Styling)</li> <li>◦ Cooking Method</li> <li>◦ Plate Selection</li> <li>◦ Arranging Food</li> </ul> </li> <li>• Merging of Flavors, Shapes, and Textures on the Plate</li> <li>• Emerging Trends in Food Presentation</li> <li>• Food photography &amp; problems there in</li> </ul>	16
<b>II</b>	<p><b>Research and Product Development</b></p> <ul style="list-style-type: none"> <li>• Testing New Equipment</li> <li>• Developing New Recipes</li> <li>• Food Trials</li> <li>• Evaluating A Recipe</li> <li>• Organoleptic Sensory Evaluation</li> </ul>	16
<b>III</b>	<p><b>Food safety &amp; hygiene</b></p> <ul style="list-style-type: none"> <li>• HACCP Principles</li> <li>• HACCP Specialization</li> <li>• HACCP Certification</li> </ul>	16
<b>IV</b>	<p><b>Breakfast</b></p> <ul style="list-style-type: none"> <li>• International and Indian menus,</li> <li>• Preparations of traditional / classical items,</li> <li>• ‘Power breakfast’ &amp; ‘Brunch’ concept</li> </ul> <p><b>Convenience foods</b> – Role of convenience foods in fast food operations, advantages &amp; disadvantages of Convenience foods. Labor &amp; cost saving aspect of Convenience foods.</p> <p><b>New Concepts</b></p> <ul style="list-style-type: none"> <li>• Slow food movement</li> <li>• Molecular Gastronomy</li> <li>• Genetically Modified Foods</li> <li>• Organic Foods</li> <li>• Vegan cuisine</li> <li>• Use of non-edible components</li> </ul>	16
<b>V</b>	<p><b>Confectionery</b></p> <ul style="list-style-type: none"> <li>• Meringues – Making, factors affecting stability, cooking, types &amp; uses.</li> </ul>	16

	<ul style="list-style-type: none"> <li>• Chocolate work</li> <li>• Fondant</li> <li>• Marzipan</li> <li>• Ice-Creams &amp; Sorbets</li> </ul> <p><b>Sugar</b></p> <ul style="list-style-type: none"> <li>• Types of sugar &amp; Sugar boiled icings</li> </ul> <p>Other sundry material &amp; mixtures used in confectionery such as jam, jellies, curds, creams, custards, gelatin, agar-agar, pectin, gums (Arabic, Tracanth) dextrin</p>	
--	---	--

### **Books Recommended**

- Bali, P. S. (2009). *Food Production Operations*. New Delhi: Oxford University Press.
- Bali, P. S. (2012). *Quantity Food production*. New Delhi: oxford university press.
- S.Bali, P. (2012). *International Cuisine & Food Production*. New Delhi: Oxford University Press.
- Thagan, P. (1999). *Modern Cookery Vol I & II*. New delhi: Orient Longman Ltd.
- Arora, K. (2000). *Theory of Cookery*. New Delhi: frank Bros & Co (Publishers) ltd.
- Wayne, G. (1995). *Professional Cooking*. USA: John Wiley & Sons.
- *Larousse Gastronomique*. (2001). USA: Hamlyn- a division of Octopus Publishing group Ltd.
- Kalra, I. (2000). *Prasad - Cooking with indian Masters*. New delhi: Allied Publishers ltd.
- Saraswat, A. (2003). *Professional Chef*. New Delhi: UBS Publishers distributors Pvt Ltd .
- David Foskett, V. C. (2003). *The Theory Of Catering*. London: Book Power Publishers
  - Food Hygiene and Sanitation, S. Roday, Tata Mc Graw-Hill
  - Cousins, D. L. (2010). *Food and Beverage Service*. London: Hodder Education .
  - Cullen, P. (2001). *The Food and Beverage Manaager*. New Delhi: Global Books & Subscription Services

## ADVANCE FOOD & BEVERAGE SERVICE

### 8-T-II

Theory – 80  
Sessional -20  
Total – 100

<b>Unit</b>	<b>Content</b>	<b>Marks</b>
I	<b>Recent Concerns And Trends</b> Future Of Quick Service Restaurants Technology In Food And Beverage Industry	16
II	<b>Planning And Organizing The Food And Beverage Service Department</b> Developing a good F&B Team ,Performance and productivity standards ,Time and motion study in Food and Beverage operations,	16
III	<b>Planning And Organizing The Food And Beverage Service Personnel</b> Job procedures( Task analysis), Job allocation and work schedules, Calculating staff strength & planning duty rosters, team work , training and leadership in food and beverage department , devising training programs for F&BS staff, Performance measures, Customer relations, sales promotions	16
IV	<b>Food And Beverage Management</b> Introduction, Objectives of F&B Management, Responsibilities of F&B Management, Constraints to F&B Management, Managing quality in F&B operations.	16
V	<b>Marketing and sales in restaurant</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Catering consideration</li> <li>• Types of menu / product</li> <li>• Marketing banquet facilities</li> <li>• Marketing Plan</li> </ul>	16

#### **Books Recommended:**

- Food and Beverage Service – Lillicrap. D.R. ; Edward Arnold Ltd. London
- Professional Food and Beverage Service Management – Verghese Brian; Macmillan India Ltd.
- Food and Beverage management and Service –Waiter; Barrie & Jenkins London 1965.
- The Waiter – Fuller John & Currie. A.J ; Hutchinson
- Food and Beverage Service- Dhawan Vijay; Franc Bros & Co.
- The Steward, Dias. P

## **Advance Accommodation Management**

### **8-T-III**

Theory – 80  
Sessional -20  
Total – 100

<b>S.no</b>	<b>Contents</b>	<b>Marks</b>
1	<b>Managing HK personnel</b> <ul style="list-style-type: none"> <li>• Documents for personnel Management</li> <li>• Determining Staff Strength</li> <li>• Recruiting</li> <li>• Selecting</li> <li>• Hiring</li> <li>• Orienting</li> </ul>	<b>16</b>
2	<b>Training</b> <ul style="list-style-type: none"> <li>• Training employees</li> <li>• Steps in Planning a training programme</li> <li>• Benefits of training</li> <li>• Types of training</li> </ul>	<b>16</b>
3	<b>Scheduling</b> <ul style="list-style-type: none"> <li>• Parameter to consider</li> <li>• Work schedules</li> <li>• Planning Duty rosters</li> <li>• Advantages of a duty rosters</li> </ul>	<b>16</b>
4	<b>Housekeeping Budgeting</b> <ul style="list-style-type: none"> <li>• Types of Budgets</li> <li>• House Keeping Expenses</li> <li>• Budget planning process</li> <li>• Income Statement of Rooms Division</li> <li>• Controlling expenses</li> </ul>	<b>16</b>
5	<b>New property Operations</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Starting up housekeeping</li> <li>• System and procedures</li> <li>• Countdown</li> </ul> <b>Changing trends in Housekeeping</b> <ul style="list-style-type: none"> <li>• Hygiene not just Cleanliness</li> <li>• New scientific techniques</li> </ul>	<b>16</b>

**Books Recommended:**

- Bansal, T. (2010). *Hotel Facility Planning*. New Delhi: Oxford University Press.
- Martin, R. (1997). *Professional Management Of Housekeeping Operations*. New York: John Wiley & Sons, Inc.
- Negi, D. J. (2000). *Human Resource Development and Management in Hotel Industry*. New Delhi: Frank Bros. & Co.
- Rao, P. (2004). *Personnel and Human Resource Management*. Mumbai: Himalaya Publishing Centre.
- W.F.Casio. (1998). *Managing Human Resources*. Boston: McGraw-Hill.

## Travel & Tourism

### 8-T-IV

**Theory – 80**  
**Internal -20**  
**Total – 100**

UNIT	C O N T E N T	MARKS
I	Tourism through Centuries (India and World), Ancient, and Medieval and Modern history of tourism Factors influencing the growth of tourism, Globalization and Tourism.	16
II	Significance of Tourism, social, economic cultural – Definition of travel, Traveller, Visitor, Excursionist, Tourist, Picnic – Concept, leisure and business.	16
III	Typology and forms of tourism – International, Inbound, Outbound, interregional, intra regional, domestic, International, national and other forms Social tourism.	16
IV	Tourism an overview – components (5A's Attraction, Accessibility, Accommodation, Amenities and Activities), Tourism system and Elements of tourism (Leeper's Model) – Characteristics of Tourism, (Intangibility, Perishability, Variability, Inseparability, Heterogeneous, Characteristics of tourism products.	16
V	Tourism as an Industry: Multi-sectoral and multifaceted nature of tourism business – Linkages of tourism with other industries/Sectors. Roles of Government and Private sector in tourism development – Hospitality Industry, Skills / attributes required for successful Tourism and Hospitality Career.	16
	Brief introduction to tourism Suppliers: Accommodation, Travel, and Transportation industries. Role of Travel Agents, Tour Operators, NTOs, Information Centers – Career opportunities in Travel Tourism	

#### **Books Recommended:**

- Cooper, F. (2000). *Tourism principles and Practices*. New delhi: Pitman.
- Sunetra Roday, A. B. (2009). *Tourism Operations & Management*. New Delhi: oxford University Press.
- Glenn.F.Ross. (1998). *The Psychology Of Tourism*. New delhi: Hospitality Press, Victoria, Australia.

## **HUMAN RESOURCE MANAGEMENT**

**8-T-V**

**Theory 80  
Sessional 20  
Total – 100**

<b>UNIT</b>	<b>C O N T E N T</b>	<b>MARKS</b>
I	Concept of Human Resource Management <ul style="list-style-type: none"> <li>• Personnel Management- Definition, Objective, Function, Importance</li> <li>• Difference Between Personnel Management and Human Resource Management</li> <li>• Human Resource Management- Definition, Objective, Function, Importance, Scope, Functions of HR Manager</li> </ul>	16
II	<ul style="list-style-type: none"> <li>• Human Resource Planning</li> <li>• Career Planning</li> <li>• Recruitment- Sources</li> <li>• Selection Process</li> <li>• Interviews</li> <li>• Placement</li> <li>• Induction and Orientation</li> <li>• Training</li> <li>• Promotions</li> <li>• Demotions</li> <li>• Transfers</li> <li>• Absentism</li> <li>• Replacement</li> </ul>	16
III	<ul style="list-style-type: none"> <li>• Job Analysis- Job Description and Specification,</li> <li>• Job evaluation techniques</li> <li>• Management Development; Performance appraisals-Objective, Process, Methods</li> <li>• Grievance Handling ( PONJ)</li> <li>• Compensation Management, Wage and Salary Administration</li> </ul>	16
IV	<ul style="list-style-type: none"> <li>• Industrial Psychology and Behavioral Science</li> <li>• Leadership: Role, Types, style, importance and qualities of a leader</li> <li>• Motivating Human Resource</li> <li>• Quality of Work Life               <ul style="list-style-type: none"> <li>○ Quality of Work</li> <li>○ Morale</li> <li>○ Job Satisfaction</li> <li>○ Social Security</li> <li>○ Health and Safety</li> <li>○ Labour Welfare</li> </ul> </li> </ul>	16

V	<ul style="list-style-type: none"> <li>• Current Trends of HR Systems in Hospitality Industry</li> <li>• Industrial Relations - Meaning &amp; Characteristics Industrial Relations - Nature of Trade Unions - Problems of Trade Union</li> <li>• Industrial Disputes - Settlement of Industrial Disputes.</li> <li>• Collective Bargaining - Features - Pre-requisite of Collective Bargaining -</li> </ul>	16
---	---	----

**Books Recommended:**

- A.M.Sharma. (2003). *Personnel and Human Resource Management*. Mumbai: Himalaya Publishing House.
- C.B. Mamoria, S. G. (2004). *Human Resource Management*. Mumbai: Himalaya Publishing House.
- Dwivedi, R. (2001). *Managing Human Resources Personnel Management in Indian Enterprises*. Delhi: Galgotia Publishing Company.

## **HOSPITALITY LAWS & LICENSES** **8-T-VI**

**Theory 80**  
**Sessional 20**  
**Total – 100**

UNIT	CONTENT	MARKS
I	<p><b>Introduction to law:</b></p> <ul style="list-style-type: none"> <li>➢ Meaning &amp; Definition of Law</li> <li>➢ Objects of Law</li> <li>➢ Importance of studying Law</li> </ul> <p><b>Indian Contract Act</b></p> <ul style="list-style-type: none"> <li>➢ Definition of Contract, Proposal, Agreement, Consideration, etc. Essentials of Valid contract</li> <li>➢ Competent Parties</li> <li>➢ Types of Contracts – valid, void and voidable.</li> <li>➢ Performance of Contract</li> <li>➢ Discharge of Contract</li> <li>➢ Remedies for Breach of Contract</li> <li>➢ Indemnity and Guarantee</li> </ul>	16
II	<p><b>Licenses And Permits</b></p> <ul style="list-style-type: none"> <li>➢ Licenses and permits for hotels and catering establishments-procedure for procurement, bye laws of hotels &amp; restaurant under municipal corporation</li> <li>➢ Renewal suspension and termination of licenses.</li> </ul> <p><b>Food Legislation</b></p> <ul style="list-style-type: none"> <li>➢ Principles of food laws-acts regarding prevention of food adulteration, definition, authorities under the act, procedure of taking a sample purchase right, warranties, guest control order or food services order in force from time to time.</li> <li>➢ Essential commodities Act</li> </ul> <p><b>Liquor Legislation-</b></p> <ul style="list-style-type: none"> <li>➢ Bombay Prohibition Act</li> <li>➢ Possession of Indian liquor</li> </ul>	16

	<ul style="list-style-type: none"> <li>➤ Possession of foreign liquor</li> <li>➤ Law for Indian made foreign liquor</li> </ul>	
III	<b>Industrial Legislation</b> <ul style="list-style-type: none"> <li>➤ Factories Act,</li> <li>➤ Payment of Wages Act,</li> <li>➤ Industrial Disputes Act,</li> <li>➤ Apprentices Act,</li> <li>➤ Provident Fund Act,</li> <li>➤ Trade Unions Act (each Act with reference to hotel industry)</li> </ul>	16
IV	<b>Law Of Tenancy</b> Rent control act, distinction between guest and tenant, inn keeper, guest relationship, inn-keeper's lien, bye laws as affecting catering establishments. <b>Consumer Protection Act</b> consumer protection councils, procedure for redressal of grievances	16
V	<b>Payment of Wages Act, 1936:</b> <ul style="list-style-type: none"> <li>➤ Important Definitions under the Act</li> <li>➤ Rules relating to wage TEACHING SCHEME, time &amp; mode of wage</li> <li>➤ Payment</li> <li>➤ Authorized Deductions</li> </ul> <b>Workmen's Compensation Act, 1923:</b> <ul style="list-style-type: none"> <li>➤ Important Definitions under the Act</li> <li>➤ Partial &amp; Total Disablement</li> <li>➤ Accident</li> <li>➤ Accident arising out of an employment</li> <li>➤ Accident 'in the course of an employment'</li> <li>➤ Employer's liability to pay compensation</li> <li>➤ Amount of compensation payable by an employer</li> </ul>	16

### ADVANCE FOOD PRODUCTION 8-P-I

Term Work Marks -20  
Practical-80  
Total-100

PRACTICAL	CONTENT
I	<b>Thai Menu</b> (6 Course) -2 menus
II	<b>Mexican Menu</b> (6 Course)- 2 menus
III	<b>Greek Menu</b> (6 Course) -2 menus
IV	<b>German Menu</b> (6 Course)- 2 menus
V	<b>Great Britain Menu</b> (6 Course) -2 menus
VI	<b>Lebanese (Mediterranean)</b> (6 Course)-1 menu

VII	<b>Display of Plate Presentation</b> – (10 Dishes)
VII	<b>Ice-cream</b> – 5 varieties
VIII	<b>Sorbets</b> – 5 varieties
IX	<b>Mousse/ Souffles/ Bavarois</b> – 5 varieties each

**ADVANCE FOOD & BEVERAGE SERVICE  
8-P-II**

Term Work Marks -20  
Practical-80  
 Total-100

<b>UNIT</b>	<b>Content</b>
1.	F & B Staff Organization Developing Organization Structure of various Food & Beverage Outlets Determination of Staff requirements in all categories Making Duty Roster Preparing Job Description & Specification
2.	Supervisory Skills Conducting Briefing & Debriefing - Restaurant, Bar, Banquets & Special events
3.	Drafting Standard Operating Systems (SOPs) for various F & B Outlets Supervising Food & Beverage operations Preparing Restaurant Log
4.	Handling of emergency situation

**Advance Accommodation Service Management  
8-P-III**

Term Work Marks -20  
Practical-80  
 Total-100

S. no	Practical
01	Making schedules for 100 room, 200 room and 300 room properties for morning , evening and night shift
02	Making roster for for 100 room, 200 room and 300 room properties for morning , evening and night shift with occupancy percentage. Making roster for villa type hotels, resorts
03	Making tent cards to train guest for conserving energy.

## **Public Relation & Travel & Tourism**

### **8-P-IV**

Term Work Marks -20  
Practical-80  
Total-100

<b>C O N T E N T</b>	
I	Types of Tourism – Assignments and presentation
II	Preparation of itinerary – National & International – Presentation
III	Package tours
IV	Most popular tourism destination in India and abroad
V	Latest trends in tourism
VI	Current affairs related to travel and tourism

## **Project Work & Training Presentation**

### **8-P-V**

**Term Work Marks -**

i) Project work – 10  
ii) Training Presentation – 10

**Practical**

i) Project work – 40  
ii) Training Presentation – 40

**Total-100**

#### **i) Project Work**

#### **Project should be carried out in the following manner**

- ED and Research Project  
Introduction
    - i) Meaning & definition of Research
    - ii) Statement of Research problem and Research objectives
    - iii) Selection of title
    - iv) Application of Research
  - Meaning, and definition of Research statement of research problem and research objectives
1. Selection of title Application of Research
  2. Research Design and Data Collection
  3. Sampling Plan
    - i) Sampling unit
    - ii) Sampling selection process
  4. Data Analysis
  5. Report writing

Every student shall select a research project from the Hospitality Industry. The nature of the product shall be based on the synthesis of their experience and knowledge gained from allied subjects. Subject of the project shall be approved by the department at the commencement of the session. The research project will be guided by the faculty of the department/college. The students will be required to submit the project report on a prescribed date.

#### **Comprehensive Viva-Voce/ Seminar based on Project**

The seminar will be scheduled by the college or the department based on the Project and the final vice-voce will be commenced on the day and date prescribed by the university in the presence of External & Internal Examiner.

#### **ii) Training Presentation**

The training presentation has to be a Multimedia PowerPoint presentation using a computer or a laptop connected to LCD / projection system depending upon the available resources. The students could show it in their personal laptop also. Log book shall also be evaluated. The training report will be evaluated.

The presentation will be scheduled by the college based on the training report and the final viva-voce will be commenced on the day and date prescribed by the university in the presence of External & Internal Examiner.

\*\*\*\*\*



**RASHTRASANT TUKADOJI MAHARAJNAGPUR UNIVERSITY  
NAGPUR**

**(Established by Government of Central Provinces Education Department by  
Notification No. 513 dated the 1st of August, 1923 & presently a state university  
governed by Maharashtra Public University Act 2016)**

---

**FACULTY OF SCIENCE AND TECHNOLOGY**

**DIRECTION NO 12 of 2019**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF  
BACHELOR OF INTERIOR DESIGN.**

**(SEMESTER PATTERN)**

(Direction issued under Section 12(8) of the Maharashtra Public University Act. 2016 relating to award of Bachelor's degree in Interior Design in the Faculty of Science and Technology)

Whereas the Maharashtra Public Universities Act No. 6 of 2016 has come into force with effect from 1<sup>st</sup> March 2017 and was amended from time to time.

**AND**

WHEREAS, the University Grants Commission, New Delhi vide letter No. D.O. No. F-2/2008/(XI Plan), dated 31 January 2008 regarding new initiatives under the XI PLAN – Academic reforms in the University has suggested for improving quality of higher education and to initiate the academic reform at the earliest.

**AND**

Whereas the Coordinator Special Task Committee of House and Interior Design Technology in the Faculty of Science and Technology at its meeting held on 16/06/2017, has submitted the amendments to Direction no. 72 in accordance with Direction no. 13 of 2017

**AND**

Whereas the Special Task Committee of House and Interior Design Technology in the Faculty of Home Science at its meeting held on 25/08/2016, have recommended for starting of semester pattern and prepared the syllabus and scheme of examination for Bachelor of Interior Design, commensurate with the governing guidelines.

**AND**

Whereas the Special Task Committee of House and Interior Design Technology in the Faculty of Science and Technology at its meeting held on 5/11/2018 have recommended amendment in the Direction No. 21 of 2017 and submitted the scheme of examination for the course of Bachelor of Interior Design on 27/11/2018, commensurate with the governing guidelines, to be implemented from academic session 2018-19.

**AND**

Whereas the coordinator of the Faculty of Home Science concurred with the recommendations of the special task committee in House and Interior Design Technology in the Faculty of Home Science, vide his observations dated 25/08/2016.

**AND**

Whereas, the new draft direction and scheme of examinations as per semester pattern is to be implemented from the academic session 2016-2017 for Bachelor of Interior Design which is to be regulated by this direction and as such there is no existence and framing of an ordinance for the above examination.

**AND**

Whereas it is expedient to provide an Ordinance for the purpose prescribing examinations leading to the degree of "Bachelor of Interior Design" in the Faculty of Science and Technology, phasic repeal of the direction No. 25 of 2016 governing the existing course of Bachelor of Interior Design.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Academic Council on 07-10- 2016 under section 12(7) of Maharashtra Public University Act 2016.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Management Council under section 12(7) of Maharashtra Public University Act 2016.

**AND**

Whereas, the framing of an ordinance as required under provision of Act is a time consuming process, now therefore, I, Dr. Siddharthavinayak P. Kane, the Vice

Chancellor of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers vested under Section 12(8) of the Act do hereby issue the following Direction

1. This Direction shall be Called "Direction regarding examinations leading to the Degree of Bachelor of Interior Design (Semester Pattern) in the Faculty of Science and Technology ,Rashtrasant Tukadoji Maharaj.Nagpur University, Nagpur.
2. The direction shall come into force from the date of its issue by Hon'ble Vice Chancellor and shall remain in force till the relevant ordinance comes into being in accordance with the provisions of the Act.
3. The duration of the Bachelor of Interior Design course shall be of Four academic years consisting of eight semesters with University examinations at the end of each semester namely:
  - a. Bachelor of Interior Design Semester I Exam.
  - b. Bachelor of Interior Design Semester II Exam.
  - c. Bachelor of Interior Design Semester III Exam.
  - d. Bachelor of Interior Design Semester IV Exam.
  - e. Bachelor of Interior Design Semester V Exam.
  - f. Bachelor of Interior Design Semester VI Exam.
  - g. Bachelor of Interior Design Semester VII Exam.
  - h. Bachelor of Interior Design Semester VIII Exam.
4. The examination specified in paragraph 3 above shall be held twice a Year at such places on such dates as may be fixed by the Board of Examinations. The Examination specified in proceeding section shall be held twice a year at such places on such dates as may be decided by the University. The main examination of semester I,III,V and VII shall be held in winter whereas the examination for semester II,IV,VI and VIII shall be held in summer. The supplementary examination of semester I,III,V and VII will be held in summer whereas supplementary examination for semester II,IV,VI,VIII will be held in winter. There shall be no practical examination during semester I,III,V and VII. Practical examination will be held during semester II,IV,VI,VIII only considering complete curriculum of both the semesters of that particular year.
5. Subject to compliance with provisions of this direction and of other ordinances in force from time to time, a candidate for admission to the examination shall :

In case of Bachelor of Interior Design –Semester I have passed XII standard from Maharashtra State Board of Secondary Education or an examination recognized as equivalent there to under the following faculties – Science / Home Science / Commerce / Arts with English as compulsory subject taken at one and same sitting with not less than 50% marks in aggregate for open category and 45% in aggregate for backward class candidates.

**OR**

The candidate should have passed the Indian School Certificate standard (XII ) Examination or any other equivalent Higher Secondary (standard XII) of a Council or Board of outside Maharashtra State with, Science / Home Science / Commerce / Arts with English as compulsory subject at first attempt with 50% marks in aggregate for open category and 45% in aggregate for backward class candidates.

**OR**

That anyone who holds two year diploma in Interior Design and Decoration from anyone of the polytechnics or equivalent shall be eligible for admission to first semester of Bachelor of Interior Design.

- b) The admitting college shall subject the applicant seeking admission to the Interior Design Course to a “Creativity test” specially designed by the Board of Studies to evaluate/assess the applicant’s aptitude. The weight age for “Creativity test” shall be 40% of the aggregate marks in the matter of admission to this course of study.
- c) In case of Bachelor of Interior Design Semester III have passed the Bachelor of Interior Design Semester I and Semester II Examination of the University or an examination recognized as equivalent there to.

**OR**

That anyone who have passed three year diploma in Interior Design and Decoration from anyone of the polytechnics or equivalent in first attempt with not less than 45% marks in aggregate shall be eligible for admission to III semester Bachelor of Interior Design.

**OR**

That anyone who have passed XII standard from Maharashtra State Board of Secondary Education or an examination recognized as equivalent there to under the faculty of Science with Mathematics and English as compulsory subjects taken at one and same sitting with diploma in Interior Design and Decoration from Board of Technical Education, Maharashtra or equivalent taken at one and same sitting with not less than 45% aggregate shall be eligible for admission to III Semester under the direction in Interior Design, Home Science faculty.

- d) In case of Bachelor of Interior Design Semester V have passed the Bachelor of Interior Design Semester III and IV Examination of the University or an examination recognized as equivalent there to.
- e) In case of Bachelor of Interior Design Semester VII, have passed the Bachelor of Interior Design Semester V and VI Examination of the University or an examination recognized as equivalent there to.

6. A student shall undergo "Apprentice Training" after appearing at the VI and VII Semester Bachelor of Interior Design Examination cumulating to a total of five months, in an Architect's or Interior Designer's office and shall produce a certificate to that effect to the satisfaction of the Principal of the college.

7. A. Without prejudice to the other provisions of the ordinance No. 6 relating to the Examinations in general the provision of paragraph 5,7,8,10 and 32 of the said ordinance shall apply to every collegiate candidate.

B. The ATKT rules for admission for the Course of Bachelor Interior Design shall be as given in the following table:

Admission to semester	Candidate should have passed in all the subjects of the following examination of R.T.M. Nagpur University	Candidate should have appeared for the following examinations	Candidate should have passed at least half of the total passing heads taken together prescribed for examinations given below( on calculation fraction if any should be ignored)
Semester I	As provided in the para 5 of the direction	-----	-----
Semester II	-----	Semester I	-----
Semester III	-----	-----	Semester I and II
Semester IV	-----	Semester III	-----
Semester V	Semester I and II	-----	Semester III and IV
Semester VI	-----	Semester V	-----
Semester VII	Semester III and IV	-----	Semester V and VI
Semester VIII	-----	Semester VII	-----

8. The Fees for the examinations shall be as prescribed by the University, from time to time and whenever, any change is made the fees prescribed for any particular examination that shall be notified through a notification for the information of all concerned.

9. Every candidate for Bachelor of Interior Design Semester I,II, III, IV, V, VI, VII, and final Examination shall be examined in the subjects as set out in the appendix to Directions :-

I The scope of the subjects shall be as indicated in the respective syllabus in force from time to time.

II Medium of instruction and examination shall be English.

10. An applicant for admission to an Examination shall satisfy the Head of the Department / Principal as regard the Sessional Examination / Internal assessment conducted during the academic year regarding her/his suitability to take the University examination.

11. In order to pass in the Examination an examinee shall obtain in each subject not less than the minimum marks as indicated in the Appendix- 1,2,3,4,5,6,7,8..

12. The Head of the Department/Principal shall maintain, in her /his office the complete record of the marks obtained by the candidate in the sessional examinations/internal

assessment that shall be submitted, before the commencement of the University examination, to the Director of Examination, in a sealed cover.

13. There shall be no classification of successful examinees at First, Second, Third, Fourth, fifth, sixth and seventh semester of Bachelor of Interior Design Examination.
14. Division of examinees successful at the Eighth Semester of Bachelor of Interior Design Examinations shall be determined on the basis of the aggregate marks obtained at all the semesters of Bachelor of Interior Design Examination taken together.
15. Those obtaining 60% or more marks in aggregate shall be placed in First Division and all other successful examinees in the Second Division respectively.
16. An examinee who is successful at an examination and obtained not less than 75% or more of the marks prescribed in a subject shall be declared to have passed the examination with Distinction in that subject.
17. Provision of Ordnance No. 7 -A relating to the condonation of Deficiency of marks for passing an examination and of ordinance No. 10 relating to examinations and compartments as amended up to date shall apply to the Examination under this ordinance.
18. An examinee who fails in sessional examinations / internal assessment shall submit fresh sessional work in the subject for evaluation provided further that in case any other examinee who fails in a subject in which paper and sessional are bracketed, may also submit fresh sessional work in subject to the principal of the college, who shall forward the fresh sessional/internal assessment marks of the University.
19. An unsuccessful examinee at any of the examination of Bachelor of Interior Design shall have an option to carry her / his sessional examination / internal assessment marks for theory / practical examinations to his / her successive attempt (s) at the examination. In case the examinee foregoes her/his Sessional Examination/Internal assessment marks in subject, then she/he shall be examined for the same at her/ her successive attempt.
20. As soon as possible after the examinations but not later than 30<sup>th</sup> June next following in case of examination held in March – April and 28<sup>th</sup> February following, in case of examination held in October- November the Board of Exams shall publish a list of successful examinees. List of successful examinees at the eighth Semester of Bachelor of Interior Design Examination shall be arranged in the First and Second Division as envisaged in clause 14 of this direction and names of examinee passing the said examinations as whole in the minimum prescribed period and obtaining the prescribed number of placed in the First or Second Division shall be arranged in order of Merit as provided in the Examinations in General Ordinance No. 6.

21. That educational tour or visit comprising of 1-5 days shall be compulsory to the students at least once during four years of the course.
22. Notwithstanding anything to the contrary in this direction, no person shall be admitted to this examination, if she/he has already passed the same examination or an equivalent examination thereto of other statutory University.
23. Successful examinees at the I, II, III, IV, V, VI, VII and VIII semester of Bachelor of Interior Design shall be entitled to receive a certificate signed by Registrar, titled Bachelor of Interior Design I, II, III, IV, V, VI, VII and VIII respectively and those successful at all the exams of Bachelor of Interior Design Examination shall on payment of the prescribed fee receive a degree in the prescribed form, signed by the Vice-chancellor, at the convocation to be held by the University.
24. The Scheme of Examination shall be as per Appendix: 1,2,3,4,5,6,7and 8 (Semester pattern). The details / title of the theory papers can be suitably modified considering the need of the subject without disturbing the main structure.
25. With the issuance of this Direction, the Direction no.21 of 2017 governing the examinations leading to award of Bachelor of Interior Design in the Faculty of Science and Technology shall stand repealed.

I, further, direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant Ordinance comes into being, in accordance with the provisions of the Maharashtra Public Universities Act, 2016.

Nagpur  
Date: 22/04/2019

Sd/-  
Dr. Siddharthavinayak P. Kane  
(Vice Chancellor)

**Absorption scheme for students of Bachelor of Interior Design four year course to Bachelor of Interior Design four year (Semester Pattern) course.**

This is for information of all concerned that Bachelor of Interior Design- 4 year course has been converted to Bachelor of Interior Design 4 year course Semester Pattern, hence forth in order to accommodate the candidates who have not yet cleared the above examinations are to be absorbed in the course namely, Bachelor of Interior Design Semester I and II, Semester III and IV, Semester V and VI and Semester VII and VIII respectively. In view of the above the following absorption scheme is prescribed.

**Part – I PAPERS**

Sr. No.	Scheme for BID 4 year- (Part –I)	Scheme for BID 4 year- (Semester I,II)
1	Interior Design- I	Interior Design- I and II
2	Material and Construction Techniques- I	Material and Construction Techniques- I and II
3	Product Workshop-I	Product Workshop-I and II
4	Presentation Techniques	Presentation Techniques I and II
5	Graphics	Graphics I and II
6	Communication Skills	Communication Skills I and II
7	Evolution of Design - I	-----
8	Mathematics	Mathematics I and II
9		Cultural Anthropology I and II

As per the above scheme:-

1. The candidates of old Bachelor of Interior Design- Part I shall have to appear in ‘Cultural Anthropology- I and II’.
2. The marks secured by them in other papers will be considered as marks secured in papers mentioned against the respective papers in a span of two semesters.
3. In the interest of the students, students of old course (yearly pattern) may be allowed 1+5 chances to pass the subjects of the concerned year, after commencement of new course (semester pattern).

## **Part – II PAPERS**

<b>Sr. No.</b>	<b>Scheme for BID 4 year- (Part – II)</b>	<b>Scheme for BID 4 year- (Semester III,IV)</b>
1	Interior Design- II	Interior Design- III and IV
2	Product Workshop-II	Product Workshop-III and IV
3	Furniture Design I	Furniture Design I and II
4	Material and Construction Techniques- II	Presentation Techniques III and IV
5	Structures - I	Structures – I and II
6	Interior Environment Control	Interior Environment Control I and II
7	Technical Presentation	Graphic Design I and II
8	Evolution of Design - II	-----
9		History of Art and Architecture I and II

As per the above scheme:-

1. The candidate who has passed in the subject ‘Evolution of Design I’ at first year level of 4 year degree course shall be exempted from the subject ‘History of Art and Architecture I and II’ of Semester III and IV.
2. The marks secured by them in other papers will be considered as marks secured in papers mentioned against the respective papers in a span of two semesters.
3. In the interest of the students, students of old course (yearly pattern) may be allowed 1+5 chances to pass the subjects of the concerned year, after commencement of new course (semester pattern).

### **Part – III PAPERS**

<b>Sr. No.</b>	<b>Scheme for BID 4 year- (Part – III)</b>	<b>Scheme for BID 4 year- (Semester V,VI)</b>
1	Interior Design- III	Interior Design- V and VI
2	Furniture Design II	Furniture Design III and IV
3	Material and Construction Techniques- III	Material and Construction Techniques- V and VI
4	Structures - II	Structures – III and IV
5	Interior Services	Interior Services I and II
6	Estimation and Costing	Estimation and Costing I and II
7	Digital Applications	Digital Applications I and II
8	Cultural Anthropology	-----
9	-----	History of Art and Architecture III and IV

As per the above scheme:-

1. The candidate who has passed in the subject ‘Evolution of Design II’ at second year level of 4 year degree course shall be exempted from the subject ‘History of Art and Architecture III and IV’ of Semester V and VI.
2. The marks secured by them in other papers will be considered as marks secured in papers mentioned against the respective papers in a span of two semesters.
3. In the interest of the students, students of old course (yearly pattern) may be allowed 1+5 chances to pass the subjects of the concerned year, after commencement of new course (semester pattern).

## **Part – IV PAPERS**

<b>Sr. No.</b>	<b>Scheme for BID 4 year- (Part – IV)</b>	<b>Scheme for BID 4 year- (Semester VII,VIII)</b>
1	Apprentice Training	Apprentice Training I and II
2	Project Work	Project Work
3	Interior Landscape	Interior Landscape I and II
4	Seminar	-----
5	Interior Detailing	Interior Detailing I, Interior Design VIII
6	Structure III	Structure V and VI
7	Professional Practice	Design Management I and II
8	-----	Environmental Psychology
9	-----	Green Building Technology
10	-----	Interior Design VII

As per the above scheme:-

1. The candidates of old Bachelor of Interior Design 4 year shall have to appear for the subjects ‘Environmental Psychology’, ‘Green Building Technology’ and ‘Interior Design VII’ of Semester VII and VIII.
2. Apprentice Training at Fourth Year level shall be completed in two phases by candidates. Two months after VI Semester and three months after completion of VIII Semester.
3. The marks secured by them in other papers will be considered as marks secured in papers mentioned against the respective papers in a span of two semesters.
4. In the interest of the students, students of old course (yearly pattern) may be allowed 1+5 chances to pass the subjects of the concerned year, after commencement of new course (semester pattern).

**Absorptions scheme to transfer from Bachelor of Interior Design (yearly pattern) to Bachelor of Interior Design (semester pattern) can be implemented as below**

Student who has passed all the subjects of first year(yearly pattern) should be directly allowed to take admission to third semester of new course.

Student who has passed all the subjects of first year(yearly pattern) and second year (yearly pattern)should be directly allowed to take admission to fifth semester of new course.

Student who has passed all the subjects of first year, second year and third year (yearly pattern) should be directly allowed to take admission to seventh semester of new course.

In the interest of the students, students of old course(yearly pattern) may be allowed 1+5 chances to pass the subjects of the concerned year, after commencement of new course (semester pattern).

If an examinee failed to pass the under graduate program within EIGHT successive years (for Eight semesters degree) from the date of his / her first admission to particular program he/ she shall be declared as “Not Fit for the Course (NFC)” and he/ she will not be allowed to appear further for any previous examination of the course.

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester I**

S. No.	Subject	Teaching Scheme	Examination Scheme				
			Duration Hrs.	Max. Marks. Th. Paper	Max. Internal Assessment	Total	Min. passing marks.
1T1	Interior Design I	6		100	100	40	
1T2	Material & Construction Techniques I	4	2	40	10	50	20
1T3	Graphics I	6	2	40	10	50	20
1T4	Cultural Anthropology I	4	2	40	10	50	20
1T5	Communication Skill I	4	2	40	10	50	20
1T6	Mathematics I	4	2	40	10	50	20
1T7	Presentation Techniques I	3	..	..	25	25	10
1T8	Product Workshop I	3	..	..	25	25	10

**Note:**

- 1) Th = Theory, Max = Maximum, Min = Minimum
- 2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.

**Grand Total of semester I - 400 marks.**

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester II**

<b>S. No.</b>	<b>Subject</b>	<b>Teaching Scheme</b>	<b>Examination Scheme</b>			
			<b>Duration Hrs.</b>	<b>Max. Marks. Th. Paper</b>	<b>Max. Internal Assessment</b>	<b>Total</b>
2T1	Interior Design II	6	6*	80 20	100	40
2T2	Material & Construction Techniques II	4	2	40 10	50	20
2T3	Graphics II	6	2	40 10	50	20
2T4	Cultural Anthropology II	4	2	40 10	50	20
2T5	Communication Skill II	4	2	40 10	50	20
2T6	Mathematics II	4	2	40 10	50	20
2T7	Presentation Techniques II	3	..	.. 25	25	10
2T8	Product Workshop II	3	..	.. 25	25	10

**Note:**

- 1) Th = Theory, Max = Maximum, Min = Minimum
  - 2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.
- \* The exam duration for Interior Design II is 6 hours (3 hours in two sittings) as the students have to design full project of interiors with all details.

**Grand Total of semester II - 400 marks.**

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester III**

S. No.	Subject	Teaching Scheme	Examination Scheme				
			Duration Hrs.	Max. Marks.	Th. Paper	Max. Internal Assessment	Total
3T1	Interior Design III	9		100	100	40	
3T2	Material & Construction Techniques III	4	2	40	10	50	20
3T3	Furniture Design I	6	2	40	10	50	20
3T4	History of Art and Architecture I	4	2	40	10	50	20
3T5	Structure I	3	2	40	10	50	20
3T6	Interior Environment Control I	4	2	40	10	50	20
3T7	Graphic Design I	6	2	40	10	50	20
3T8	Product Workshop III	3	..	25	25	10	

**Note:**

- 1) Th = Theory, Max = Maximum, Min = Minimum
- 2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.

**Grand Total of semester III - 425 marks.**

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester IV**

S. No.	Subject	Teaching Scheme	Examination Scheme			
			Duration Hrs.	Max. Marks. Th. Paper	Max. Internal Assessment	Total
4T1	Interior Design IV	9	12*	80 20	100	40
4T2	Material & Construction Techniques IV	4	2	40 10	50	20
4T3	Furniture Design II	6	2	40 10	50	20
4T4	History of Art and Architecture II	4	2	40 10	50	20
4T5	Structure II	3	2	40 10	50	20
4T6	Interior Environment Control II	4	2	40 10	50	20
4T7	Graphic Design II	6	2	40 10	50	20
4T8	Product Workshop IV	3	..	.. 25	25	10

**Note:**

- 1) Th = Theory, Max = Maximum, Min = Minimum
- 2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.

\* The exam duration for Interior Design IV is 12 hours (3 hours in two sittings for two days) as the students have to design full project of interiors with all details.

**Grand Total of semester IV - 425 marks.**

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester V**

<b>S. No.</b>	<b>Subject</b>	<b>Teaching Scheme</b>	<b>Examination Scheme</b>				
			<b>Duration Hrs.</b>	<b>Max. Marks. Th. Paper</b>	<b>Max. Internal Assessment</b>	<b>Total</b>	<b>Min. passing marks.</b>
5T1	Interior Design V	12		100	100	40	
5T2	Material & Construction Techniques V	4	2	40 10	50	20	
5T3	Furniture Design III	6	2	40 10	50	20	
5T4	History of Art and Architecture III	4	2	40	10	50	20
5T5	Structure III	3	2	40	10	50	20
5T6	Interior Services- I	4	2	40	10	50	20
5T7	Estimation and Costing -I	3	2	40	10	50	20
5T8	Digital Application -I	4	..	50	50	20	

**Note:**

- 1) Th = Theory, Max = Maximum, Min = Minimum
- 2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.

**Grand Total of semester V - 450 marks.**

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester VI**

<b>S. No.</b>	<b>Subject</b>	<b>Teaching Scheme</b>	<b>Examination Scheme</b>				
			<b>Duration Hrs.</b>	<b>Max. Marks. Th. Paper</b>	<b>Max. Internal Assessment</b>	<b>Total</b>	<b>Min. passing marks.</b>
6T1	Interior Design VI	12	12*	80 20	100	40	
6T2	Material & Construction Techniques VI	4	2	40 10	50	20	
6T3	Furniture Design IV	6	2	40 10	50	20	
6T4	History of Art and Architecture IV	4	2	40 10	50	20	
6T5	Structure IV	3	2	40 10	50	20	
6T6	Interior Services- II	4	2	40 10	50	20	
6T7	Estimation and Costing -II	3	2	40 10	50	20	
6T8	Digital Application II	4	..	50	50	20	

**Note:**

1) Th = Theory, Max = Maximum, Min = Minimum

2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.

\* The exam duration for Interior Design VI is 12 hours (3 hours in two sittings for two days) as the students have to design full project of interiors with all details.

**Grand Total of semester VI - 450 marks.**

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester VII**

<b>S. No.</b>	<b>Subject</b>	<b>Teaching Scheme</b>	<b>Examination Scheme</b>				
			<b>Duration Hrs.</b>	<b>Max. Marks. Th. Paper</b>	<b>Max. Internal Assessment</b>	<b>Total</b>	<b>Min. passing marks.</b>
7T1	Interior Design VII	6		100	100	100	40
7T2	Interior Landscape I	3	2	40	10	50	20
7T3	Environmental Psychology	3	2	40	10	50	20
7T4	Structure - V	3	2	40	10	50	20
7T5	Design Management I	2	2	40	10	50	20
7T6	Interior Detailing I	6	..	100	100	100	40
7T7	Apprentice Training I	..	..	50	50	50	20

**Note:**

- 1) Th = Theory, Max = Maximum, Min = Minimum
- 2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.

**Grand Total of semester VII - 450 marks.**

**Appendix**  
**Teaching and Examination Scheme**  
**Bachelor of Interior Design**  
**Four Year( Eight Semester) Degree Course**  
**BID Semester VIII**

S. No.	Subject	Teaching Scheme	Examination Scheme			
			Duration Hrs.	Max. Marks. Th. Paper	Max. Internal Assessment	Total
8T1	Interior Design VIII	9	12*	80 20	100	40
8T2	Interior Landscape -II	3	2	40	10	50
8T3	Green Building Technology	3	2	40	10	50
8T4	Structure - VI	3	2	40	10	50
8T5	Design Management II	2	2	40	10	50
8T6	Project Work	3	..	.	100	100
8T7	Apprentice Training II	..	..	..	50	50

**Note:**

1) Th = Theory, Max = Maximum, Min = Minimum

2) Minimum marks for passing will be 40% of the total marks allotted to that paper or Internal assessment.

\* The exam duration for Interior Design VIII is 12 hours (3 hours in two sittings for two days) as the students have to design full project of interiors with all details.

**Grand Total of semester VIII - 450 marks.**

**INTERIOR DESIGN**  
**SEMESTER I**  
**1T1 INTERIOR DESIGN I**  
**SESSIONAL**

Sessional - 100

Passing Marks - 40  
Total Marks - 100

**AIM:** The aim of the subject is to understand the principles of design and its application to interior design. Visual perception through simple design elements and organization.

**UNIT I**

Understanding visual perception of forms analyzed through spatial elements like, line , plane and volume through graphic tools and 3D explorations. Understanding their combinational character.

**UNIT II**

Impact of variables like size, shape, colour, tone, texture and light on spatial elements of design.Compositions as symmetrical, asymmetrical, balanced/ unbalanced, steady/ dynamic etc. perception of forms through movement in space.

**UNIT III**

Understanding design issue though order, pattern, rhythm- ISSUES Composition. Synthesis of these elements evolves understanding of order in space and form, Variation, issues of geometry, principles of perception, proximity, closure similarity form in content, figure and ground relationships, static and dynamic aspects of spaces.

**UNIT IV**

Analysis of visual elements of design leading to establishment of design principles like Unity and Balance.

**UNIT V**

Geometrical character of design elements leading to principles like contrast, Harmony, Rhythm, Proportion, emphasis and subordination, repletion etc.

**SESSIONAL WORK:**

The exercises shall be based on:

1. Understanding and application of design elements and variables.
2. Understanding and application of design principles through 2D and 3D compositions.
3. Quantitative and qualitative aspects of space though design exercise.

#### **REFERENCES:**

1. Time Saver Standards
2. Visual Arts: A Basic Study by Bhagwat Desai
3. Form Space and Order by D.K.Ching

**INTERIOR DESIGN**  
**SEMESTER I**  
**1T2 MATERIAL AND CONSTRUCTION TECHNIQUES – I**  
**PAPER II**

Theory - 40  
Sessional - 10  
Total Marks -50  
Passing Marks: 20

**Aim:** Understanding building as a system. Introduction to basic building material and construction methods. General idea about their chemical and physical properties leading to structural strength and aesthetic qualities. Emphasis should be given on developing understanding about making choice of appropriate building materials in a given situation.

### **UNIT I**

Building Terminology, Building components, its characteristics and behavior. Relationship between building components & building material

### **UNIT II**

Materials - Clay, brick, stone their physical and behavioral properties, process of manufacture, tools and techniques of application to built form and interiors

### **UNIT III**

Openings in masonry, arches, lintels

### **UNIT IV**

Material – Sand, cement, aggregate, mortar, concrete. Process of manufacture, in situ reinforced cement concrete construction, physical and behavioral properties, application in built forms and interiors. Cane and bamboo, tools and techniques of joinery, application to built forms and interiors

**Sessional Work:** Plates, Site visit reports, tutorials, notes, sketches and market surveys.

### **REFERENCES:**

1. Building Construction by Sushil Kumar
2. Building Construction by Rangwala
3. Building Construction by Barry and Mckay

# **INTERIOR DESIGN**

## **SEMESTER I**

### **1T3 GRAPHICS I**

#### **PAPER III**

Theory: 40

Sessional: 10

Total Marks: 50

Passing Marks: 20

**AIM :** To introduce students to technical drawing methods and equipment , language of graphics i.e. vocabulary and grammar enabling students to express simple three dimensional objects by developing their skill for communicating graphically objects so as to later adopt the same for depicting buildings and building components.

#### **UNIT 1**

Familiarization of equipment and recapitulation: Ability to handle and use various drawing instruments and media for technical drawing and sketching. Introduction to graphic language and its components viz. Line types; meaning and application, lettering , use of various metric scales, conventions ,standard annotations and format .Principles of plane geometry and geometrical constructions .systems of measurement MKS and FPS.

#### **UNIT II**

Understanding scales: study of scales, their use in practice and construction of plain and diagonal scale. Concept of enlargement and reduction of objects.

#### **UNIT III**

Introduction to orthographic projections : The concept of representing objects and elements of drawing such as point , line , planes and simple regular geometric forms / 3 dimensional objects as plan/s section/s and elevation/ learning the basics of drawing orthographic projections for simple combinations of point , line , planes and solids primarily as first angle projections and or third angle projections.

#### **UNIT IV**

Orthographic projections:Drawing Orthographic Projections of simple and complex solids based on geometrical constructions , either single or in combinations.

## **UNIT V**

Understanding and drawing views:learning the basics of drawing isometric views and Axonometric projections for representing various simple and complex geometrical shapes and forms and rendering the same to understand materials .

### **SESSIONAL WORK:**

1. Exercises should be based on simple and complex geometrical shapes and cover all units in plate forms.
2. Sessional work should be planned to cover all the units mentioned in course outline with thrust on skill development, accuracy and understanding of the topic.
3. Maximum weightage of 10 percent in assessment should be given to the assignments of geometrical constructions.
4. Manually drafted assignments to cover the course outline based on all units.

### **REFERENCES:**

1. Ching Francis D.K.: Architectural Graphics
1. Leslie Martin: Architectural graphics:
2. Jolhe D A : Engineering Graphics , Tata McGraw Hill , New Delhi
3. Bhat N D, "Elementary Engineering Drawing-Plane and Solid Geometry", Chartotar Publishing House, Anand (1988)
4. M.S.Kumar : Engineering Drawing, DD publications, Chennai
5. I.H. Morris : Geometrical Drawing for Art Students, Orient Longman Chennai.

**INTERIOR DESIGN**  
**I SEMESTER**  
**1T4 CULTURAL ANTHROPOLOGY I**  
**PAPER IV**

Theory – 40  
Sessional – 10  
Total Marks: 50  
Passing Marks – 20

**UNIT I**

**Society –**

- i) Meaning and Definition
- ii) Characteristics of Society
- iii) Types of Society
- iv) Factors Bringing Changes in Society
- v) Impact of Modernization on Society and Study of Society in Interior Design

**Culture –**

- i) Meaning and Definition
- ii) Characteristics of Culture
- iii) Types of Culture in India
- iv) Factors Bringing Changes in Culture – Modernization, Urbanization, Technology
- v) Tradition and Rituals of any one State
- vi) Art form and Craft form in Indian States

**Anthropology -**

- i) Meaning and Definition
- ii) Meaning and Definition of Cultural Anthropology
- iii) Importance of Anthropology in Studying Interior Design.

**Chapter 2 – Ethnography**

- i) Meaning and Definition
- ii) History of Ethnography
- iii) Significance of Ethnography in Interior Design.

**REFERENCEBOOKS –**

1. NadeemHasnain, 2011, Indian Anthropology
2. Mohd. Irfan, 2012 , Social Exclusion And Muslim Ethnograph, Neha Publishers & Distributors

# **INTERIOR DESIGN**

## **SEMESTER I**

### **1T5 COMMUNICATION SKILLS**

#### **PAPER V**

Theory: 40

Sessional: 10 Total Marks: 50

Passing Marks : 20

**AIM:** To provide an adequate mastery of technical and communicative English Language training primarily, reading and writing skills, secondarily listening and speaking skills. To develop all the four skills and nurture the personality of the students, to enable them to survive in the competitive world and become professionally competent. In Language acquisition four Skills plays a significant role.

**UNIT I: LISTENING:** a) Importance of Listening Skills, b) Developing Listening Skills, c) Seminar Presentation Techniques

**UNIT II :SPEAKING :** a) Voice training and expression b) Non verbal communication) Role Playing) Group Discussion) Report Presentation) Professional Manners and Etiquettes) Personal Interview Techniques. Hygiene 1) Voice training and expression (*Effective Public Speaking*) 2) Non verbal communication: Body Language

**UNIT III: READING :** a) Book review 'Reflections on Vital issues'

**UNIT IV:WRITING :** a) Paragraph writing) Correction of Errors) Précis Writing d) Unseen Passage) Technical report writing, Essay writing Letter writing Dialogue writing.

**UNIT V :SOFT SKILL DEVELOPMENT :** a) Effective Public Speaking, Goal Setting, Time Management) Team Building) Stress Management f) Health and

#### **SESSIONAL WORK:**

1. Activities related to Listening Skills, Telephonic conversation
2. Situational listening Skills(Meeting, Dialogue, Seminars etc)
3. Essay writing ,Letter writing, Correction of Errors ,Précis Writing
4. Comprehension Passage, Paragraph writing (Related to B.I.D. Syllabus, For Eg:
5. Interior of a Mall/ Monument, etc).
6. *Goal Setting and Three minutes Presentation*
7. Presentation of a Research Paper-Syllabus based topic

#### **REFERENCES:**

1. Professional Communication Skills : By Pravin, S.R.Bhatia, A.M Sheikh: S.Chand and company

2. English Grammar Composition and Effective Business Communication By M.A. Pink,  
S.E.Thomas : S.Chand
3. Contemporary English Grammar Structures and Compositions by David Green  
Macmillan Publication
4. Reflections on Vital issues Edited by P.J. George
5. Publication Orient Black Swan
6. Presentations (The Business Skills Series) by Anne Laws Orient Black Swan
7. Fifty ways to improve your Presentation Skills in English By Bob Dignen Publication  
Orient Black Swan

**INTERIOR DESIGN  
SEMESTER- I  
PAPER VI  
1T6 MATHEMATICS – I**

Theory: 40

Sessional: 10

Total Marks: 50

Passing Marks: 20

**AIM:**

- To understand elementary principles of mathematics.
- To apply mathematics in practical problems.
- To obtain accuracy in calculations and results of various mathematical experiments.

**CONTENTS:**

**UNIT I**

- Sets, Relations and Functions
  - Definition
  - Domain
  - Range
  - Cartesian Product
  - Even-Odd Functions
  - Inverse Functions

**UNIT II**

- Logarithms
  - Product
  - Division
  - Use of Log Tables
  - Simple Calculations using Log Tables

**UNIT III**

- Trigonometry
  - Trigonometric Ratios
  - Ratios of Sum and Differences of Angles
  - Multiple Angles and Half Angles

**UNIT IV**

- Plane Co-ordinate Geometry
  - Distance Formula
  - Equation to a Line
  - Section Formula and their applications

**UNIT V**

- Angle between the Lines
  - Parallel Lines
  - Perpendicular Lines
  - Length of Perpendicular

**SESSIONAL WORK**

Two unit tests per semester and assignments

**REFERENCES**

1. Algebra by K P Basu
2. Set Theory Schaum Series
3. Trigonometry by S L Loney
4. Plane Co-ordinate Geometry by S L Loney

**INTERIOR DESIGN**  
**SEMESTER I**  
**1T7 PRESENRATION TECHNIQUES I**  
**SESSIONAL**

Sessional - 25

Passing Marks - 10

Total Marks - 25

**AIM :-**To improve drawing and sketching skills. To transfer the design ideas. With visual aid from designer to the client.

**UNIT - I**

Introduction to various tools used for sketching such as pencil, charcoal , crayons , water colour etc.

**UNIT - II**

Line drawing of nature by using various techniques as shades of pencil. Introduction of light and shade in nature drawing. Line drawing of exterior of building. Building drawing in perspective.

**UNIT - III**

Landscape elements by using various mediums. Introduction of colour in the same i.e. poster , pencil & water colour.

**SESSIONAL WORK:**

- Assignments based on sketching technique
- Assignments based on peispelhres of exterior buildings.
- Assignments based on exterior& interior Landscape.

**REFERENCES:**

1. Rendering with Pen and Ink by Gill

**INTERIOR DESIGN  
SEMESTER I  
1T8 PRODUCT WORKSHOP I  
SESSIONAL**

Sessional – 25

Passing Marks - 10

Total Marks - 25

**UNIT - I CLAY WORKSHOP**

- Introduction to mud and clay as a material. Process and techniques of forming and decorating using clay as a material. Having feel of materials and creating innovative products. Interior finishes with mud.

**UNIT - II COLOUR WORKSHOP**

**Aim** :-Colour as an important part of our environment and its importance in design and colour as a scientific base.

- Study of colour as science. Light and the spectrum. Different Wave lengths of coloured light.
- Colour as a system and its application.
- How colour is perceived. Harmony in vision and basic principles of Harmony.
- Colour and textures of various natural materials.
- Modifying factors to colours, namely, light, ability to reflect / absorb, surface quality, distance and scale.
- Manifestation of colours in various cultures. Colours symbolism basic characteristic of various hues.

**UNIT – III CERAMIC WORKSHOP**

**Aim** :- Understanding of ceramic products by working with materials, having feel of material and creating innovative products.

- A brief study of ceramics of various cultures.
- Process and techniques of forming and decorating.
- Colour pigments and design qualities.
- Site visits to ceramic product factories, sample collection, documentation, display of creative work.

**INTERIOR DESIGN  
SEMESTER II  
2T1 INTERIOR DESIGN II  
PAPER I**

Theory- 80  
Sessional: 20  
Total Marks: 100  
Passing Marks - 40

**AIM:** Space making in order to understand elements and organization. Visual perception of Interior spaces by creating Comfortable, functional and arithmetically appearing harmonious Interior Environment.

**UNIT I**

Introduction to concept of space. Elements of enclosed form- Combinations, resultant configurations & Characters.

**UNIT II**

Man and his basic living activity. Relationship of space with that of function for basic living activity. Organizational types and their correlation to linkages, types of routes and movement.

**UNIT III**

Functional analysis, minimum space requirements, anthropometrics, space planning for living activity.

**UNIT IV**

Quantitative and qualitative aspects of space through case studies and design exercise. Functional efficiency and qualitative aspects of relation to space.

**UNIT V**

Analysis of existing spaces and built forms, materials and structural systems, built form and its expression. Lighting, air views & issue.

**SESSIONAL WORK:** The exercises shall be based on:

- 1) Analysis of space and in relation to function.
- 2) Data collection: Survey and analysis of existing space.

**REFERENCES:**

1. Time Saver Standards
2. Visual Arts: A Basic Study by Bhagwat Desai
3. Form Space and Order by D.K.Ching

**INTRIOR DESIGN**  
**SEMESTER II**  
**2T2 MATERIAL AND CONSTRUCTION TECHNIQUES – II**  
**PAPER II**

Theory - 40  
Sessional – 10

Total Marks: 50  
Passing Marks - 20

**AIM:** Understanding timber and timber joinery and its application.Understanding wood products and derivatives.

**UNIT I**

Material –timber – classification of trees, characteristics of good timber, sawing methods, tools and techniques of basic timber joinery.

**UNIT II**

Application of timber to openings like doors and windows, Timber paneled, partly paneled and partly glazed and fully glazed doors including hardware, design standards and criteria of opening.

**UNIT III**

Application of timber to partition and paneling.

**UNIT IV**

Material –Reconstituted wood, plywood, block boards, particle boards, fiber boards, cement fiber board's etc- their properties, process of manufacturing, tools and techniques of joinery.

Surface finishes to reconstituted wood like laminates, veneer, and other proprietary material.

**SESSIONAL WORK:**

1. Plates,Site visit reports, tutorials, notes, sketches and market surveys.

**REFERENCES:**

4. Building Construction by Sushil Kumar
5. Building Construction by Rangwala
6. Building Construction by Barry and Mckay

**INTERIOR DESIGN  
SEMESTER II  
2T3GRAPHICS II  
PAPER III**

Theory: 40  
Sessional :10  
Total Marks: 50  
Passing Marks -20

**AIM:** drawing skills as tools to design thinking and visualization to enable the students to understand and express Composite three-Dimensional objects as perspective views. to understand objects formed by additive and interpenetrated solids using various graphicalprojection systems including sections and rendering suitably to understand materials , tones and textures.

**UNIT I:**

Development of Surfaces: development of simple geometrical shapes, cut solids / complex forms using the conventional methodsviz.. Unfold, unroll and radial. Model making using two dimensionalmaterials like paper etc.

**UNIT II:**

Orthographic projections: drawing orthographic projections of cutsolids, true sections etc. of single or combination solids .simple and complex cuts i.e. single plane cutting an object and two planes cutting an object.

**UNIT III:**

Interpenetration of solids: using projections to derive lines, curves and planes formed by the intersection of planes with solids and solids with solids.

**UNIT IV:**

Geometrical Drawing of special and complex curves: Geometrical construction of Sine curve, Geometrical mean, Golden Section, Archimedean Spiral, Logarithmic Spiral. Geometrical construction of Ellipse, Parabola, Hyperbola Hyperbolic paraboloid, Ellipsoid, Elliptic Paraboloid, Hyperboloid – Hypers etc.

**UNIT V:**

Introduction to perspective drawing: types of perspective drawing. Importance and relevance of Vanishing point, picture plane and eye level, difference between isometric view and perspective view. Parallel and angular perspective views of objects

## **SESSIONAL WORK:**

1. Sessional work should be planned to cover all the units mentioned in course outline with thrust on skill development, accuracy and understanding of the topic.
2. Maximum weight age of 10 percent in assessment should be given to the assignments of development of surfaces and model making skills based on them using the methods taught.
3. Manually drafted assignments to cover the course outline based on above units.

## **REFERENCE:**

1. Ching Francis D.K.: Architectural Graphics
2. Leslie Martin: Architectural graphics:
3. Jolhe D A : Engineering Graphics , Tata McGraw Hill , New Delhi
4. Bhat N D, “Elementary EngineeringDrawing-Plane and Solid Geometry”, Chartotar Publishing House, Anand (1988)
5. M.S.Kumar : Engineering Drawing, DD publications, Chennai
6. I.H. Morris : Geometrical Drawing for Art Students, Orient Longman Chennai

**INTERIOR DESIGN  
SEMESTER II  
2T4 CULTURAL ANTHROPOLOGY II  
PAPER IV**

Theory – 40  
Sessional – 10  
Total Marks – 50  
Passing Marks – 20

**AIM :** Students of design have to be sensitized to various cultural aspects such as traditions , fine arts and the performing arts of a particular country and have to understand the symbolism, patterns and forms that manifest themselves in the architecture of that place.

**UNIT I – Vastushastra :** History of VastuShastra ,Scientificness of VastuShastra, Use of VastuShastra in Interior Design.

**UNIT II:** Traditions in arts & crafts – space, function and climate responsiveness

**UNIT III:** Evolution of forms and spaces during various eras and regions influences etc.

**UNIT IV:** Symbolism, patterns and forms that manifest themselves in the architecture of that place.

**UNIT V:** Significance of cultural aspects and traditions.

**SESSIONAL WORK:**

1. Project
2. Assignment

**REFERENCEBOOKS –**

3. NadeemHasnain, 2011, Indian Anthropology
4. Mohd. Irfan, 2012 , Social Exclusion And Muslim Ethnograph, Neha Publishers & Distributors

**INTERIOR DESIGN  
SEMESTER II  
2T5 COMMUNICATIONSKILLS II  
PAPER V**

Theory : 40  
Sessional: 10  
Total Marks: 50  
Passing Marks: 20

**AIM :** To prepare students for participation in seminars, group discussions, paper presentation and general personal interaction at the professional level

**UNIT I:** Book review

**UNIT II :** 1)Technical report writing , Official Report Writing ,Progress Report , Industrial Visit Report , Travel Report , Workplace Report , Inventory Report , 2)Stress Management

**UNIT III :** Dialogue writing , Group Discussion , Role Playing , *Health and Hygiene*

**UNIT IV :** Seminar Presentation Techniques

**UNIT V :** Professional Manners and Etiquettes , Personal Interview Techniques ,Meeting Agendas and minutes writing

**SESSIONAL WORK:**

1. Presenting a seminar on a selected topic
2. Book Reading and Reviews (Discussing the various books read).
3. Mock personal interviews
4. Report Writing
5. Mock Professional situations
6. Dialogue writing
7. Group DiscussionRole Playing

**REFERENCES:**

1. Professional Communication Skills : By PravinS.R.Bhatia, A.M Sheikh: S.Chand and company
2. English Grammar Composition and Effective Business Communication By M.A. Pink, S.E.Thomas : S.Chand
3. Contemporary English Grammar Structures and Compositions by David Green Macmillan Publication
4. Reflections on Vital issues Edited by P.J. George ,Publication Orient Black Swan
5. Presentations (The Business Skills Series) by Anne Laws Orient Black Swan
6. Fifty ways to improve your Presentation Skills in English By Bob Dignen Publication Orient Black Swan

**INTERIOR DESIGN  
SEMESTER- II  
2T6 MATHEMATICS – II  
PAPER VI**

Theory: 40

Sessional: 10

Total Marks: 50  
Passing marks: 20

**AIM**

- To understand elementary principles of mathematics.
- To apply mathematics in practical problems.
- To obtain accuracy in calculations and results of various mathematical experiments.

**UNIT I**

- Limits
  - Definition
  - Standard forms
  - Special Cases as : Limit tends to Infinity

**UNIT II**

- Derivatives (I)
  - Derivatives from definition
  - Standard forms
  - Product rule, Quotient rule
  - Parameter form, Logarithmic derivatives
  - Implicit functions

**UNIT III**

- Derivatives (II)
  - Rate measuring
  - Maxima-minima

**UNIT IV**

- Integration (I)
  - Standard forms
  - Substitution Method, Integration by parts
  - Algebraic forms, Partial fractions

**UNIT V**

- Integration (II)
  - Definite Integrals
  - Area by definite integration

**SESSIONAL WORK**

Two unit tests per semester

**REFERENCES**

1. Differential Calculus by Gorakh Prasad
2. Integral Calculus by Gorakh Prasad

**INTERIOR DESIGN**  
**SEMESTER II**  
**2T7 PRESENTATION TECHNIQUES II**  
**SESSIONAL**

Sessional - 25

Total Marks - 25

Passing Marks - 10

**AIM:** To understand colour as a media of representation, conceptual and preoperational skills & techniques.

**UNIT I :**

Sketching of transport elements. Human figures studies in line, drawings, shade & sculptural mass.

**UNIT II:**

Conceptual sketches using different media. Rendering techniques for architectural & interior drawings as plans & elevations.

**UNIT III:**

Perspective of formal geometric solids and spaces and informal geometrics, rendering techniques and use of colour.

**INTERIOR DESIGN  
SEMESTER II  
2T8 PRODUCT WORKSHOP II  
SESSIONAL**

Sessional - 25

Total Marks - 25

Passing Marks: 10

**UNIT – I PLASTER OF PARIS WORKSHOP**

**Aim:** Introduction to Plaster of Paris material, having feel of material and by creating products for interior spaces.

- Introduction to plaster as material.
- Process of mixing and its use in reproduction.
- Mould making and casting.
- Use for plaster with other materials like cloth, thread, wires etc.

**UNIT – II BAMBOO AND CANE WORKSHOP**

**Aim :-** Understanding of materials and preventive measures for bamboo and cane.

- The processing on bamboo (seasoning, treatment)
- Tools for working on bamboo
- Precautions for safety in workshops.
- Cutting, Joinery details, strength, finishes, Application to construction and furniture Interior.

Assignments based on transfers elements

1. Assignments based on human figures
2. Assignments based on perspective of solids & spaces.

**REFERENCES:**

2. Rendering with Pen and Ink by Gill

**BACHELOR OF INTERIOR DESIGN  
SEMESTER III  
3T1 INTERIOR DESIGN – III  
PAPER I**

Sessional- 100  
Total Marks- 100  
Passing Marks- 40

**AIM:** To understand architectural spaces and its functional and formal aspects.

**UNIT I**

Understanding the architectural elements of the structure and enclosure i.e. floor, wall, column, roof and openings-exploring in different permutation and combinations to understand how they give a building its form.

**UNIT II**

Spatial organization and their correlation within living spaces.

**UNIT III**

Understanding the spatial character through volume, light qualities, circulation patterns etc. through case studies.

**UNIT IV**

Developing design skills through modulation of space with respect to function and user.

**UNIT V**

Conceptual abstraction through relationship of function and spatial quality.

**SESSIONAL WORK:**

1. Analytical study of small enclosures to understand the structural system and evolution of building form.
2. Spatial organization in living spaces like small residence
3. Volume study through case studies.
4. Study of 3D forms through case studies with emphasis on concept building
5. Study of modulation of space and its applicationto complex activities.

**REFERENCES:**

4. Time Saver Standards
5. Form Space and Order by D.K.Ching

**INTERIOR DESIGN**  
**SEMESTER III**  
**3T2 MATERIAL AND CONSTRUCTION TECHNIQUES - III**  
**PAPER II**

Theory - 40
Sessional - 10
Total Marks - 50
Passing Marks - 20

**AIM:** The aim of the subject is to impart detail knowledge of materials, their characteristics and their application to built form and interiors. Study of horizontal and vertical plane construction.

**UNIT I**

Case studies to understand existing methods of construction with reference to timber floors and modern materials for floors. Design parameters for construction of floors and partitions.

**UNIT II**

Introduction to glass as a material, manufacturing process, types of glass, tools and techniques, bending, fusion, sand blasting, etching etc.

**UNIT III**

Application of glass to openings, partitions, ceilings, floorings, furniture and other interior elements. Hardware and fixing details of glass.

**UNIT IV**

Application of timber for special type of openings like doors. Construction, fixing, joinery details and hardware for doors.

**UNIT V**

Application of timber for special type of openings like windows. Construction, fixing, joinery details and hardware for windows.

**SESSIONAL WORK:**

1. Assignments based on floors, partitions, glass in interiors.
2. Assignments based on special types of doors and windows.

**REFERENCES:**

1. Building Construction by Rangwala and Sushil Kumar
2. Building Construction by Barry and Mckay

**INTERIOR DESIGN  
SEMESTER III  
3T3 FURNITURE DESIGN I  
PAPER III**

Theory: 40  
Sessional: 10  
Total: 50  
Passing marks: 20

**AIM:** To develop competency for designing, critical thinking and thereby developing furniture forms in relation to human forms to make it functional for various needs generating innovative design ideas. The students will have knowledge of ergonomics and its applications in design including designing for the handicapped and the elderly.

**UNIT I**

Correlation between furniture and spaces – human movements w.r.t. human comfort, Function, materials and methods of construction. Factors influencing furniture designs: user types, Climate, social, economic, material availability, skill and construction techniques (emphasis on wood / timber as a material.) Types of woods and wood based products used in Furniture, care and maintenance issues, economics of furniture, durability and usability. Terms and terminology used in furniture: Types of furniture and furniture systems. Movable components and fixed components.

**UNIT II**

Relevance of Anthropometric data in relation to various furniture, measurements for static and dynamic work including maximum capacity, Muscles and work physiology, use of percentile and averages in design. Diagrammatic representation of data through charts. Overview of ergonomics and design relevance's; Application and relevance of ergonomics while designing furniture. Hardware and mechanisms study, its application.

**UNIT-III**

Design process involving ergonomics considerations and ergonomic design evaluation and Participatory ergonomics as aspects. Man as the prime system component; Man, machine-environment interaction system and user-friendly design practice; Human compatibility, comfort and adaptability; Fundamentals of ergonomics: Physical (anthropometrics, human body- structure and function, posture, Postural Stress, movement and biomechanics), Physiological (work physiology) and Psychological aspects (behaviour, cognitive aspects and mental workload). Design for the differently abled people.

**UNIT-IV**

**FURNITURE AS A PRODUCT :** Design process and stages, Understanding the methods and techniques involved in furniture components. Analysing existing pieces of furniture in its functional aspects, technical aspects, skills required, materials, flexibility, comfort, ergonomic and aesthetic considerations, transportation and economic factors..

**UNIT V:**

"Measure Drawing" of simple furniture items – plan, elevation and detail drawing on full scale. Understanding Measurement of quantity of material used in furniture (e.g.: measurement of Cubic feet of wood to be used in a wooden chair). Deriving cost of material. power tool demonstration, machinery demonstration, jig-making, wood bending, table saw introduction, joinery, turning, routing, mortising, shaping, sanding, and finishing.

**SESSIONAL WORK:**

4. Sessional work should be planned to cover all the units mentioned in course outline with thrust on critical thinking ability , technical detailing and accurate depiction as per standards and understanding of processes.
5. An exercise has to be done where actual measurements have to be taken in relation to various furniture presentations in report form.
6. Manually drafted assignments to cover the course outline based on above units giving constructional details , sizes and specificationsetc from time to time..

**REFERENCES:**

Bridger, RS: Introduction to Ergonomics, 2nd Edition, Taylor &Francis, 2003.

1. Dul, J. and Weerdmeester,B.,Ergonomics for beginners, a quick reference guide, Taylor& Francis, 1993.
2. Green, W.S. and Jordan,P .W, Human Factors in Product Design, Taylor & Francis, 1999.
3. D. Chakraborti, Indian Anthropometric Dimensions for ergonomic design practice,National Institute of Design,Ahmedabad, 1997
4. G.Salvendy (edit), Handbook of Human Factors and ergonomics, John Wiley &Sons,Inc., 1998
5. Singh,S (Edt),Ergonomics Interventions for Health and Productivity, HimanshuPublications, Udaipur, New Delhi, 2007

**INTERIOR DESIGN**  
**SEMESTER III**  
**3T4 HISTORY OF ART & ARCHITECTURE I**  
**PAPER IV**

Theory- 40  
Sessional - 10

Total Marks - 50  
Passing Marks- 20

**AIM:** Evolution of art & architecture, built form as a result of society, culture, climate, land and technology, manifested in attitudes to spatial and formal abstraction and schemata, attitudes of landscapes, spatial order, structural, constructional and material order, manner of articulation, symbols & meanings.

#### **UNIT I**

Introduction & survey of various sources of history. Introduction to Egyptian & Mesopotamian style of art & architecture.

#### **UNIT II**

Introduction to classical architecture of Greece & Rome. Ensemble of art, crafts like sculpture, pottery etc along with classical architecture of this era.

#### **UNIT III**

Works and design ideology of foreign designers belonging to various schools of thought & of their effects on the design movements and interior environment spaces.

#### **UNIT IV**

Forces of industrialization in structure, production systems, changes in technology & its impact on life style, scientific thought & on arts, development of the modern architectural movements.

Various art moments like Art Deco, Art Nouveau, Beaux Arts, Cubism, expressionism, Fauvism, impressionism, Realism, surrealism, Minimalism, etc.

#### **UNIT V**

Works and design ideas of the Renaissance giants like Raphael, Davinci, Michelangelo. The effects of their works in interior spaces, architecture.

## **SESSIONAL WORKS:**

- 1) Note on sources of history: text + pics / sketches.
- 2) Egyptian civilization: Sketches (well labeled) along with the corresponding text.
- 3) Egyptian civilization: more sketches & texts.
- 4) Greek civilization: Greek orders sketches (labeled) with text.
- 5) Terminology for example: raking cornice pediment, entablature, cornice, triglyph, metope, frieze, architrave, abacus, echinus, volute, capital, necking, shaft, entasis, stylobate.
- 6) Techniques: notes + pictures for example: fresco, tempera, gilding, ormolu, etc. (almost S-10)
- 7) Techniques: notes + pictures of more similar techniques.

## **REFRENCES:**

- 1) History by Edith of Tomery
- 2) History of art & architecture by tiraskar

**INTRERIOR DESIGN  
SEMESTER III  
3T5 STRUCTURE – I  
PAPER V**

Theory –40  
Sessional-10  
Total Marks- 50  
Passing Marks: 20

**AIM:** Introduction to basic structural systems.

**UNIT I**

Introduction to basic structure, aim and object, scope of study.

Basic elements of building : General introduction to various elements of buildings, introduction to load bearing, framed structure, composite structure and suitability-; Glossary of technical words related to reinforced concrete structure, primary and secondary forces acting on structure, gravitational force, live load, wind loads; conceptual idea and their impact on building as a whole, relevant IS Code.

**UNIT II**

Foundations of structures, bearing capacity of types of soils, principle of foundations, types of simple foundations, thumb rules for design of foundations.

**UNIT III**

Introduction to deep foundations, types of deep foundations.

**UNIT IV**

Shoring, types of shores, scaffolding, types of scaffolds and underpinning.

**UNIT V**

Stability of Structures, equilibrium of bodies, Lami's Theorem, conditions of equilibrium axioms of statics and basic concepts parallelogram law of forces, principles of transmissibility, superposition and law of action, rigid body.

**SESSIONAL WORK:**

1. Based on sessional work, numericals, sketches & sessional examinations.

**REFERANCE:**

1. Engineering Mechanics – R.K. Bansal and Sanjay Bansal, Laxmi  
a. Publications, New Delhi.
2. Engineering Mechanics – R.S. Khurmi
3. Building Construction – Sushilkumar

**INTERIOR DESIGN  
SEMESTER III  
3T6 INTERIOR ENVIRONMENT CONTROL I  
PAPER VI**

Theory- 40

Sessional-10  
Total Marks-50

Passing Marks -20

**AIM**-To understand the importance of human comfort in built form and environment.

**UNIT – I**

Definition of climate and elements of climate.

**UNIT - II**

Built environment, impact and issues of climatic balance in traditional and contemporary built environments

**UNIT- III**

Effect of climate on human comfort

**UNIT – IV**

Solar orientation, sun control and shading devices.Use of sun path diagram and heliodon.

**UNIT – V**

Daylight factor,size of opening with reference to daylight,lighting in buildings,light and its sources,lighting criteria,artificial lighting levels for various activities,calculation for lighting levels,electrical layouts,science of wire distribution,types of wiring,luminaires available in the market.

**SESSIONAL WORK:**

1. Assignments based on above topics.
2. Drawings related to sun path diagram and shading devices.

**REFERENCES:**

1. Tropical climate by koenisberger.
2. Building Services and Equipment by Prof. A. L. Chatre

**INTERIOR DESIGN**  
**SEMESTER III**  
**3T7 GRAPHIC DESIGN I**  
**PAPER VII**

Theory - 40  
Sessional - 10

Total Marks -50  
Passing Marks: 20

**AIM:**The aim of this subject is to equip students with the skill of presenting their designs through sketches, technical drawings, views, models

**UNIT I**

Representations of trees, foliage, human figures, furniture etc. their integration to presentation drawings.

Representation of building elements, openings, materials, accessories etc. terminology and abbreviation used in architectural presentation.

**UNIT II**

Measured drawing of an architectural space

**UNIT III**

Measured drawing of furniture in an interior space.

**UNIT IV**

Exercises on sketching to represent conceptual designs.

**UNIT V**

Model making

**SESSIONAL WORKS:**

1. Exercises on Calligraphy
2. Exercises on sketching and making technical drawing
3. Measured drawing of an architectural and interior space

**INTERIOR DESIGN  
SEMESTER III  
3T8 PRODUCT WORKSHOP – III  
SESSIONAL**

Sessional – 25

Total Marks – 25

Passing Marks - 10

**UNIT – I Photography**

**AIM:** Develop basic sense of visual perception for designers through observation , colour composition and light interaction, shades and shadows and positive/ negative space relationship.

1. Developing ability to see things ,analyse them and express them in a strong visual form.
2. Basic knowledge of the medium by introduction to the basic principles of photography, understanding of the camera , its various parts and introduction to dark room processing and equipment.
3. Introduction to different ideas and utilities in the field of photography and understanding aspects involved in making the ideas of meaning and composition.
4. Types of photography its relationship with various fields – architectural photography fine arts photography,documentphotography,journalismphotography,fashion design photogr-phy.
5. Photography: Photograms, chemograms ,solarisation , low light photography , toning of prints , hand painting photographs, mixed media expression.

**UNIT II: Weaving**

**AIM:** Scientific understanding of fabrics as soft interior element of design, its various uses as art forms, wall hangings , upholstery forms , curtain and panel forms.

1. Introduction to fibres and yarns, table loom and floor loom, preparing warp , setting up loom for basic weaves and their variations.
2. Variations in weaves and design quality weaves and its quality, for upholstery, curtain and floor coverings.
3. Rugs and durries, motifs, design patterns and colour variations.
4. Extensive market survey of available fabrics for interior spaces, product specifications and manufacturers.
5. Colour pigments and design qualities.
6. Site visits to ceramic product factories , sample collection , documentation , display of creative work.

### **UNIT III: Textile Printing**

**AIM:** Scientific base of printing and relationship with types of fabric , visual perception of printing principles and their applications and developing soft interior elements .

- Development of textile design in different culture from primitive art to contemporary design.
- Criteria of design , the elements and the principles of textile design. Analysis of motifs , developing repeat as a block, understanding, material used , colour types and their mixing process, various colour printing.
- Block printing, developing block,understanding, material used,colour types and their mixing process, various colour printing.
- Screen printing –design evolution for wall hanging, preparing screen and understanding the technique, printing on paper and fabric.

**INTERIOR DESIGN  
SEMESTER IV  
4T1 INTERIOR DESIGN IV  
PAPER I**

Theory: 80  
Sessional: 20  
Total Marks: 100  
Passing Marks: 40

**AIM:** Development of basic design shells and understanding nature of space and scale of space.

**UNIT I**

Approach to design through idea generation and applied to interior spaces

**UNIT II**

Relationship of space quality, scale and modulating transition spaces, gathering points and mediating spatial thresholds.

**UNIT III**

Influence of culture, climate, socio religious status etc. on spaces of today in Indian context.

**UNIT IV**

Application of art/craft at public level spaces like restaurants, lounges etc.

**UNIT V**

Understanding the influence and importance of services like air conditioning, illumination etc. in interiors.

**SESSIONAL WORK:**

1. Exercises on semantics applied to small spaces
2. Study of hierarchy of linkages through case studies
3. Responsible and responsive attitude towards building up spaces with emphasis on climate and socio religious status.
4. Theme restaurants and lounges emphasizing on art, craft and culture.
5. Commercial interiors to understand the coordination of services and design

**REFERENCES:**

1. Time saver standards for building types, DeChiaraandCallender, McGrawhillcompany.
2. Neufert Architect's data, BousmahaBaiche& Nicholas Walliman, Blackwell science ltd.
3. National Building Code – ISI

**INTERIOR DESIGN**  
**SEMESTER IV**  
**4T2 MATERIAL AND CONSTRUCTION TECHNIQUES - IV**  
**PAPER II**

Theory - 40  
Sessional - 10  
Total Marks - 50  
Passing Marks - 20

**AIM:** The aim of the subject is to impart detail knowledge of materials, their characteristics and their application to built form and interiors. Study of horizontal and vertical plane construction.

**UNIT I:**

Case studies to understand existing methods of construction for wooden staircases and roof forms.

**UNIT II**

Thermal and acoustical insulation materials, their properties and application. Introduction to PVC, fiber glass and acrylic.

**UNIT III**

Adhesives classification and types, method of application, bond strength, material and workmanship specifications.

**UNIT IV**

Ceilings: Introduction to ceiling materials like PoP, gypsum board, PVC, fiber board. Method of construction and structural systems. Integration of different types of services in ceiling design.

**UNIT V**

Wall treatment: Finishes to walls, wall cladding, design considerations, materials and working details.

**SESSIONAL WORKS:**

1. Plates on above topics.

**REFERENCES:**

1. Building Construction by Sushil Kumar, Rangwala, Barry and Mckay

**INTERIOR DESIGN  
SEMESTER IV  
4T3 FURNITURE DESIGN II  
PAPER III**

Theory -40  
Sessional: 10  
Total Marks: 50  
Passing Marks --20

**AIM :** To familiarize the students about the evolution and development of furniture through a historical overview and use intoday's time. The aim of this subject is to develop a sense of appreciation for History of Interior with Furniturein relation to Interior Planning. Changing trends and lifestyles

**UNIT I:**

Techniques of finishing the wood Surfaces: Wood Paints, Polishes and varnishes etc. Decorative finishes to wood and wood based materials used conventional and historically. Craftsmanship in wood , basic properties , basic joiner,. basic fabrication techniques , finishing and construction techniques .Upholstery Materials: Types of foams, springs and other materials used for upholstering- Techniques of upholstering and various hardware used for the same. Wood & other materials used, familiarity with methods of gilding, Decoupage,embossing, moulding, stencilling , demonstration of marquetry, brass, ivory, mother of pearl, inlay, Wood etc

**UNIT II**

History of furniture developed; cultural, architectural & interior planning as a setting and context for its development from ancient to middle ages.Modern age covering period furniture style s. Concepts and characteristic explaining different factors. Influences, ornamentations and nomenclature ,decorative and significant motifs used in furniture etc.

**UNIT III:**

Oriental furniture development ; influences , characteristics , nomenclature usage and materials etc. Wood & other materials used, familiarity with methods of gilding, embossing, moulding,stenciling , Demonstration of marquetry, Brass, Ivory, Mother of Pearl, Inlay, Wood etc. Difference in basic shapes, form & motifs of East and West

## **UNIT IV:**

The furniture designs of Pierre Chareau, Carlo Scarpa, ,Eileen Gray, Le Corbusier, Ludwig Mies Van Der Rohe, Otto Wagner, Adolf Loos, George Nakashima, Jean Prouve, Charles And Ray Eames, Charlotte Perriand, Peter Pearce, Morphosis, Richard Meier, and Herman Miller among others will be studied .Sustainable and eco-friendly designing efforts in contemporary context.

## **UNIT V:**

Designing of basic furniture items: Sitting furniture , Table furniture , Bed furniture , storage furniture - terminology, typology, ergonomics and construction principles viz. stools , cabinets, consoles , side tables, racks , shelving systems etc. from the systems above. Study on furniture for specific types of interiors like office furniture, children's furniture, residential furniture, display systems, etc. – Design Projects on Residential, Commercial and Office Interiors.

## **SESSIONAL WORK:**

1. Study of market trends and assignments
2. Project on Design & Detailing of Single residential or Commercial Furniture wood, cane and metal.
3. Furniture to be designed freehand sketch files to be made topic wise covering each unit.
4. Plates on developed furniture forms and with analytical sketches to indicate brainstorming and mindmapping techniques used .

## **REFERENCES:**

1. English Furniture Style (1500 – 18) by Ralph E
2. Indian Architecture by Satish Kumar
3. Interior Design by Ahmad Kasu

**BACHELOR OF INTERIOR DESIGN**  
**SEMESTER IV**  
**4T4 HISTORY OF ART & ARCHITECTURE-II**  
**PAPER IV**

Theory- 40  
Sessional - 10

Total Marks - 50  
Passing Marks- 20

**AIM:** Evolution of art & architecture, built form as a result of society, culture, climate, land and technology, manifested in attitudes to spatial and formal abstraction and schemata, attitudes of landscapes, spatial order, structural, constructional and material order, manner of articulation, symbols & meanings.

**UNIT I**

Introduction to the early Christian Era with its distinct art & architecture conforming to the religious beliefs of the Christian Era. – Prominent works under the Byzantine Empire.

**UNIT II**

Architectural styles of Medieval Europe including the Romanesque and Gothic style of working principles, scientific developments & technology affecting the architecture.

**UNIT III**

Renaissance architecture in different regions of Europe demonstrating a conscious revival of various elements of previous styles.

- The age of Exuberance, demonstrated vividly by the Baroque architecture using the Renaissance elements in a new rhetorical & theatrical fashion.

**UNIT IV**

“Late Baroque” or more commonly Rococo & various other contemporary styles affecting many aspects of arts.

**UNIT V**

Works of various modern painters like Pablo Picasso, Rodin Van Gogh, Rodin, Ganglion, Pissarro, Monet etc.

**SESSIONAL WORK:**

- 8) Group activity: Assignment in groups for working on the renaissance painters.(making elaborate charts with pictures & appropriate text for the ease of understanding)
- 9) Greek sculptures: well- labeled pictures along with appropriate text.
- 10) Greek pottery with sketches & texts & a note on vaults (groin vault & barrel vault etc).
- 11) Roman sculptures: well labeled colored pictures with appropriate text alongside.
- 12) Notes on various ISMS like minimalism, impressionism, surrealism etc.
- 13) Group activity: similar to the previous activity, for designs like F.L wright, ward Benett, etc.
- 14) Power point presentations by various groups on the life & works of various modern painters like monet , Rodin, Picasso, Van, Gogh, Gauguin etc.

**REFRENCES:**

- 3) History by Edith of Tomery
- 4) History of art & architecture by Tiraskar

**INTRERIOR DESIGN  
SEMESTER IV  
4T5 STRUCTURE – II  
PAPER V**

Theory –40  
Sessional-10  
Total Marks- 50  
Passing Marks: 20

**AIM:** Introduction to basic structural systems.

**UNIT I**

Force: definition, Resolution and composition of forces, analytical method for concurrent, nonconcurrent, parallel and general forces systems, moment of force couple.

**UNIT II**

Resolution and composition of forces, graphical method for concurrent, non - concurrent, parallel and general forces systems, moment of force couple.

**UNIT III**

Types of supports to simply supported beams and trusses, general loading conditions, various types of loads and load taken by the supports.

**UNIT IV**

Centroids of laminae of various shapes,triangle, circle, semicircle, trapezium, built in sections.

**UNIT V**

Moment of Inertia of plane areas, second moment of area, radius of gyration about an axis, parallel and perpendicular axis theorems. Friction, Coefficient of friction, coulomb's law of friction, kinetic friction, static friction, limiting friction, numerical based on formulae.

**SESSIONAL WORK:**

1. Based on sessional work, numerical, sketches & sessional examinations.

**REFERANCE BOOKS:**

1. Engineering Mechanics – R.K. Bansal and Sanjay Bansal , Laxmi
2. Publications, New Delhi.
3. Engineering Mechanics – R.S. Khurmi
4. Building Construction – Sushilkumar

**INTERIOR DESIGN  
SEMESTER IV  
4T6 INTERIOR ENVIRONMENT CONTROLIV  
PAPER VI**

Theory- 40  
Sessional- 10  
Total Marks- 50

Passing Marks-20

**AIM:** Understanding the requirement and design of built environment with respect to services.

**UNIT I**

Natural ventilation and its importance.Design of openings to achieve comfort.

**UNIT II**

Air cooling systems- passive and evaporative cooling, dessert coolers, ducting and air distribution.

**UNIT III**

Air-conditioning- functions and principles, refrigeration cycle, capacity of AC ,types of AC systems and their details, ducting and air distribution,

**UNIT IV**

AC layouts for office spaces-load calculations with details of ducting.

**UNIT V**

Communication distribution systems, intercom and EPABX systems, computer networking.wiring system as a part of design and methods of concealing.

**SESSIONAL WORK:**

1. Assignments and tests covering all units

**REFERENCES:**

2. Tropical climate and housing by Koenisberger
3. Building services and equipment by Prof.A.L.Chatre

# **BACHELOR OF INTERIOR DESIGN**

## **SEMESTER IV 4T7 GRAPHIC DESIGN II**

### **PAPER VII**

Theory - 40  
Sessional - 10

Total Marks -50  
Passing Marks:20

#### **UNIT I**

One point and two point perspective views from varying eye levels of complex 3D compositions.

#### **UNIT II**

One point and two point perspective views of furniture.

#### **UNIT III**

One point and two point perspective views of interior spaces including all activities like residential spaces, commercial spaces, office spaces, recreational spaces etc. Rendering the above views in different media like pencils, ink, water colour oil pastels etc with proper foreground and background to represent different texture and finishes.

#### **UNIT IV**

Detail models of furniture & interior spaces using different materials.

#### **SESSIONAL WORKS:**

1. Perspective views of furniture and interior spaces
2. Model making

**INTERIOR DESIGN  
SEMESTER IV  
4T8 PRODUCT WORKSHOP – IV  
SESSIONAL**

Sessional - 25  
Total Marks - 25  
Passing Marks - 10

### **UNIT - I Upholstery**

**AIM :** Finishing of designed furniture forms by upholstering in various materials.

- Upholstering materials and their specific qualities , property of stretching and compressing types of joinery, stitching devices, details of horizontal, vertical and curved surfaces.
- Special effects to furniture form by upholstery , decorative ways of upholstering by various stitches and materials.
- Leather as a upholstering material, real leather, artificial leather, their properties and usage in various purposes.
- Craft of leather work and its innovative use in built form and interior product.
- Leather and its use with other materials like wood, ceramics, metals, bamboo etc.
- Details of design parameters.

### **UNIT – II GLASS**

**AIM:** Understanding of glass as a material and its various application and finishes .

- Various finishes to glass like engraving, bevelling , grinding, textile, staining.
- Glass in furniture design.

### **UNIT III - TIMBER**

**AIM:** Working with wood and wood products to understand material parameters.

- Wooden joinery and its strength
- Wood polishes , other finishes , colour and surface quality.
- Carving in wood.

**INTERIOR DESIGN  
SEMESTER V  
5T1 INTERIOR DESIGN V  
PAPER I**

Sessional Work – 100  
Total Marks --100  
Passing Marks -40

**AIM:**To create commercial and public interior spaces responding to needs of the users and society in general . To apply knowledge of various streams like behaviour ,user and customer psychology , building technology , services , acoustics etc. in giving design solutions to enhance the qualitative aspects of life / usage.

**COURSE CONTENT:** The course for the semester will be focused on commercial spaces , institutional spaces , eateries , hospitals hostels etc. Based on this the following unitswill be dealt with for each project however emphasis could vary for assessment for every design project .

**UNIT I:** Developing floor plans with facilitation and clearances with all relevant details with specifications .Generating reflected ceiling plan/s and its detailing with specification and finishes

**UNIT II:**Developing wall elevations and relevant sections with materials and finishes and specifications

**UNIT III:** Generating working drawings of furniture designed furniture and other relevant components

**UNIT IV:** Integrating services in interiors ; electrification , AC , lighting plan etc.

**UNIT V:** Generating views sketch views and perspectives.

**SESSIONAL WORK :**

1. At least two major projects and two short problems need to be done in a semester for better exposure to various nuances of designing better and quality spaces.
2. Designing of majorly non-residential projects , Developing floor plans , detailing , writing specifications and generating working drawings of furniture , applying digital output methods .
3. Understanding typical non-residential building types .human scale and dimension as applied to public spaces . reflected ceiling plans advanced powerpoint presentations ,
4. Field trips – to be determined by faculty.

**REFERENCES:**

4. Time saver standards for building types, DeChiaraandCallender, McGrawhillcompany.
5. Neufert Architect's data, BousmahaBaiche& Nicholas Walliman, Blackwell science ltd.
6. National Building Code – ISI

7. Time saver standards for landscape architecture – Charles W Harris – McGraw Hill
8. New Metric Handbook – Patricia Tutt and David Adler – The Architectural Press
9. Scott-Webber. Programming: A Problem Solving Approach for Users of Interior Spaces. Thomson Learning, 1998. ISBN: 0-873-93674-4 2. Karlen, Mark, Ruggeri, Kate, & Hahn, Peter. Space Planning Basics. New York: John Wiley and Sons, Incorporated, 2003. ISBN: 0-471-43439-6.
10. Sherrill, Whiton, and Abercrombie, Interior Design & Decoration, Fifth edition. Upper Saddle River, New Jersey: Prentice-Hall, 2002 ISBN: 0-13-030748-3
11. Additional relevant books, journals, and magazines may be identified and included by the faculty.

**BACHELOR OF INTERIOR DESIGN**  
**SEMESTER V**  
**5T2 MATERIAL AND CONSTRUCTION TECHNIQUES - V**

Theory - 40  
Sessional - 10  
Total Marks - 50  
Passing Marks - 20

**AIM:** The aim of this subject is to acquaint students with the different materials used in interiors, their properties and application to interiors.

**UNIT I**

Different types of ferrous metals, properties, sizes and forms of availability in market , methods of working with metals , fixing and joinery in ferrous metals , finishing and treatment to metals , Application of ferrous metals to built form and interior.

**UNIT II**

Different types of proprietary materials- commercial and technical names, sizes, wastages, BIS and codes for materials, testing, fabrication, commercial methods of pricing, billing etc.

**UNIT III**

Different types of finishes for vertical surfaces, composition, surface preparation and application methods , defects in Workmanship.

**UNIT IV**

Study on site, execution of complex interior projects and systems in terms of design origination, site execution sequences, and methodology

**UNIT V**

Application of ferrous metals to built form and interior.

## **SESSIONAL WORKS**

1. Plates and tutorials / seminars on above topics.
2. Details of application of ferrous sections to grills, gates, railings, accessories, structural applications like trusses, stanchions, etc.
3. Details of application of aluminum sections to windows, doors, partitions, kitchen platform etc.
4. Details of application of stainless steel to grills, railings, furniture, interior accessories, etc.
5. Details of all special doors etc.

**REFERENCES:** Building Construction by Barry and Mckay

**INTERIOR DESIGN  
SEMESTER V  
5T3 FURNITURE DESIGN III  
PAPER III**

Theory- 40  
Sessional- 10  
Total Marks- 50  
Passing Marks- 20

**AIM:** Understanding and conceptualizing furniture forms.

**UNIT I**

Understanding simple furniture forms like table etc with respect to its function.

**UNIT II**

Designing furniture forms in relation to each other in a given space.

**UNIT III**

Designing elements of living units, with interface of its correlation to space.Understanding harmony through material and through details-evolving coordinated system for entire space.

**UNIT IV**

Multiple use of furniture forms

**UNIT V**

Exploration of various materials and hardwareand their use in combination.

**SESSIONAL WORK:**

- 1) Use of various forms in simple furniture designs like tables etc. giving different situations and uses.
- 2) Evolving furniture forms using various materials.
- 3) Coordinated furniture in a reference frame like living units with details of material , hardware.
- 4) Multiutility furniture forms for small spaces.
- 5) Presentation of market surveys for new materials and hardware.

**INTERIOR DESIGN  
SEMESTER V  
5T4 HISTORY OF ART & ARCHITECTURE III  
PAPER IV**

Theory - 40  
Sessional – 10  
Total Marks- 50

Passing Marks – 20

**AIM:** To understand the progression of historical development of interiors in India & its application to interior design Impact of socio-cultural, political, religious, climatic, geological etc on evolution of a style of elements of style.

**UNIT I:**

Introduction to the basic understanding of the Bronze Age civilization also known as the Harappan civilization followed by the Vedic period (or vedic Age)

**UNIT II:**

Transitioning smoothly into the iron Age with the emergence of the Mauryan Empire. Moving onto the Gupta Empire constituting the Golden age of India.

**UNIT III:**

The substantial contributions made by Buddhist & Jain Art & Architecture mainly associated with the religious structures i.e viharas, stupas & Chaityas. Emergence of the Hindu temple architecture alongside.

**UNIT IV:**

Work & design ideology of Indian designers belonging their effects on the design movements & interior environment spaces.

**UNIT V:**

Understanding of the Islamic architecture brought along with the Mughals to India & its amalgamation with the various existing Indian architecture styles thus forming the XXXX Indo- islamic architecture style.

- 1) Sketches of Harappan civilization (includes architectural sketches, sculptures, seals, toys etc).
- 2) Terminology to find out: Wharf, berthing, sluice gates , moat, dock etc.
- 3) Sketches of stambha, stupa, toranas, vedikas.

- 4) Development of stupas through sketches & texts (well labeled)
- 5) Making process of chaityas. Terminology: coffers, amalkas, apse, vestibule, fakshas etc.
- 6) Various caves given from the topic of rock-cut architecture + sketches or pictures.

**REFFRENCE:**

- 1) History of by Edith Tomory
- 2) History of art & architecture by Hiraskar

**INTERIOR DESIGN  
SEMESTER V  
5T5 STRUCTURE – III  
PAPER V**

Theory - 40  
Sessional - 10

Total Marks – 50  
Passing Marks - 20

**AIM:** Introduction to strength of different materials used in interiors & building construction.

**UNIT I**

Structural properties of basic materials like brick, stone, concrete, steel aluminum, timber. Factor of safety, relationship between strength of brickwork & strength of individual bricks & mortar. Types of steel, iron. Effect of temperature on different metals & stones used in interior.

**UNIT II**

Concrete Technology.I.S.456 – Different Grades of Concrete. Different Grades of Cement and Steel Used. Study of Cement, Sand, Aggregate and Water. Process of Concreting, Curing, Form Work and Stripping, Water Cement Ratio, and various other details, tests in brief.

**UNIT III**

Simple stresses & strains, different types of stresses and strains, volumetric strain, safe stresses, factor of safety, different types of safe stress as per ISI code for different materials like timber, steel. Hook's law, typical stress strain behavior for steel and concrete.

**UNIT IV**

Simple bending, assumptions & reality. Deflection of simply supported beams, cantilevers, maximum limit of deflection.

**UNIT V**

Analysis of Columns, Concept of buckling and crushing in Columns. Direct and bending stresses, short columns & long columns. End conditions, Euler's assumptions, limitations. Calculation of Euler's crippling load.

**SESSIONAL WORK:**

1. Assignments on above topics.

**REFERENCES:**

2. S. Ramamrutham , Strength of Materials

**INTERIOR DESIGN  
SEMESTER V  
5T6 INTERIOR SERVICES I  
PAPER VI**

Theory - 40  
Sessional – 10  
Total Marks - 50  
Passing Marks: 20

**AIM:**To understand the basic principles of drainage and water supply in building.

**UNIT - I**

Basic principles of sanitations and disposal of waste materials from buildings; Water carriage systems; Standard sanitary , fittings , traps, pipes and their jointing ; Flushing systems ; Manholes & inspections chambers , drains below buildings, self cleansing velocity, drains on slopping sites.

**UNIT II**

layout of simple drainage systems and testing of drain ; Septic tanks , soak pits , aquaprivy ; Single and double stack system ; rain water harvesting and disposal , sub – soil drainage, Toilet interior details for public and residential applications.

**UNIT - III**

General idea sources of water supply; Domestic water systems; Suction, storage tanks and the capacity, types of pipes , their sizes & joints ; downtake supply of water to various fittings.

**UNIT – IV**

Security systems – access control systems, burglar alarms, CCTV network ; gas Piping for LPG and medical gases.

Different forms of refuse; Collection, storage and transport; garbage disposal refuse chutes.

**SESSIONAL WORK:**

1. Layout for fire protection, CCTV, medical gas distribution, LPG distribution.

**REFERENCES:**

1. Building Services by Rangwala

**INTERIOR DESIGN**  
**SEMESTER V**  
**5T7 ESTIMATION & COSTING I**  
**PAPER VII**

Theory - 40  
Sessional - 10

Total Marks – 50  
Passing Marks - 20

**AIM :-**To develop the necessary skills in understanding quantities and costs for estimation of basic civil works of buildings and interior works.

**UNIT I**

Market survey for rates of materials in interior. Current schedule of rates (CSR) of local PWD, mode and units of measurement, General rules for measurement, degree of accuracy.

**UNIT II**

Approximate methods of costing, Estimate and estimating, necessity of approximate estimates, principle of the approximate methods of costing, approximate methods of costing for various structures.

**UNIT III**

Types of estimates; methods of taking out quantities; Prime costs and provisional sums, provisional quantities, day work, Financial implications accompaniments of an estimate, Uses of an estimate.

**UNIT IV**

Preparation of schedule of quantities and estimates for basic civil works of brickwork and plaster of buildings.

**UNIT V**

Preparation of schedule of quantities and estimates for plumbing systems and electrical fittings.

**SESSIONAL WORK:**

1. Based on estimates of projects & sessional exams.

**REFERENCES:**

1. Estimating & Costing in Civil Engineering Theory & Practice”, B.N.Dutta, UBS Publishers’ Distributors Ltd., New Delhi, 1995.
2. Elements of Estimating & Costing, Rangwaala, Publishing House.

**INTERIOR DESIGN  
SEMESTER V  
5T8 DIGITAL APPLICATION  
SESSIONAL**

Sessional – 50  
Total Marks: 50  
Passing Marks: 20

**UNIT – I**

Basics of Autocad , creating first drawing , editing, command prompts , layouts .

**UNIT – II**

Dimensioning , adding text.

**UNIT III**

3D object drawing , theory behind 3D modeling , construction of 3D models and surface

**INTERIOR DESIGN  
SEMESTER VI  
6T1 INTERIOR DESIGNVI  
PAPER I**

Theory --80  
Sessional Work – 20  
Total Marks -- 100  
Passing Marks- 40

**AIM:** To establish the linkages between the culture and traditional ethos and its manifestation in the built environment / architecture , arts , crafts and interiors of that region. Students of design need sensitizing to various cultural manifestations in built spaces and need to understand the symbolism , patterns and forms that exist and existed in the interiors to make them unique as opposed to mass producing of spaces viz. contemporary residential and housing developments for lower income group

**COURSE CONTENT:** The course for the semester will be focused on styles (viz. period , historic and regional. ) and corporate / contemporary interiors Based on this the following units will be dealt with for each project however emphasis could vary for assessment for every design project .

**UNIT I**

Developing floor plans with facilitation and clearances with all relevant details with specifications .Generating reflected ceiling plan/s and its detailing with specification and finishes

**UNIT II:**

Developing wall elevations and relevant sections with materials and finishes and specifications

**UNIT III:**

Generating working drawings of furniture, designed furniture and other relevant components and interior finishes.

**UNIT IV:**

Integrating services in interiors ; electrification , AC , lighting plan etc.

**UNIT V:**

Generating views sketch views and perspectives

**SESSIONAL WORK:**

1. At least two major projects and two eskeys need to be done in a semester for better exposure to various nuances of designing better and quality spaces.
2. Designing of majorly non-residential projects , Developing floor plans , reflected ceiling plans ,detailing , writing specifications and generating working drawings of furniture , applying digital output methods .

3. Understanding typical non-residential building types. Reference to human scale and dimension as applied to various spaces. Advanced powerpoint presentations ,
4. Field trips – to be determined by faculty.

## **REFERENCES:**

1. Time saver standards for building types, DeChiara and Callender, McGrawhillcompany
2. Neufert Architect's data, Bousmaha Baiche& Nicholas Walliman, Blackwell science ltd.
3. National Building Code – ISI
4. Time saver standards for landscape architecture – Charles W Harris – McGraw Hill
5. New Metric Handbook – Patricia Tutt and David Adler – The Architectural Press
6. Interior Design – Ahmed Kasu
7. Journals, and magazines may be identified and included by faculty.

**INTERIOR DESIGN**  
**SEMESTER VI**  
**6T2 MATERIAL AND CONSTRUCTION TECHNIQUES VI**  
**PAPER II**

Theory - 40  
Sessional - 10

Total Marks -50  
Passing Marks - 20

**AIM:** The aim of this subject is to acquaint students with the different materials used in interiors projects, their design management and specifications, their properties and application to interiors. Students should be acquainted with understanding complex and composite interior projects, the technique of using the materials and make working drawings related to those.

**UNIT I**

Study on site, execution of complex interior projects and systems in terms of design origination, site execution sequences, and methodology

**UNIT II**

Different types of non ferrous metals , properties , sizes and forms of availability in market, methods of working with metals, fixing and joinery in non ferrous metals, finishing and treatment to metals,

**UNIT III**

Application of non ferrous metals to built form and interiors.

**UNIT IV**

Different types of finishes for vertical surfaces, composition, surface preparation and application methods , defects in Workmanship.

**UNIT V**

Sliding doors, sliding folding doors, revolving doors, pivoted doors, rolling shutter, collapsible gate, hardware for doors.

**SESSIONAL WORKS:**

1. Plates and tutorials, seminars on above topics.

**REFERENCES:**

1. Building Construction by Sushil Kumar, Rangwala, Barry and Mckay,

**BACHELOR OF INTERIOR DESIGN  
SEMESTER VI  
6T3 FURNITURE DESIGN IV  
PAPER III**

Theory-40  
Sessional-10  
Total Marks-50  
Passing Marks-20

**AIM** –System design approach and space planning through furniture as element of design.

**UNIT I**

Introduction to modular system of furniture design-its relationship to human ergonomics. Survey of various modular system available for different functions in market.

**UNIT II**

Modular approach to furniture design-design parameters and various form evolution applied to living units.

**UNIT III**

Modular approach to furniture design in office and institutional spaces.

**UNIT IV**

Devising furniture systems for urban use

**UNIT V**

Development of a program for a target user to conceptualise through case studies or implications and develop a suitable furniture.

**SESSIONAL WORK:**

1. Market survey presentation
2. Modular system of storage elements-closets,kitchencabinets,display,partitions etc.
3. Modular systems for office spaces.
4. Exhibition display panels, kiosks etc.
5. Design of working prototype model with the cost criteria.

**INTERIOR DESIGN  
SEMESTER VI  
6T4 HISTORY OF ART AND ARCHITECTURE IV  
PAPER IV**

Theory - 40  
Sessional – 10  
Total Marks: 50  
Passing marks: 20

**AIM:** To understand the progression of historical development of interiors in India & its application to interior design Impact of socio-cultural, political, religious, climatic, geological etc on evolution of a style of elements of style.

**UNIT I**

Understating and covering the vast expanse of the regional style of southern India.

**UNIT II**

Understanding the regional style of architecture of eastern India.

**UNIT III**

Understanding the regional style of architecture of Western India.

**UNIT IV**

Work of various famous Indian painters and the effect of their paintings on the masses. Also exploring the various distinct styles of vernacular arts existing in the different regions of India. Understanding the role of arts & crafts in man's life.

**UNIT V**

Tracing the development of Colonial Architecture (mainly British) in India and understanding the mixture of various India & foreign elements in it.

**SESSIONAL WORK:**

1. Indo- Islamic structures for ex: QutubMinar, TajMahal etc. sticking pictures and labeling the various elements by hand, also writing in text appropriately about that structure.
2. Note on :Squinch system. Terminology: sihn, siwan, mihrab, Quiblah , member, hujra, Zarih, Gumbad, eidgah, madresa, khana, cupola, kiosk etc.
3. Notes along with labeled pictures of the Mukteswara temple, Tingaraja Temple VaitalDeul, Parasuramesvara Temple, etc.
4. Terminology : Angashikhara, Anuraha- paga, anuratha- paga, ardhaMansapa, BhogaMandapa, Bhumi, BhumiAmla , Amla, amalka, bisama, Garba- grehaGandi, bada, bandhana, beki. Bhadras, Ghantha. Jagmohana ,Jagati, Rahapagas, Pista etc.
5. Note on Colonial influences (British) on art & architecture of India.
6. Glossary ( to be hand written) including all the terminologies done throughout the year with additions of certain more difficult terms.

**REFFRENCE:**

- 3) History of by Edith Tomory
- 4) History of art & architecture by Hiraskar.

**INTERIOR DESIGN**  
**SEMESTER VI**  
**6T5 STRUCTURE IV**  
**PAPER V**

Theory - 40  
Sessional - 10  
Total Marks – 50  
Passing Marks - 20

**AIM:** To understand basic principles of RCC construction. To study components of a building project.

**UNIT I**

Shear force & bending moment, application to cantilevers, simply supported beams, concept of hogging and sagging moments, and interrelation between S.F. and B.M. diagrams.

**UNIT II**

Introduction to reinforced concrete structures. Thumb rule for design of lintels, R.C.C. parapet, chajja, distribution of loads through elements of buildings, load transfer through lintels, slabs, beams, columns, floating columns. Basic R.C.C section and terms like Effective depth, covers, Overall Depth. Covers for different R.C.C members. Balanced, Under Reinforced, Over Reinforced Sections.

**UNIT III**

Perfect frames – Analysis of trusses, distribution of load using method of joints and graphical method.

**UNIT IV**

Drawing the typical reinforcement details in lintels, slabs and beams.

**UNIT V**

Typical reinforcement details in columns, column footings, staircases.

**SESSIONAL WORK:**

1. Structural systems and their layout for a small building and assignments on above topics.

**REFERENCE:**

2. S. Ramamrutham, Strength of Materials.
3. Shah and Kale, Design of R.C.C.

**INTERIOR DESIGN**  
**SEMESTER VI**  
**6T6 INTERIOR SERVICES II**  
**PAPER VI**

Theory - 40

Sessional – 10  
Passing Marks - 20  
Total Marks - 50

**AIM:** Understanding the behaviour of sound in enclosed spaces and creating acoustically comfortable and functional interior environments. Understanding the role of different services like garbage disposal, security systems, fire protection, gas distribution.

**UNIT – I**

Properties of sound, process of hearing, behaviour of sound, room acoustics, noise control-outdoor and indoor ; sound insulation ; Noise criteria of building materials, interior elements and finishes.

**UNIT II**

Interior elements and finishes, various materials and sound insulation. Partition, Walls, floors and ceilings for acoustical insulation, reverberation time and auditorium design.

**UNIT III:**

Building Management systems.

**UNIT IV:**

Fire safety and preventive measures. Fire fighting regulations with reference to National Building code. Fire escape stairways and escape routes, dry and wet risers, Water demand for fire fighting, storage tanks, fire hydrants etc.

**UNIT V**

Fire – causes and spread of fire , Design consideration for fire safety ; Devices for fire detection and fighting. Services for multistoried buildings like Lifts, Staircases etc.

**SESSIONAL WORK:**

1. Drainage layout, drainage layout with septic tank , rainwater harvesting / disposal layout , watersupply layout, for residential applications, toilet details for public & residential applications.

**INTERIOR DESIGN**  
**SEMESTER VI**  
**6T7 ESTIMATION AND COSTING II**  
**PAPER VII**

Theory - 40  
Sessional – 10  
Total Marks- 50  
Passing Marks: 20

**AIM:**To develop the necessary skills in understanding quantities and costs for estimation of interior works.

**UNIT I**

Preparation of schedule of quantities and estimates for flooring and ceiling of various kinds.

**UNIT II**

Preparation of schedule of quantities and estimates for coloring and treatment to walls.

**UNIT III**

Taking out quantities and estimates of material required for wardrobes in interior works.

Preparing cutting plans for plywood and laminates.

**UNIT IV**

Rate analysis,definition, purpose of rate analysis, importance of rate analysis, essential of rate analysis, task works per day rate analysis of preliminary items of civil work .

**UNIT V**

Rate analysis of items of interior works.

**UNIT VI**

Coordination of various agencies involved in work of interior during execution; Accounting and book keeping.

**SESSIONAL WORK:**

1. Based on estimates of projects & sessional exams.

**REFERENCES:**

1. Estimating & Costing in Civil Engineering Theory & Practice”, B N Dutta, UBS
2. Publishers’ Distributors Ltd., New Delhi, 1995.
3. Elements of Estimating &Costing, Rangwaala, Publishing House.

# **INTERIOR DESIGN**

## **SEMESTER VI**

### **6T8 DIGITAL APPLICATION II**

#### **SESSIONAL**

Sessional – 50

Total Marks - 50

Passing Marks - 20

#### **UNIT I**

Basic concepts of 3D modeling

#### **UNIT II**

Modeling tools , techniques and commands

#### **UNIT III**

Extrusion of solids, solid editing

#### **UNIT IV**

3D object drawing , theory behind 3D modeling , construction of 3D models and surface models.walkthrough

#### **UNIT V**

Introduction to graphic creation and image editing software like COREL package, Adobe photoshop, Adobe illustrator etc

**INTERIOR DESIGN  
SEMESTER VII  
7T1 INTERIOR DESIGNVII  
SESSIONAL**

Sessional- 100  
Total Marks- 100  
Passing Marks- 40

**AIM-** To understand the urban context in which the individual design project is set and to aid in understanding the complexities and fundamentals of all design dimensions

**UNIT – I**

Exhibition display-urban level national level.

**UNIT – II**

Interior of ports-airports,bus stops, railway station etc.

**UNIT – III**

Urban interiors-shopping malls,streets,town squares etc.

**UNIT- IV**

Automobile interiors-bus,caretc

**SESSIONAL WORK:**

1. Exercises to understand urban space like exhibitions.
2. Design for stalls in exhibitions
3. Developing kiosks and other elements like street furniture in context to the development around squares etc.

**INTERIOR DESIGN  
SEMESTER VII  
7T2 INTERIOR LANDSCAPE I  
PAPER II**

Theory -40

Sessional Work – 10

Total Marks – 50  
Passing Marks -- 20

**AIM:** Exposure to various concepts, ideas and techniques prevalent in landscape architecture

Landscape design is a vital component of architecture and interiors through its ability to transform the spatial characteristics and make them aesthetics since it predominantly deals with the planning of open Space .

**UNIT I**

Elements of Landscape Design ,Hardscape and Softscape Elements. Elements of landscape – land elements, land forms etc. Their use and importance in landscape .

**UNIT II**

Basic principles of landscape design; importance and relevance of aesthetic , functional, social ,climatic and economic considerations. Types of landscapes , their characteristics and suitability.

**UNIT III**

Structures in landscapes , water bodies and their built forms like fountains and ponds etc. containers for soil and water and their construction details.Landscape foundations, grading, drainage, paved and unpaved surfaces, roads and paths, their types, natural landforms, its advantages, retaining walls and slope retention,

**UNIT IV**

Plants and planting in various land types .Characteristics and classification of plant materials ,Use Of plant materials for enhancing landscapes . (Horticultural study of plants, shrubs, climbers soil suitability , climate , growth , foliage , maturity and diseases and maintenance issues in in various climate type and environment etc.)

**UNIT V**

Services in landscapes andtheir integration in landscape design . viz. water supply , drainage , lighting etc. in interiors. Factors to be considered, problems and issues .types of lighting.and suitability.

**SESSIONAL WORK:**

1. Plant identification platesand reports.
2. Sketching assignments and term papers.

## **REFERENCE BOOKS**

1. T S S for Landscape Architecture, McGrawHill, Inc, 1995
2. Grant W Reid, From Concept to Form in Landscape Design, Van Nostrand Reinhold  
a. Company, 1993
3. Brian Hacket, Planting Design
4. T.K. Bose and Chowdhury, Tropical Garden Plants in Colour, Horticulture And Allied  
a. Publishers,Calcutta,1991
5. Motloch, J.L.,Introduction to Landscape Design", Van Nostrand Reinhold Publishing  
a. Co., New York, 1991.
6. Bring, M, "Japanese Gardens: "design & Meaning
7. Simonds, J.O., "Earthscape: A Manual of Environmental planning", McGraw Hill Book  
a. Co., New York,1978.
8. • Motloch, J.L., "Introduction to Landscape Design", Van Nostrand Reinhold  
Publishing Co., New York,1991..., McGraw Hill Book Co., New York, 1981.
9. Michael Laurie, An Introduction to Landscape Architecture, Elsevier, 1986
10. Geoffrey And Susan Jellicoe, The Landscape of Man, Thames And Hudson, 1987

**INTERIOR DESIGN  
SEMESTER VII  
7T3 ENVIRONMENTAL PSYCHOLOGY  
PAPER III**

Theory – 40  
Sessional – 10  
Total Marks – 50  
Passing Marks - 20

**AIM:** Reflection of behavior patterns of human being into space planning. Relationship of man and space.

**UNIT I:**

Analysis of human mind and his/her image of the world. Influence of social behavior patterns, traditions in thinking and behaving and their reflections on physical environment.

**UNIT II:**

To understand theory of social behavior and space conditions behavior.

**UNIT III:**

To study influence of spatial role of space making elements and how this assembly affects space perception. To understand their impact on spatial experience.

**UNIT IV:**

Understand cognitive theory and gestalt principle of psychology. These principles are to be related in the field of space making to develop an understanding of place making.

**UNIT V:**

Relationship of spatial elements like floor, column, wall, window, door steel roof and spatial parameter like illuminations spatial organization, furniture, IAQ, colour to the psychology and perception of space.

**SESSIONAL WORK:**

Select all existing buildings, analyze and abstract it out in terms of basic constituent space making elements, which are key to the architectural assembly. Submit the analysis in a form of report containing analytical diagrams and graphic sketch. Create design showing better spatial experience and its desired effect.

**REFERENCES:**

1. Lang, J.:Creating Architectural Theory, Van Nostrand Reinhold Company, New York (1991).Bartuska, T. J. The Built Environment Definition and Scope. In T. J. Bartuska, Introduction: Definition, Design and Development of Built Environment

**INTERIOR DESIGN**  
**SEMESTER VII**  
**7T4 STRUCTURE V**  
**PAPER IV**

Theory - 40  
Sessional: 10  
Total Marks – 50  
Passing Marks: 20

**UNIT I**

Fixed Beam as a statically in-determinate structure. Concept of negative bending moment at supports. Fixed end reactions (No derivations). Simple Problems with full uniformly distributed load and one or two point loads.

**UNIT II**

Continuous beams. Concept of continuity over supports and typical B.M.D to explain the negative B.M.D over supports.

**UNIT III**

Renovation of load bearing & framed structures. Removing walls, strengthening foundations, creating supports using steel / concrete, columns/ beams. Adding lintels, creating openings.

**UNIT IV**

Causes and prevention of cracks in buildings, investigations relating to cracks, causes of occurrence of cracks, severity of cracks.

**UNIT V**

Anti termite treatment: Types of anti-termite treatment, pre-constructional and post-constructional treatments.

**SESSIONAL WORK:**

Case study of renovation of a small building plan, drawings and assignments based on above topics.

**REFERENCES:**

1. S. Ramamrutham, Strength of Materials.
2. Vazirani – Rathwani, Design of steel structures.

**INTERIOR DESIGN  
SEMESTER VII  
7T5 DESIGN MANAGEMENT I  
PAPER V**

Theory-40  
Sessional – 10  
Total Marks – 50  
Passing Marks- 20

**AIM:**Introduction to professionalism, design practice, working of a design organization. Understanding the responsibility of a designer and the technicalities of the profession.

**UNIT I**

Issues of Professional Practice courses, Nature of Profession. Types of Interior Design practice. Types of design office organization.

**UNIT II**

Nature of relationship between a client and the professional.Taking instruction from the client, its interpretation.

**UNIT III**

Design process and its stages. Scope of services.

**UNIT IV**

Scale of professional change, types of fees, Process of fee negotiation.

**UNIT V**

Professional code of conduct and ethics.

**SESSIONAL WORK:**

1. Assignments based on all above topics.

**REFERENCES:**

1. A guide to business principles and practices for Interior Designers by Harry Siegel

**BACHELOR OF NTERIOR DESIGN**  
**SEMESTER VII**  
**7T6 INTERIOR DETAILING I**  
**SESSIONAL**

Sessional Work – 100

Totaal Marks: 100

Passing marks: 40

**AIM: Ability to prepare working details of interior design projects.**

**UNIT I**

**Preparation of working details for:**

Furniture with Specification

Flooring with specification.

**UNIT II**

**Preparation of working details for:**

Ceiling with specification.

Wall treatment with specification.

**UNIT III**

Service Layouts

- a) Electrical layout with specification
- b) Illumination layout with specification
- c) AC layout with specification
- d) Fire fighting system – layout with specification
- e) Computer networking – layout with specification.
- f) Communication cabling – layout with specification

**UNIT IV**

Product details.

**INTERIOR DESIGN**  
**SEMESTER VIII**  
**8T1 INTERIOR DESIGN VIII**  
**PAPER I**

**Theory-80**

Sessional - 20

Total Marks – 100  
Passing Marks- 40

**AIM:** To understand the urban context in which the individual design project is set and to aid in understanding the complexities and fundamentals of all design dimensions

Ability to prepare working details of interior design projects.

**UNIT I**

Drawing media management: Drawing paper opaque and tracing sheets, paper sizes, A0 toA6 and B0 toB6, folding ammonia prints for filing and unfolding in filed form.

Orientation and position of titles: Detail contents, location of main view, part details, key plan, common specification, linkages to previous and following sheets. Titles for main and sub drawings, highlighting the titles by bold lettering, underlining, boxing etc. mentioning scale, indicating graphical scale and other information likely to be reduced or enlarged in size

**UNIT II**

Preparation of working details for Furniture with Specification

**UNIT III**

Preparation of working details for Flooring with specification.

**UNIT IV**

Preparation of working details for ceiling with specification.

**UNIT V**

Preparation of working details for Wall treatment with specification.

**INTERIOR DESIGN  
SEMESTER VIII  
8T2 INTERIOR LANDSCAPEII  
PAPER II**

Theory-40  
Sessional- 10  
Total Marks- 50  
Passing Marks- 20

**AIM :**Creating awareness of the need for green design and imparting knowledge of designing sustainably , advocating of the application of passive and active use of renewable energy system and the promotion of efficient use of water, materials and waste through the sustainable concept .project handling and preparation

**UNIT I**

Methodology and process of site analysis, data collection, compilation, presentation and analysis techniques. Preparation, interpretation and evolution of landscape plans, site planning and landscape elements. Project management and use of CPM and PERT.

**UNIT II**

Study of Historical developments in landscape architecture and types in the west . Ancient period to renaissance period garden styles. Europe and the American.

**UNIT III**

Study of Historical garden developments and landscape types in the east ( India, China ,Japan etc.). Their characteristics , influences and conditions which evolved them .

**UNIT IV:**

Environmental Science Ecology and concept of Ecosystem, Environmental deterioration, Environment protection measures. Environmental Issues.Understanding urban landscape design road landscaping, waterfront development, landscaping of residential areas, Industrial Landscaping. Concept of public gardens and private gardens.

**UNIT V:**

Interior landscape principles and consideration . Bio climatic design concepts , innovative green technologies in landscaping , Concept of sustainable development and case studies.

**SESSIONALWORK:**

1. Case study / studies of landscape design for sustainable use of resources
2. Landscape DESIGN Exercise FOR A GIVEN open space (area of 2000 to 3000 sq. metres)

3. Sketching assignments and term papers.
4. Plates on above topics.

## **REFERENCES:**

1. T S S for Landscape Architecture, McGrawHill, Inc, 1995
2. Grant W Reid, From Concept to Form in Landscape Design, Van Nostrand Reinhold Company, 1993
3. Brian Hacket, Planting Design
4. T.K. Bose and Chowdhury, Tropical Garden Plants in Colour, Horticulture And Allied publishers,Calcutta,1991
5. Motloch, J.L.,Introduction to Landscape Design", Van Nostrand Reinhold Publishing Co., New York, 1991.
6. Bring, M, "Japanese Gardens: "design & Meaning
7. Simonds, J.O., "Earthscape: A Manual of Environmental planning", McGraw Hill Book Co., New York,1978.
8. Motloch, J.L., "Introduction to Landscape Design", Van Nostrand Reinhold Publishing Co., New York,1991.., McGraw Hill Book Co., New York, 1981.
9. Michael Laurie, An Introduction to Landscape Architecture, Elsevier, 1986
10. Geoffrey And Susan Jellicoe, The Landscape of Man, Thames And Hudson, 1987

**INTERIOR DESIGN  
SEMESTER VIII  
8T3 GREEN BUILDING TECHNOLOGY  
PAPER III**

Theory –40  
Sessional-10  
Total Marks- 50  
Passing Marks –20

**AIM:** To have an increased awareness among students on issues in areas of green building technology.

**UNIT I**

Introduction to green building technology, definition, need and concept, challenges Global, Regional and Local environmental issues, natural resources and their pollution, Carbon credits, Zero waste concept, benefits of green buildings, considerations of green buildings.

**UNIT II**

Parameters to be considered for making buildings green, basic concepts of building design, systems design and controls.

**UNIT III**

Materials used in green building construction and green interiors.

**UNIT** Methods of reducing use of natural resources to make buildings green.

**UNIT V**

Rating systems of green buildings, green buildings certification, carbon credits.

**SESSIONAL WORK:** Based on assignments and presentations.

**REFERENCES:.**

1. Climate responsive Architecture by Anant Krishnan
2. ECBC Code 2007, Bureau of Energy Efficiency, New Delhi Bureau of Energy Efficiency Publications – Rating System, TERI Publications – GRIHA Rating System.

**INTERIOR DESIGN  
SEMESTER VIII  
8T4 STRUCTURE – VI  
PAPER IV**

Theory -	40
Sessional -	10
Total Marks –	50
Passing Marks -	20

**UNIT I**

Different ways of covering large span areas, basic economics of large span structures, knowledge of material requirements, Light supported space structures, integrated display system, structural elements. Structural systems of fair grounds and exhibition spaces. Structural systems for false ceilings and furniture forms. Effect of simple geometric forms on the overall structural behavior.

**UNIT II**

Preliminary design criteria & thumb rule for sizes of steel columns and steel girders. Steel Tables-Different Sections Available and their applications. Reading of Steel Tables. Study and relative strengths of beams as 'I', 'L' and 'T' sections. Introduction to I.S.800 (W.S. Method). Different grades and properties of Steel and teel sections.

**UNIT III**

Connections of steel structures bolted/riveted/welded. Basics of welded connections, types of welds, strength of welds, size of welds.

**UNIT IV**

Roof Trusses – Preliminary design of roof truss tension, compression members.

**UNIT V**

Introduction to general principles of earthquake proof buildings. Load Transfer in Arches – Different Kinds of hinged Arches.

**SESSIONAL WORK:**

1. Assignments and presentations on above topics.

**REFERENCE BOOKS:**

2. S. Ramamrutham, Strength of Materials.
3. Vazirani – Rathwani, Design of steel structures.

**INTERIOR DESIGN  
SEMESTER VIII  
8T5 DESIGN MANAGEMENT II  
PAPER V**

Theory - 40  
Sessional – 10  
Total Marks – 50  
Passing – 20

**AIM:** To professional attitude in students work and understanding relevance of various types of documents.

**UNIT I**

Tenders, types of tenders, tender document, work order.

**UNIT II:**

Contract, types of contracts, contract documents, arbitration.

**UNIT III:**

Billing methods, tax liabilities, actual estimation, introduction of different estimates.

**UNIT IV**

Other aspects of design creation and its management, design methodologies, problem solving, fore-casting, decision making information systems, finance etc.

**UNIT V**

CPM and PERT, Brief introduction to building byelaws.

**SESSIONAL WORK:**

1. Assignments based on all above topics.

**REFERENCES:**

1. A guide to business principles and practices for Interior Designers by Harry Siegel

**INTERIOR DESIGN**  
**SEMESTER VIII**  
**8T6 PROJECT**

Viva voce - 100  
Total Marks - 100  
Passing Marks: 40

**AIM:** Research – Thesis.

- The area of work chosen by the student with the guidance of a faculty member could be in any of the following areas :-
- History and theory of interior spaces, interior design language of various culture , art and craft from its relevance in to interior spaces , mass production of various interior elements, material search, urban interiors , graphics and space psychology and human behaviour or any other issue accepted by the institution as relevant to the field of interior design.

**EVALUATION**

- The study would be presented as a written document with supporting illustration periodically reviewed and examined by an external examiner.

# **TWO YEAR POST GRADUATE DEGREE COURSE (MASTERS OF ARTS) IN POLITICAL SCIENCE**

---

## **SYLLABUS OF CHOICE BASED CREDIT SYSTEM 2016-17**

---

### **A. OBJECTIVES**

Political Science as a discipline of study is known as the science which studies the ruler and the ruled. It encompasses the study of an individual in relation to the State, Society, Nation and the World. It deals not merely with the structures of government and administration and study of political theories that hold sway over human life, rights and duties of the citizens, but also the developmental processes. It has assumed an interdisciplinary character. The subject matter of political science is changing fast and so we need to rely on new conceptual instruments that allow us a better understanding of political phenomena. Similarly, we need to explore new tools for analysis within the discipline. This is a time to ponder over whether Political Science categories and concepts are useful for an increasingly complex world. A student of political science cannot remain oblivious of the processes of decision making and the socio-economic orientations behind them. The proposed post graduate course in Political Science is designed in the light of these new dimensions of political science in the changing world. It will impart basic principles, ideas, themes, concepts of the subject as well as relate those to the latest development. The course is further designed to provide the understanding of the fundamental ideas, concepts and processes involved in the understanding of the discipline in general. It also takes into consideration the idea of politics in India and establishes the methods to understand the science of politics in India in particular. The course tries to create a fine balance to provide exposure not just to the core political science segment but also equally to the International Relations component.

Following are the broad objectives of the course-

1. To enable students to understand the entire gamut of political science and its interrelations with other disciplines;
2. To appraise the students of recent trends in Political Science and the new ideas, approaches, methodologies and perspectives;

3. To develop the analytical abilities of the students that will help to make sense of the changes taking place;
4. To appraise the students of the changing social, political and economic environment in India and in the world and the implications it holds for each other;
5. To develop interdisciplinary outlook and comprehensive understanding among the students about political realities;
6. To inculcate research and analytical habits among students and encourage re-conceptualization of politics vis-à-vis the changing economy;
7. To equip them to act as sensitized individuals and active citizens and to explore diverse careers in life.
8. The CBCS enables students to take courses of their choice, learn at their pace, undergo additional courses, acquire credits more than what is required and adopt an interdisciplinary approach.

#### **B. ELIGIBILITY**

##### **Admission and Promotion:**

1. Students, who have passed post-Standard XII or post-HSSC, 3 year or 5 years' degree course in any discipline from a UGC recognized statutory University/ Institute in India, are eligible for admission in the 1<sup>st</sup> Semester.
2. Candidates obtaining at least 'P' (Pass) Grades in all courses (inclusive of Core and Elective) of first semester and obtained at least 'P'(Pass) Grade in 50% of courses of Second Semester Examination shall be allowed to take admission in third semester.
3. The eligibility will however be subject to the fulfillment of other eligibility conditions and rules of admission laid down by the RTM Nagpur University as in force.
4. The course is open for regular, full time students only.
5. Rest of the eligibility criteria will be governed by various rules, ordinances, etc., issued by the university from time to time.

#### **C. DATE OF COMMENCEMENT AND ACADEMIC YEAR**

1. Two consecutive (one odd+ one even) semesters constitutes one Academic year.
2. New syllabus will come into force from the academic year 2016-17 for M.A. Semesters I and II.

#### **D. PATTERN OF NEW COURSE**

1. The new syllabus is designed as per the Semester Pattern with Continuous Internal Evaluation (CIE) schema.

2. The entire course is full time of Two Academic years' duration consisting of four semesters.
3. Each semester will have 04(four) papers and the entire course requirement is of 16 papers for the successful completion of the M.A. programme.
4. The papers are divided into Core, Elective, and Foundation papers.
5. The M.A. programme is designed as Choice Based Credit System (CBCS) within the Credit Based Semester System (CBSS).
6. Semester I and II consists of Core and Elective Papers of total 16 credits (each paper will consist of 4 credits) and Semester III and IV consists of Core, Elective and Foundation papers. (schema given on pg. no. 5)
7. The system is based upon continuous internal evaluation having a written and descriptive examination of 80 marks and internal evaluation of 20 marks for each paper.
8. The entire course will of 1600 marks.

#### E. COURSES

The PG Programme in Political Science consists of the following courses that are offered to the students.

1. Core: Consists of the Compulsory papers offered in all the four semesters which are core to the discipline of political science. The students admitted in the department have to compulsorily appear in these papers. (These papers are not for offer to the other discipline students)
2. Elective: The elective papers are for the students admitted in the department only. It consists of papers to provide an opportunity to the students to select from the pool of papers so as to enable her/him to carry out specializations. They are supportive, scope enhancing and provides interdisciplinary exposures vis a vis the parent discipline. (students from other disciplines cannot offer these papers)
3. Foundation (compulsory and elective): The papers offered in the foundation courses are only for the students of discipline other than political science.

#### F. PATTERN OF EXAMINATION AND QUESTION PAPER

Students will be evaluated at two levels in the following manner.

- a. Written Examination
  1. There will be written examination of descriptive type for each paper at the end of every semester.
  2. Each paper will be of 80 marks of 3-hours duration

3. There will be two questions on each unit of syllabus.
  4. The question paper will consist of Five questions with internal choices in question.
  5. The fifth question will be common from all units.
  6. Students will have to answer all the five questions.
  7. Each question will carry 16 marks.
- b. Internal Evaluation
1. There will be internal evaluation of each student in each paper.
  2. Internal evaluation will be of 20 Marks. It will include 10 marks for the assignments (this can include research paper writing, book reviews, survey, project, study tour, seminar presentation etc.)
  3. The teacher concerned will decide the task to be given to the students and will also evaluate the performance of the student.
  4. Internal Assessment will also consist of 10 Marks for viva-voce and participation in class room.
  5. Personal interview will be conducted jointly by the faculty of the department or teachers concerned and the principal of the college.

#### G. MINIMUM STANDARD OF PASSING

1. The students should secure minimum 40 marks out of 100 in the written and internal examination together.

#### H. CREDIT AND GRADE POINT SYSTEM

Credit System: The following will be credit system of the M.A. Programme of the department of Political Science.

The programme will consist of full credit courses of 4 credits/week. Each semester the students are required to complete 4 full credit papers. In all the semester will be of 16 credits. The overall M.A. programme will be of 64 credits. A student is required to fulfill minimum 60 credits from the department and minimum four credits to be attained from the other discipline of their choice.

**Grade Point System (as per UGC directives)**

Letter Grade	Grade Point
O (outstanding)	10
A+ (Excellent)	09
A (Very Good)	08
B+ (Good)	07
B (Above Average)	06

C (Average)	05
P (Pass)	04
F (fail)	00
Absent	00

I. ABSORPTION SCHEME

1. Students seeking admission to third semester must clear first semester in both written(theory) and internal examination.
2. First year annual pattern students can get admission to third semester directly provided they clear all the papers in first attempt.
3. Rules and regulations passed by the university in this matter will govern the absorption scheme.

J. CURRICULUM SCHEMA

**M.A. I**

SEMESTER-I

PAPER I AND II	AND III	-	CORE
PAPER IV		-	ELECTIVE

SEMESTER-II

PAPER I AND II	and III-	CORE
PAPER IV		- ELECTIVE

**M.A.II**

SEMESTER- III

PAPER I AND II	-	CORE
PAPER III	-	ELECTIVE
PAPER IV	-	FOUNDATION

SEMESTER- IV

PAPER I AND II	-	CORE
PAPER III	-	ELECTIVE
PAPER IV	-	FOUNDATION

## **K. SEMESTER-WISE OUTLINE OF THE COURSE**

### **M.A. I**

#### **SEMESTER – I**

##### **CORE**

POL 1T1 - Modern Indian Political Thought

POL 1T2 - Indian Government and Politics

POL 1T3 - Modern Political Ideologies

##### **ELECTIVE**

(Choose any ONE from the following elective papers)

POL 1T4.1 - Politics of Developing Countries

POL 1T4.2 - Fundamentals of Foreign Policy

POL 1T4.3 - International Law

POL 1T4.4 - Theory and Practice of Diplomacy

#### **SEMESTER – II**

##### **CORE**

POL 2T1 - Comparative Politics

POL 2T2 - Western Political Thought

POL 2T3 - International Relations

##### **ELECTIVE**

(Choose any ONE from the following elective papers)

POL 2T4.1 - Political Sociology

POL 2T4.2 - Political Anthropology

POL 2T4.3 - Western Political Theory

POL 2T4.4 - South Asian Political System

(With reference to Pakistan, Bangladesh, Sri Lanka & Nepal)

### **M.A. II**

#### **SEMESTER - III**

##### **CORE**

POL 3T1 - Research Methodology

POL 3T2 - Public Administration

## **ELECTIVES**

**(Choose any ONE from the following elective papers)**

POL 3T3.1 - Politics of Maharashtra

POL 3T3.2 - Ancient Indian Political Thought

POL 3T3.3 - Electoral Politics in India

POL 3T3.4 - Globalization and its Impact on India

## **FOUNDATION COURSE**

**(ONLY For the students of disciplines other than Political Science)**

POL 3T4.1 - Political Science : Ideas and Concepts

*(Students of Political Science who do not wish to offer foundation course from other disciplines can choose any ONE paper from the following as foundation course)*

POL 3T4.2 - India and the World

POL 3T4.3 - Local Self- Government

POL 3T4.4 - Major Issues in Contemporary Politics

## **SEMESTER - IV**

### **CORE**

POL 4T1 - State Politics in India

POL 4T2 - Indian Administration

### **ELECTIVES**

**(Choose any ONE from the following elective papers)**

POL 4T3.1 - Pressure Groups and Social Movements

POL 4T3.2 - Reservation Policy in India

POL 4T3.3 - International Human Rights- Problems and Prospects

POL 4T3.4 - Public Policy in India

### **FOUNDATION COURSE**

**(To be opted by students of disciplines other than Political Science)**

POL 4T4.1- Indian Constitution and Its Working

*(Students of political science who do not wish to offer foundation course from other disciplines can choose any ONE elective paper from the following as foundation course)*

POL 4T4.2 - International Organizations

POL 4T4.3 - Development Administration

POL 4T4.4 - Human Rights and Indian Constitution

## **L. PUBLICATIONS AND RESOURCE MATERIALS**

List of Journals with publisher's address & websites :

- MARATHI -

- Samaj Prabodhan Patrika – Editor – Dr. Ashok Chausalkar, Deptt.Of Political Science, Shivaji University, Kolhapur.
- Anubhav – 8, Amit Complex, 474, Sadashiv Peth, Pune-30.
- Andolan – 6, Raghav, Shri-Raghuraj 118-A, Simhagarh Road,Pune-30
- Parivartanacha Vatsaru – C/o. The Unique Academy, VastuChambers, Shirole Road, Opp. Fergusson College, Pune.
- Sadhana – Sadhana Media Center, 431, Shaniwar Peth, Pune -30.
- Vichar Shalaka – Dr. Nagprao Kumbhar, Aai, Shiv Nagar, Sut-MillRoad, Latur – 413512.
- Nav Bharat – Pradnya Pathshala Mandal, 315, Gangapuri, Dist:Satara, WAI – 412803.
- Pradnyalok – C/o. S. M. Halde, 487-A, Hanuman Nagar, Nagpur –440009.
- Aajcha Sudharak – Mohoni Bhavan, Khare Town, Dharampeth, Nagpur-440010.

- HINDI -

- Shodharthi – Dr. Anilkumar Varma, 78, New Civil Lines, Behind Gurudeo Palace, Kanpur – 208024.
- Samayeek Varta – Yogendra Yadav, XB-4, Sahavikas Society, 68, Indraprastha Vistar, Patadganj, Delhi – 110092.
- Chintan Srujan - Dr. B. B. Kumar, Secretary, Astha Bharati, 12/604,East End Apts., Mayur Vihar, Phase-I Extn., Delhi – 110096. [www.asthabharati.org](http://www.asthabharati.org)
- Journal of Asia For Democracy and Development, by the Council for Peace, Development & Cultural Unity, Modi Niwas, MORENA, (MP)
- Samanyajan Sandesh – Lohiya Adhyayan Kendra, Subhash Road, Near Cotton Market, Nagpur – 440018

- ENGLISH –

- Economic & Political Weekly – [www.epw.org.in](http://www.epw.org.in)
- Indian Political Science Journal – Dr. Sanjeev Kumar Sharma,Professor& Head, Department of Political Science, CCS University,Meerut (UP) – available in Hindi also.
- Manthan – C/o. Deendayal Research Institute, 7-E, SwamiRamtirtha Nagar, Rani Jhansi Road, New Delhi – 110055.
- World Focus – [www.cnfworldfocus.org](http://www.cnfworldfocus.org)
- Bhartiya Pradnya – Dr. T. H. Chowdhary, 3-4-705/4, Narayanguda,Hyderabad – 5000020.
- Dialogue (Ashta Bharati Journal) – Dr. B. B. Kumar, Secretary,Astha Bharati, 12/604, East End Apts., Mayur Vihar, Phase-I Extn.,Delhi – 110096. [www.asthabharati.org](http://www.asthabharati.org)
- Indian Journal of Public Administration, C/o. Editor, IIPA,Indraprastha Estate, Ring Road, New Delhi – 110002.

- Comparative Political Studies (SAGE) - <http://cps.sagepub.com>
- India Quarterly: A Journal of International Affairs (SAGE) - <http://iqqq.sagepub.com>
- International Relations (SAGE) - <http://ire.sagepub.com>
- Indian Social Science Review Indian Council of Social Science Research
- Philosophy and Social Action, Editor : Dhirendra Sharma, Philosophy & Social Action, "Nirmal Nilay" , Dehradun - 248009,(Uttaranchal) India. - <http://www.psaindia.org>
- Journal of Indian School of Political Economy (Arthabodh), Indian School of Political Economy, Pune
- Journal of Interdisciplinary Policy Research and Action, Nagpur, A-2, 604, Samruddhi Sankul, Civil Lines, Nagpur-440001.

**Supplementary Reading Material :**

1. Marathi Vishwa Kosh (Marathi Encyclopedia) – Vols 1 to 16,
2. Bhartiya Samaj Vidnyan Kosh
3. Rajyashastra Kosh by Vora & Palshikar
4. Rajyashastra Kosh by Dr. P.D.Deore& others, Diamond Publishers
5. Rajniti Shastra Parichay by Acharya S.D. Jawdekar
6. All Books on Political Science by Yashvantrao Chavan Maharashtra Open University

**Important Institutional Websites :**

1. Indian Parliament & Central Government [www.parliamentofindia.nic.in](http://www.parliamentofindia.nic.in)
2. Election Commission – [www.eci.gov.in](http://www.eci.gov.in)
3. Census of India – [www.censusindia.net](http://www.censusindia.net)
4. Supreme Court – <http://supremecourtofindia.nic.in>
5. United Nations – [www.un.org](http://www.un.org)
6. Reserve Bank of India - [www.rbi.org.in](http://www.rbi.org.in)
7. Maharashtra Government - [maharashtra.gov.in](http://maharashtra.gov.in)
8. Tata Institute of Social Science – [www.tiss-uirf.org](http://www.tiss-uirf.org)
9. Lokniti-CSDS – [www.lokniti.org](http://www.lokniti.org)
10. Prayas – [www.prayaspune.org](http://www.prayaspune.org)
11. International Institute for Democracy & Electoral Assistance – [www.idea.int](http://www.idea.int)
12. Rambhau Mhalgi Prabodhini - <http://rmponweb.org>

**M. Detail Semester-wise contents of the syllabi are given below:-**

**M.A. I**

**SEMESTER - I**

**CORE PAPERS**

**POL-1T1 : MODERN INDIAN POLITICAL THOUGHT**

**UNIT-I:**

- a. Rajarammohan Roy- Socio-political reforms and movements, thoughts on the British government, Education and social practices in India.
- Jyotiba Fuley- Socio-political movements and reforms, thoughts on Caste system, Education and the Idea of State
- b. Dr. B.R.Ambedkar- Thoughts on Social Political System, Caste System, Constitutional Democracy and national integration and political concepts of Liberty, Equality and Fraternity

**UNIT-II:**

- a. Abul Klam Azad- Indian nationalism, hindu muslim unity and composite nationalism
- b. V.D.Savarkar- nationalism, hindu militarism, hindu society

**UNIT-III:**

- a. M.K. Gandhi- Indian nationalism, theory of state, Instruments of protest-satyagraha, nonviolence, non-cooperation and civil-disobedience  
Bal Gangadhar Tilak- on Indian society, on Indian nationalism, Self Rule, Swadeshi,
- b. Jayprakash Narayan- on Indian nationalism and Political Awakening, Democracy, Total Revolution.

**UNIT-IV:**

- a. Jawaharlal Nehru- Idea of India and Indian nationalism, on Indian Constitutionalism, Democratic Socialism and Philosophy of India's Foreign Policy
  - b. Rammanohar Lohia – on Indian nationalism, on Choukhamba theory, Social Equality
- M.N. Roy- on Indian nationalism, communism and new humanism

**Reading Material :**

1. Appadorai, Documents on Political Thought in Modern India, 2 vols. Bombay, Oxford University Press, 1970.
2. —, Indian Political Thinking Through the Ages, Delhi, Khanna Publishers, 1992.
  - A. Azad, India Wins Freedom, Hyderabad, Orient Longman, 1988.
3. J. Bandhopadhyaya, Social and Political Thought of Gandhi, Bombay, Allied, 1969.
4. J. V. Bondurant, Conquest of Violence: The Gandhian Philosophy of Conflict, Berkeley, University of California Press, 1965.
5. K. Bose, Studies in Gandhism, Calcutta, Merit Publishers, 1962.
7. R. J. Cashman, The Myth of the 'Lokmanya' Tilak and Mass Politics in Maharashtra, Berkeley, University of California Press, 1975.
8. Chandra, Nationalism and Colonialism in Modern India, Delhi, Vikas, 1979.

9. Chatterjee and G. Pandey (eds.), *Subaltern Studies VII*, Delhi, Oxford University Press, 1992.
10. K. Damodaran, *Indian Thought: A Critical Survey*, London, Asia Publishing House, 1967.
11. T. de Bary, *Sources of Indian Tradition*, New York, Columbia University Press, 1958.
12. G. Dalton, *India's Idea of Freedom: Political Thought of Swami Vivekananda*,
13. Aurobindo Ghose, Mahatma Gandhi and Rabindranath Tagore, Delhi, Academic Press, 1982.
14. R. Desai, *Social Background of Indian Nationalism*, Bombay, Popular, 1954.
15. Diehl, E.V. Ramaswami Naicker - Periyar: A Study of the Influence of a Personality in Contemporary South India, Lund Esselte Studium, 1977.
16. P. Dutt, *India Today*, Calcutta, Manisha, 1970.
17. T. Embree (ed.), *Sources of Indian Tradition: from the Beginning to 1800*, India, Penguin Books, 1991.
18. Gandhi, *Eight Lives: A Study of the Hindu-Muslim Encounter*, Albany, NY, State University of New York Press, 1986.
19. V. Geetha and S. V. Raja Durai, *Towards a Non Brahmin Millennium: Iyothee Thass to Periyar*, Calcutta, Samya, 1998.
20. Ghose, *The Renaissance to Militant Nationalism*, Bombay, Allied Publishers, 1969.
21. ———, *Socialism, Democracy and Nationalism in India*, Bombay, Allied Publishers, 1973.
22. ———, *Modern Indian Political Thought*, Delhi, Allied, 1984.
23. A. N. Ghoshal, *A History of Indian Political Ideas*, London, Oxford University Press, 1959.
24. R. Hardgrave, *The Dravidian Movement*, Bombay, Popular Prakashan, 1965.
25. S. Hay, *Sources of Indian Tradition: Modern India and Pakistan*, India, Penguin Books, 1991.
26. Heimsath, *Indian Nationalism and Social Reform*, Princeton NJ, Princeton University Press, 1964.
27. R. Iyer, *The Moral and Political Thought of Mahatma Gandhi*, Delhi, Oxford University Press, 1973.
28. T. N. Jagdisan (ed.), *Wisdom of a Modern Rishi: Writings and Speeches of Mahadev Gobind Ranade*, Madras, Rouchbuse, 1969.
29. K. Jones, *Socio-Religious Reform Movement in British India*, Cambridge, Cambridge University Press, 1984.
30. K. N. Kadam (ed.), *Dr. B. R. Ambedkar*, New Delhi, Sage, 1992.
31. M. J. Kanetkar, *Tilak and Gandhi: A Comparative Study*, Nagpur, Author, 1935.
32. K. P. Karunakaran, *Modern Indian Political Tradition*, New Delhi, Allied Publishers, 1962.
33. ———, *Religious and Political Awakening in India*, Begum Bridge, Meenakshi Prakashan, 1969.
34. ———, *Indian Politics from Dadabhai Naoroji to Gandhi: A Study of Political Ideas of Modern India*, New Delhi, Gitanjali, 1975.
35. A. G. Karve and D. V. Ambedkar, *Speeches and Writings of Gopal Krishna*

- Gokhale, Bombay, Asia, 1966.
36. R. M. Lohia, Marx, Gandhi and Socialism, Hyderabad, Nav Hind, 1953.
  37. V. P. Luthra, The Concept of Secular State and India, Delhi, Oxford University Press, 1964.
  38. G. R. Madan, Western Sociologists on Indian Society, London, Routledge and Kegan Paul, 1979.
  39. V. R. Mehta, Foundations of Indian Political Thought, New Delhi, Manohar, 1992.
  40. S. Mukherjee, Gandhian Thought: Marxist Interpretation, New Delhi Deep & Deep, 1991.
  41. B. R. Nanda, Gokhale, Gandhi and the Nehrus: Studies in Indian Nationalism, London, Allen and Unwin, 1974.
  42. ———, Gandhi and His Critics, Delhi, Oxford University Press, 1985.
  43. ———, The Making of a Nation: India's Road to Independence, New Delhi, Harper Collins, 1998.
  44. J. P. Narayan, Prison Diary, Bombay, Popular Prakashan, 1977.
  45. V. S. Narvane, Modern Indian Thought, New Delhi, Orient Longman, 1978.
  46. J. Nehru, Discovery of India, London, Meridian Books, 1956.
  47. K. Nambi Arooran, Tamil Renaissance and Dravidian Nationalism: 1905-1944,
  48. Madurai, Koodal Publishes, 1980.
  49. G. Omvedt, Dalits and the Democratic Revolution: Dr. Ambedkar and the Dalit Movement in Colonial India, New Delhi, Sage, 1994.
  50. T. Pantham and K. Deustch (eds.), Political Thought in Modern India, New Delhi, Sage, 1986.
  51. B. Parekh, Colonialism, Tradition and Reform: Analysis of Gandhi's Political Discourse, New Delhi, Sage, 1989.
  52. ——— and T. Pantham (eds.), Political Discourse: Exploration in Indian and Western Political Thought, New Delhi, Sage, 1987.
  53. B. Prasad, Jayaprakash Narayan: Quest and Legacy, New Delhi, Vikas, 1992.
  54. S. Radhakrishnan, Eastern Religion and Western Thought, London, Oxford University Press, 1940.
  55. S. Ramamoorthy, Freedom and The Dravidian Movement, Delhi, Orient Longman, 1982.
  56. N. R. Ray (ed.), Rajamohan Roy: A Bi-centenary Tribute, Calcutta, Asiatic Society, 1975.
  57. S. H. Rudolph and L.I. Rudolph, Gandhi- The Traditional Roots of Charisma, Chicago, University of Chicago Press, 1983.
  58. S. Saraswati, Towards Self Respect: Periyar EVR on a New World, Madres New Century Book House, 1994.
  59. J. Sarkar, India Through the Ages: A Survey of the Growth of Indian Life and Thought, Calcutta, M.C. Sarkar and Sons, 1928.
  60. S. Sarkar, Bengal Renaissance and Other Essays, New Delhi, PPH, 1970.
  61. T. V. Satyamurthy, Social Change and Political Discourse in India, Vol. 3, Oxford, Oxford University Press, 1996.
  62. R. A. Sinari, The Structure of Indian Thought, Delhi, Oxford University Press, 1989.

63. M. Sykes (trans.), Moved by Love: The Memoirs of Vinobha Bhave, Hyderabad, Gandhi Darshan, 1973.
64. V. P. Verma, Modern Indian Political Thought, Agra, Lakshmi Narain Aggarwal, 1974.
65. S. A. Wolpert, Tilak and Gokhale, Berkeley, University of California Press, 1962.
66. G. Woodcock, Mohandas Gandhi, London, Fontana, 1971.
67. Nandedkar, V. G. – Rajkeeya Vichar and Vicharvant, (Marathi) Diamond Publications, Pune (2011).
68. vk/kqfud Hkkjrh; jktuhfrd fpUru] MkW- oh- ih- oekZ] y{ehukjk;.k vxzoky izdk'ku] vxxjk] vko`Rrh 2008
69. Hkkjrh; jktuhfrd fopkjd] MkW- , - ih- voLFkh] y{ehukjk;.k vxzoky izdk'ku] vxxjk] vko`Rrh 2008-
70. vk/kqfud jkT;ehekalk Hkxk&1] 'ka- n- tkoMsdj] yksdfk{k.k y?kqxaFkekyk-z
71. vk/kqfud Hkkjr ds jktuhfrd fopkjd] ih- ,u- ukVk.kh] ikabZaVj iCyh'klZ] t;iwj] 2007.
72. vk/kqfud Hkkjrkryh jktdh; fopkj] MkW- Hkk- y- HkksG] fiaiGkiwjs ifCyds'kUl] ukxiwj] 2003-s
73. Hkkjrh; jktdh; fopkjoar] uk- ;- MksG] fo|k cqDl] vkSjaxkckn] 1999-s

## **POL-1T2 : INDIAN GOVERNMENT AND POLITICS**

### **UNIT-I: Foundations of Indian Government and Politics**

- a. Philosophy of the Constitution of India, Salient features and constitutional objectives, idea of welfare state
- b. Nature of rights- civil, political, social and economicand role of Judiciary

### **UNIT-II: Structure of Governance:**

- a. Indian Federalism: Features of Indian federalism, Strains and Tensions between the Centre and State.
- b. Union Government: President, Prime Minister and Cabinet  
Parliament-composition, powers and functions

### **UNIT-III: Process of Indian Democracy:**

- a. Electoral Politics: Election commission and electoral process, Party System in India
- b. Pressure Groups, Interest Groups and Social Movements

### **UNIT-IV: Issues in Indian Politics:**

- a. Politics of identity and Representation- Caste, Class, Gender, Language, Religion and Region
- b. Development, communalism and violence, globalization, terrorism, radical politics

Reading Material :

1. I. J. Ahluwalia and I.M.D. Little, India's Economic Reforms and Development, Delhi, Oxford University Press, 1998.
2. G. Austin, The Constitution of India: Cornerstone of a Nation, Oxford, Oxford University Press, 1966.
3. ———, Working a Democratic Constitution: The Indian Experience, Delhi, Oxford University Press, 2000.
4. R. Baird (ed.), Religion in Modern India, New Delhi, Manohar, 1981.
5. P. Bardhan, The Political Economy of Development in India, Oxford, Blackwell, 1988.
6. U. Baxi, Political Justice, Legislative Reservation for Scheduled Castes, and Social Change, Madras, University of Madras, 1990.
7. ——— and B. Parekh (ed.), Crisis and Change in Contemporary India, New Delhi, Sage, 1994.
8. S. Bayly, Caste, Society and Politics in India from the Eighteenth Century to the Modern Age, Cambridge, Cambridge University Press, 1999.
9. S. Bose and A. Jalal (eds.), Nationalism, Democracy and Development: State and Politics in India, Delhi, Oxford University Press, 1997.
10. P. Brass, "Pluralism, Regionalism, and Decentralizing tendencies in contemporary Indian politics" in A. Wilson and D. Dalton (eds.), The States of South Asia: Problems of National Integration, London, Hurst, 1982.
11. ———, The Politics of India Since Independence, 2nd edn., Cambridge, Cambridge University Press, 1994.
12. J. Brown, Modern India: the Origins of an Asian Democracy, Delhi, Oxford University Press, 1985.
13. T. Byres (ed.), The Indian Economy: Major Debates Since Independence, Delhi, Oxford University Press, 1998.
14. N. Chandhoke, Beyond Secularism: The Rights of Religious Minorities, Delhi, Oxford University Press, 1999.
15. P. Chatterjee (ed.), States and Politics in India, Delhi, Oxford University Press, 1997.
16. ——— and M. Rao (eds.), Dominance and State Power in Modern India: Decline of a Social Order, Delhi, Oxford University Press, 1989.
17. ——— and et.al., (eds.), Transforming India: Social and Political Dynamics of Democracy, New Delhi, Oxford University Press, 2000.
18. A. H. Hanson and J. Douglas, India's Democracy, New Delhi, Vikas, 1972.
19. R. L. Hardgrave, India: Government and Politics in a Developing Nation, New York, Harcourt, Brace and World, 1965.
20. T. B. Hansen, The Saffron Wave: Democracy and Hindu Nationalism in Modern India, Princeton NJ, Princeton University Press, 1999.
21. N. Jayal, Democracy and the State: Welfare, Secularism and Development in Contemporary India, Delhi, Oxford University Press, 1999.
30. R. Jeffery and P. Jeffery, Population, Gender and Politics: Demographic Change in Rural North India, Cambridge, Cambridge University Press, 1997.
31. R. Jenkins, Democratic Politics and Economic Reform in India, Cambridge, Cambridge University Press, 1999.
32. S. Khilnani, The Idea of India, London, Hamish Hamilton, 1997.

33. A. Kohli, Democracy and Discontent: India's Growing Crisis of Governability, Cambridge, Cambridge University Press, 1990.
34. ——— (ed.), The Success of India's Democracy, Cambridge, Cambridge University Press, 2001.
35. R. Kothari, Politics in India, Delhi, Orient Longman, 1970.
36. T. K. Oomen, Protest and Change: Studies in Social Movements, New Delhi, Sage, 1990.
37. G. Omvedt, Reinventing Revolution: New Social Movements and the Socialist Tradition in India, London, ME Sharpe, 1993.
38. S. H. Rudolph and L.I. Rudolph, In Pursuit of Lakshmi- The Political Economy of the Indian State, Delhi, Orient Longman, 1987.
39. T. Sathyamurthy (ed.), Social Change and Political Discourse in India, Vols.3, Oxford, Oxford University Press, 1996.
40. A. K. Sen, "Secularism and its discontents" in K. Basu and S. Subrahmanyam (Eds.),
41. D. Sheth, "Caste and class: social reality and political representations" in V.A. Pai
42. D. E. Smith, India as a Secular State, Princeton NJ, Princeton University Press, 1963.
43. M. N. Srinivas, Social Change in Modern India, Bombay, Allied Publishers, 1966.
44. A. Varshney (ed.), The Indian Paradox: Essays in Indian Politics, New Delhi, Sage, 1989.
45. M. Weiner, Party Building in a New Nation: The Indian National Congress, Chicago, University of Chicago Press, 1967.
46. ———, The Indian Paradox: Essays in Indian Politics, New Delhi, Sage, 1989.
47. B. Arora and D. V. Verney (eds.), Multiple Identities in a Single State: Indian Federalism in Comparative Perspective, New Delhi, Centre for Policy Research, Konark, 1995.
48. M. Chadda, Ethnicity, Security and Separatism in India, Delhi, Oxford University Press, 1997.
49. A. Chanda, Federalism in India: A Study of Union-Sate Relations, London, George Allen & Unwin, 1965.
50. P. Chatterjee (ed.), States and Politics in India, Delhi, Oxford University Press, 1997.
51. A. H. Hanson and J. Douglas, India's Democracy, New Delhi, Vikas, 1972. B. Singh,
52. Singh, M.P. and H. Roy (eds.), Indian Political System: Structure, Policies, Development, New Delhi, Jnanada Prakashan, 1995.
53. E. Sridharan, Coalition Politics in India: Lessons from Theory, Comparison and Recent History, New Delhi, Centre for Policy Research, 1997.
54. P. Brass, Caste, Faction and Party in Indian Politics, Vols.2, Delhi, Chanakya Publications, 1984-1985.
55. ———, Factional Politics in a Indian State: The Congress Party in Uttar Pradesh, Berkeley, University of California Press, 1966.
56. A. Burger, Opposition in a Dominant Party System, Berkeley, University of

- California Press, 1969.
57. P. K. Chhibber, Democracy Without Association; Transformation of the Party System and Social Cleavages in India, Ann Arbor, The University of Michigan Press, 1999.
58. A. Kohli, (ed.), The Success of India's Democracy, Cambridge, Cambridge University Press, 2001.
59. R. Kothari, "The Congress System Revisited: A Decennial Review", *Asian Survey*, 14/12, 1974.
60. ———, Politics in India, New Delhi, Orient Longman, 1970.
61. ———, Party System and Election Studies, Bombay, Asia Publishing House, 1967.
62. J. Manor, "Parties and the Party System", in A. Kohli (ed.), India's Democracy: An Analysis of Changing State- Society Relations, Princeton NJ, Princeton University Press, 1988.
62. R. N. Rao, Coalition Conundrum: The BJP's Trials, Tribulations and Triumphs, New Delhi, Har Anand Publications, 2001.
64. R. Roy and P. Wallace (eds.), Indian Politics and the 1998 Election: Regionalism, Hindutva and State Politics, New Delhi, Sage, 1999.
65. T. V. Sathyamurthy, Social Change and Political Discourse in India: Structures of Power, Movements of Resistance, Vols. 4, Oxford, Oxford University Press, 1996.
66. N. C. Sahni, (ed.), Coalition Politics in India, Jullunder, New Academic Publishing Company, 1971.
67. S. L. Shakdher, The Law and Practice of Elections in India, New Delhi, National, 1992.
68. ———, Electoral Reforms in India, New Delhi, Council and Citizen for Democracy, 1980.
69. A. Abdul, Poverty Alleviation in India: policies and programmes, New Delhi, Ashish, 1994.
70. J. Adams, "Breaking Away: India's economy vaults into the 1990s" in M. Bouton and 1993.
71. A. Ghosh, Indian Economy: Its Nature and Problems, 22nd revised edn., Calcutta, World Press, 1979-80.
72. B. Jalan (ed.), The Indian Economy: Problems and Prospects, New Delhi, Viking, 1992.
73. R. Jenkins, Democratic Politics and Economic Reform in India, Cambridge, Cambridge University Press, 1999.
74. V. Joshi, "Fiscal Stabilization and economic reform in India" in I.J. Ahluwalia and M.D. Little (eds.), India's Economic Reforms and Development: Essays for Manmohan Singh, Delhi, Oxford University Press, 1998.
75. D. Khatkhate, "India on an economic reform trajectory" in L. Gordon and P. Oldenburg (eds.), India Briefing 1992, Boulder Colorado, Westview Press and the Asia Society, 1992.
76. R. Khator, Environment, Development and Politics in India, Lanham Md, University Press of America, 1991.
77. A. Vanaik, The Painful Transition: Bourgeois Democracy in India, London,

- Verso, 1990.
78. P. Verma, The Great Indian Middle Class, Delhi, Viking, 1998.
  79. M. Weiner, The Indian Paradox, Essays in Indian Politics, New Delhi, Sage, 1989.
  80. ———, The Child and the State in India, Princeton NJ, Princeton University Press, 1991.
  81. Hkkjrh; jktuhfr dk cnyrk ifjn';] ,e- lh- [kaMsyk] ikabZaVj izdk'ku] t;iwj] 2005
  82. Hkkjrh; jktuhfr fl/nkar o O;ogkj] ,e- lh- [kaMsyk] ikabZaVj izdk'ku] t;iwj] 2007
  83. Lora= Hkkjr ds ipkl o"ksZ] Hkkx 1 o 2] ch- xksLokeh] ikabZaVj izdk'ku] t;iwj] 2007
  84. iapk;r jkt vkSj efgyk fodkl] ,e- jkBksM] ikabZVj izdk'ku] t;iwj] 2010-
  85. Hkkjrh; 'kklu vkf.k jktdkj.k] MkW- vydk fo- ns'keq[k] Jh- lkbZukFk izdk'ku] ukxiwj
  86. Hkkjrh; x.kjkT;kps 'kklu vkf.k jktdkj.k] MkW- Hkk- y- HkksG] fiaiGkiwjs ifCyds'kUl] ukxiwj-s

## **POL-1T3 : MODERN POLITICAL IDEOLOGIES**

**Unit-I** Introduction to political ideologies: Nature, Origin and Significance

- a. Liberalism: Classical, Neo-Liberalism and libertarianism
- b. Socialism: Origin of socialist thought and its various kinds.

**Unit-II**

- a. Communism: Classical and Neo-communism- Meaning, nature, significance and Development
- b. Marxism: Meaning, nature and Philosophy and developments in Marxist thought

**Unit-III**

- a. Feminism: Meaning, nature, philosophy and kinds of feminism- liberal, Marxist, radical and black feminism
- b. Environmentalism: Meaning, nature, philosophy, development and movements

**Unit-IV**

- a. Fascism: Meaning, nature, philosophy, development- old and new
- b. Nationalism: Meaning, nature, Philosophy and forms.

**Reading Material :**

1. P. F. Clarke, Liberals and Social Democrats in Historical Perspective, Cambridge, Cambridge University Press, 1978.
2. L. Derfler, Socialism since Marx: A Century of the European Left, London, Macmillan, 1973.
3. A. Devall and G. Sessions, Deep Ecology, Salt Lake City UT, Peregrine Smith Books, 1985.
4. A. Dobson, Green Political Thought, London, Unwin Hyman, 1990.
5. A. Durbin, The Politics of Democratic Socialism, London, Routledge, 1940.
6. J. B. Elshtain, Public Man, Private Woman: Women in Social and Political tought,

- Princeton NJ, Princeton University Press, 1981.
7. A. Fukuyama, *The End of History and the Last Man*, Harmondsworth, Penguin, 1992.
  8. B. Friedan, *The Feminine Mystique*, New York, Norton, 1963.
  9. Fukuyama, *The End of History and the Last Man*, Harmondsworth, Penguins, 1992.
  10. P. Gay, *The Dilemma of Democratic Socialism: Eduard Bernstein's challenge to Marx*, New York, Columbia University Press, 1952.
  11. J. Gray, *Liberalism*, Minneapolis, University of Minnesota Press, 1986.
  12. \_\_\_\_\_, *Liberalisms: Essays in Political Philosophy*, London, Routledge, 1989.
  13. A. Gentile, "The Philosophical basis of Fascism" in *Readings on Fascism and National Socialism*, Denver Colarado, Swallow, n.d.
  14. R. E. Goodin, *Green Political Theory*, Cambridge, Polity Press, 1992.
  15. A. J. Gregor, *Young Mussolini and the Intellectual Origins of Fascism*, Berkeley and Los Angeles, University of California Press, 1979.
  16. A. Hamilton, *The Appeal of Fascism: A Study of Intellectuals and Fascism 1919-1945*, New York, Macmillan, 1971.
  17. M. Harrington, *Socialism: Past and After*, New York, Arcade, 1989.
  18. F. Hayek, *The Constitution of Liberty*, London, Routledge and Kegan Paul, 1960.
  19. R. N. Iyer, *The Moral and Political Thought of Mahatma Gandhi*, New York, Oxford University Press, 1973.
  20. D. Jay, *Socialism and the New Society*, London, Longman, 1962.
  21. J. Joll, *The Anarchists*, London, Methuen, 1979.
  22. M. Kitchen, *Fascism*, London, Dent, 1979.
  23. J. Laski, *The Rise of European Liberalism*, London, George Allen and Unwin, 1967.
  24. L. Labedz, *Revisionism: Essays on the History of Marxist Ideas*, London, Allen and Unwin, 1962.
  25. W. Lacquer (ed.), *Fascism: a Readers' Guide: Analyses, Interpretation and Bibliography*, Harmondsworth, Penguin, 1979.
  26. G. Lichtheim, *A Short History of Socialism*, London, Weidenfeld and Nicolson, 1970.
  27. Lyttelon (ed.), *Italian Fascism from Pareto to Gentile*, London, Cape 1973.
  40. D. MacLean and C. Wills (eds.), *Liberalism Reconsidered*, Totowa NJ, Rowman and Allanheld, 1983.
  28. D. J. Manning, *Liberalism*, London, John Dent and Sons, 1976.
  29. C. Mansfield, *The Spirit of Liberalism*, Cambridge, Harvard University Press, 1978.
  30. D. McLellan, *Marxism after Marx*, London, Macmillan, 1975.
  31. R. Minogue, *The Liberal Mind*, London, Methuen, 1963.
  32. B. Mussolini, *Fascism: Doctrine and Institutions*, New York, Howard Fertig, 1968.
  33. E. Nolte, *Three Faces of Fascism: Action francaise, Italian Fascism, National Socialism*, New York, New American Library, 1969.
  34. R. Nozick, *Anarchy, State and Utopia*, New York, Basic Books, 1974.
  35. O'Neill, *Ecology, Policy and Politics: Human Well-being and the Natural World*, London, Routledge, 1993.
  36. S. G. Payne, *Fascism: Comparison and Definition*, Madison, University of

- Wisconsin Press, 1980.
37. J. Porritt, Seeing Green: The Politics of Ecology Explained, Oxford, Basil Blackwell, 1984.
  38. G. de Ruggiero, The History of European Liberalism, Boston, Beacon, 1959.
  39. Rand, The Fountainhead, New York, Bobbs-Merrill, 1943.
  40. Rothbard, Ethics of Liberty, Atlantic Highlands NJ, Humanities Press, 1982.
  41. M. J. Sandel, Liberalism and its Critics, Oxford, Blackwell, 1984.
  42. J. Strachey, Programme for Progress, London, Gollancz, 1940.
  43. L. Strauss, Liberalism: Ancient and Modern, New York, Basic Books, 1968.
  44. O' Sullivan, Fascism, London, J. M. Dent and Sons, 1983.
  45. F. D. Torre, E. Mortimer and J. Story, Eurocommunism: Myth or Reality, Harmondsworth, Penguins, 1979.
  46. F. M. Watkins, The Age of Ideology- Political Thought from 1750 to the Present, Englewood Cliffs NJ, Prentice Hall, 1964.
  47. E. Weber, Varieties of Fascism, New York, Van Nostrand, 1966.
  48. G. Woodcock, Mohandas Gandhi, London, Fontana, 1971.
  49. D. Worster, Nature's Economy: A History of Ecological Ideas, 2nd edition, Cambridge, Cambridge University Press, 1994.

## **ELECTIVES**

(Choose any ONE from the following elective papers)

### **POL-1T4.1 : POLITICS OF DEVELOPING COUNTRIES**

#### **Unit-I**

- a. Genesis of Colonialism, Types of Colonialism
- b. Nature of anti colonial Struggle in Developing countries

#### **Unit-II**

- a. Nature of Constitutionalism and Post colonial State
- b. Political Institutions in post colonial states- nature and types; appraisal

#### **Unit-III**

- a. Political Leadership in developing countries: nature, objectives, significance and role
- b. Political Parties in post colonial developing countries- nature, types, objectives, role and performance

#### **Unit-IV**

- a. New Social Movements in developing countries- nature, role, types and political impact
- b. Role of Military, Waves of Democratic Expansion: recent trends

#### **Reading Material :**

1. H. Alavi and T. Shanin, Sociology of Developing Societies, London, Macmillan,

1982.

2. S. Amin, *Accumulation on a World Scale: A Critique of the Theory of Underdevelopment*, New York, Monthly Review Press, 1974.
3. B. Anderson, *Imagined Communities: Reflections of the Origin and Spread of the Nationalism*, 2nd edn., London, Verso, 1991.
4. Z. F. Arat, *Democracy and Human Rights in the Developing Countries*, London, Verso, 1992.
5. H. Asfah (ed.), *Women and Politics in the Third World*, London, Routledge, 1996.
6. M. Berger, "The End of the Third World", *Third World Quarterly*, 15/2, 1994.
7. J. M. Bystdzienski (ed.), *Women Transforming Politics: Worldwide strategies for Empowerment*, Bloomington, Indiana University Press, 1992.
8. P. Cammack, D. Pool and W. Tordoff, *Third World Politics: A Comparative Introduction*, 2nd edn. London, Macmillan, 1993.
9. C. Clapham, *Third World Politics: An Introduction*, Beckenham, Croom Helm, 1985.
10. R. Cohen and P. Kennedy, *Global Sociology*, London, St. Martin Press, 1999.
11. L. Diamond (ed.), *Political Culture and Democracy in Developing Countries*, Boulder Colorado, Lynne Rienner, 1993.
12. D. Engels and S. Marks (eds.), *Contesting Colonial Hegemony, State and Society in Africa and India*, London, I. B. Tauris, 1994.
13. J. A. Ferguson, "The Third World", in R. J. Vincent (ed.), *Foreign Policy and Human Rights*, Cambridge, Cambridge University Press, 1996.
14. D. K. Fieldhouse, *The West and the Third World: trade, Colonialism, Dependence and Development*, Oxford, Blackwell, 1999.
15. F. Fukuyama, *The End of History and the Last Man*, Harmondsworth Penguin, 1992.
16. J. Gelb, *Feminism and Politics: A Comparative Perspective*, Berkeley, University of California Press, 1989.
17. A. Giddens, *The Consequences of Modernity*, Cambridge, Polity Press, 1990.
18. J. Habermas, "New Social Movements", *Telos*, 49, Fall, 1981.
19. N. Harris, *The End of the Third World: Newly Industrializing Countries and the Decline of an Ideology*, Harmondsworth, Penguin, 1986.
20. P. Harrison, *Inside the Third World*, Harmondsworth, Penguin, 1981.
21. K. Hajdar, *Dictionary of Third World Terms*, London, Penguin, 1993.
22. J. Haynes, *Third World Politics: A Concise Introduction*, Oxford, Basil Blackwell, 1996.
23. ———, *Religion in Third World Politics*, Buckingham, Open University Press, 1993.
24. D. Held, and D. Archibugi (eds.), *Cosmopolitan Democracy: An Agenda for a New World Order*, Cambridge, Polity Press, 1995.
25. A. Hettne, *Developmental Theory and the Three Worlds*, Harlow, Longman, 1995.
26. M. Kamrava, *Politics and Society in the Third World*, London, Routledge, 1993.
27. S. D. Krasner, *Structural Conflict: The Third World against Global Liberalism*. Berkeley, University of California Press, 1985.
28. J. Manor (ed.), *Rethinking Third World Politics*, Harlow, Longman, 1991.
29. J. Midgal, *Strong Societies and Weak States, State-Society Relations and State*

- Capabilities in the Third World, Princeton NJ, Princeton University Press, 1988.
30. L. M. Miller, The Third World in Global Environmental Politics, Boulder Colorado, Lynne Rienner, 1995.
  31. M. Miller, The Third World in Global Environmental Politics, Buckingham, Open University Press, 1995.
  32. H. Nelson and N. Chowdhary (ed.), Women and Politics Worldwide, Delhi, Oxford University Press 1997.
  33. R. Packenham, The Dependency Movement: Scholarship and Politics in Dependency Studies, Cambridge Massachusetts, Harvard University Press, 1992.
  34. Pourgerami, Development and Democracy in the Third World, Boulder Colorado, Westview, Press, 1991.
  35. V. Randall, Women and Politics: An International Perspective, 2nd edn., Chicago, University of Chicago Press, 1987.
  36. \_\_\_\_\_ (ed.), Political Parties in the Third World, London, Sage, 1988.
  37. \_\_\_\_\_ and R. Theobald, Political Change and Underdevelopment: A Critical Introduction to Third World Politics, London, Macmillan, 1985.
  38. W. Rodney, How Europe Underdeveloped Africa, London, Bogle l' Ouverture, 1972.
  39. P. Schmitter and L. Whitehead (eds.), Transitions from Authoritarian Rule: Prospects for Democracy, Baltimore, Johns Hopkins University Press, 1986.
  40. B. Smith, Understanding Third World Politics, London, Macmillan, 1996.
  41. R. Slater, B. Schutz and S. Dorr (eds.), Global Transformation and the Third World, Boulder Colorado, Lynne Rienner, 1993.
  42. M. P. Tadaro, Economic Development in the Third World, 5th edn., New York, Longman, 1994.
  43. Thomas et al., Third World Atlas, 2nd edn., Buckingham, Open University Press, 1994.
  44. G. White, R. Murray and C. White, Revolutionary Socialist Movements in the Third World, Brighton, Wheatsheaf, 1983.

## **POL-1T4.2 : FUNDAMENTALS OF FOREIGN POLICY**

### **UNIT-I –**

- a. Foreign Policy: Meaning, Definition, Scope and significance
- b. Foreign policy: Theoretical Aspects-Liberal realist, liberal idealist, Marxist

### **UNIT-II-**

- a. International Relations and Foreign Policy: Bilateral Relationship, multilateral relationship, unilateral actions
- b. Objectives of Foreign policy: promotion of national interest, power status in international relations and influence.

### **UNIT-III :**

- a. Internal & External Determinants of Foreign Policy
- b. Making of Foreign Policy : Role of Foreign Ministry, Foreign Secretary

## and Diplomatic Missions

### UNIT-IV :

- a. Diplomacy and Foreign Policy in the Era of Globalisation
- b. Impact of Technology, Role of Diaspora

### Reading Material

1. J. Bandopadhyaya, the Making of India's Foreign Policy, Calcutta, Allied Publications, 1995.
2. Vandana Ashtahan, India's Foreign Policy and Subcontinental Politics
3. A. Appadorai, Domestic Roots of India's Foreign Policy New Delhi OUP, 1981.
4. S. Bhattacharya, Pursuit of National Interest through Non alignment, Calcutta, university press, 1978.
5. R. Badrock, India's Foreign Policy Since 1971, London, Royal Institute for International Affairs, 1990.
6. V.P.Dutta, India's Foreign Policy in Changing World, new Delhi, Vikas, 1999.
7. C. Hill, Changing Politics of Foreign Policy, Hampshire, Macmillan, 2001.
8. S. Mansingh (ed), India's Foreign Policy in 21<sup>st</sup> Century, New Delhi, Foreign Policy Institute, 1999.
9. C. Raja Mohan, Crossing the Rubicon-The Shaping of India's New Foreign Policy, Palgrave Macmillan, delhi, 2004
10. J. N. Dikshit, India's Foreign Policy and its Neighbours, Gyan Publishers, new delhi, 2001.

## **POL-1T4.3 : INTERNATIONAL LAW**

### UNIT-I :

- a. The Origin, Development and Sources of International Law
- b. Subjects of International Law : States, International Organizations, Rights & Duties of Individuals

### UNIT-II :

- a. Recognition and Jurisdiction of State, Treaty Obligations, Laws of the Sea
- b. State Territory, Acquisition & Loss of Territory, State Succession, Intervention

### UNIT-III :

- a. Piracy on High Seas, Hijacking, Extradition, Asylum
- b. Laws of War, War Crimes, Prisoners of War and Refugees

### UNIT-IV :

- a. Laws of Neutrality, Blockade, Right of Visit & Search
- b. International Court of Justice, International Criminal Court

### Reading Material :

1. S. D. Bailey, Prohibitions and Restraints in War, London and New York, Oxford University Press, 1972.
2. N. Bentwich, International Law, London, Royal Institute of International Affairs, 1945.
3. J. L. Brierly, The Outlook for International Law, Oxford, The Clarendon Press,

1944.

4. \_\_\_\_\_, *The Law of Nations*, 4th edn., Oxford, The Clarendon Press, 1949.
5. \_\_\_\_\_, *The Basis of Obligation in International Law*, London, Oxford University Press, 1958.
6. I. Brownlie, *Principals of Public International Law*, London, Oxford University Press, 1973.
7. D. P. O. Connell, *International Law*, 20 Vols., London, Stevens, 1970.
8. P. E. Corbett, *Law and Society in the Relations of States*, New York, Harcourt Brace, 1951.
9. \_\_\_\_\_, *Law and Diplomacy*, Princeton NJ, Princeton University Press, 1959.
10. K. Deutsch and S. Hoffman (ed.), *The Relevance of International Law*, Oxford, The Clarendon Press, 1955.
11. E. D. Dickinson, *What is Wrong with International Law?*, Berkeley, James J. Gillickand Company, 1947.
12. \_\_\_\_\_, *The Equality of States in International Law*, Cambridge, Cambridge University Press, 1920.
13. I. J. Dore, *International Law and Superpowers: Normative Order in a Divided World*,
14. L. Duguit, *Law in the Modern State*, New York, B. W. Huebsch, 1919.
15. R. Falk, *Legal Order in a Violent World*, Princeton NJ, Princeton University Press, 1968.
16. \_\_\_\_\_, *The Status of Law in the International Society*, Princeton NJ, Princeton University Press, 1971.
17. C. G. Fenwick, *International Law*, Oxford, The Clarendon Press, 1939.
18. W. Friedmann, *The Changing Structure of International Law*, New York, Columbia University Press, 1964.
19. L. Henkin, *How Nations Behave*, New York, Praegar, 1968.
20. R. Higgins, *Development of International Law through the political Organizations of the United Nations*, 1963.
21. R. Hingham (ed.), *Intervention or Abstention*, Lexington Kentucky, The University Press of Kentucky, 1975.
22. P. C. Jessup, *Modern Law of Nations*, New York, Macmillan, 1948.
23. M. A. Kaplan and N. de B. Katzenbach, *The Political Foundations of International Law*, New York, John Wiley and Sons, 1961.
24. G. W. Keeton, *National Sovereignty and International Order*, London, Peace Book Company, 1939.
25. \_\_\_\_\_ and G. Schwarzenberger, *Making International Law Work*, 2nd edn., London, Stevens and Sons Ltd., 1946.
26. H. Kelsen, *The Law of the United Nations*, New York, Praegar, 1950.
27. \_\_\_\_\_, *Principles of International Law*, New York, Rinehart and Co., 1952.
28. \_\_\_\_\_, *General Theory of Law and State*, Cambridge, Harvard University Press, 1945.
29. J. Mattern, *Concepts of State, Sovereignty and International Law*, Baltimore, Johns Hopkins Press, 1928.
30. J. B. Moore, *International Law and Some Current Illusions*, New York, Macmillan, 1924.

31. H. J. Morgenthau, "Positivism, Functionalism and International Law", American Journal of International Law, 34, April 1940.
32. W. V. O' Brien, The Conduct of Just and Limited War, New York, Praeger, 1981.
33. C. C. K. Okolie, International Law Perspective of the Developing Countries, 1973.
34. L. Oppenheim, International Law Vol. 1, 1969, Revised edn., Vol. II- 1953.
35. H. B. Siago, New States and International Law, 1970.
36. G. Schwarzenberger, International Law and Order, New York, Praeger, 1971.
37. J. G. Starke, Introduction to International Law, London, Butterworths and Company Ltd., 1947.
38. J. Stone, Legal Controls of International Conflict, New York, Rinehart and Company, 1954.
39. ———, Aggression and World Order, Berkeley and Los Angeles, University of California Press, 1958.
40. C. de Visscher, Theory and Reality in Public International Law, Princeton NJ, Princeton University Press, 1957.
41. M. Walzer, Just and Unjust Wars, New York, Basic Books, 1977.
42. Sir J. F. Williams, Aspects of Modern International Law, New York, Oxford University Press, 1939.
43. is'kos, MkW- Ogh- ,e- o eankdhuh - vkarjjk"V<sup>a</sup>h; dk;nk] Hkkx 1 o 2] O;daVjkt bUQksVsd izk- fy] ;orekG-

## **POL-1T4.4 : THEORY AND PRACTICE OF DIPLOMACY**

### **UNIT-I**

- a. Diplomacy : Meaning, Nature and Scope.
- b. Relationship with Foreign Policy and international relations

### **UNIT-II**

- a. Evolution of Diplomatic Theory, Practices and Methods, Diplomatic Offices & Agents, Diplomatic Language
- b. Negotiations, Treaties, Alliance; Different Types of Diplomacy

### **UNIT-III**

- a. Instrument of National Policy: promotion of national interest, diplomacy during war and peace. Diplomatic Services and Consular Services, privileges and immunities
- b. Recent Changes: Diplomacy by Conference, Diplomacy and Commercial interest, Diplomacy at the Regional and international Multilateral organizations

### **UNIT-IV**

- a. Open Diplomacy: Meaning, Nature and Characteristics, Functions and roles of Democratic diplomacy, Open Diplomacy and the Resolution of international conflicts
- b. Issues before global diplomacy: Racial Discrimination, Environment, Global Terrorism, Nuclear Proliferation, Gender Discrimination, Human Rights

**Reading Material :**

1. H.G. Nicolson - Diplomacy, London, Oxford University Press, 1963.
2. H.G. Nicolson - The Evolution of Diplomatic Method, London, Constable, 1954
3. American Academy of Political and Social Science, Instruction in Diplomacy: The Liberal Arts Approach, 1972
4. Henry Kissinger - Diplomacy, New York, Simon & Schuster, 1994
5. Sir D. Busk - The Craft of Diplomacy: How to Run A diplomatic Service, New York, Praeger, 1967
6. G.H. Fisher - Public Diplomacy and the Behavioral Sciences, Bloomington, Indiana University Press, 1972
7. C.J. Friedrich - Diplomacy and the Study of International Relations, Oxford, The Clarendon Press, 1919
8. L. Gerber - The Diplomacy of Private Enterprise, Cape Town, Purnell, 1973
9. D.L.S. Hamlin - Diplomacy in Evolution, Toronto, University of Toronto Press, 1961
10. Sir W. Hayter - The Diplomacy of the Great Powers, New York Macmillan, 1961
11. Sir M. Howard - Studies in War and Peace, New York, Viking, 1971
12. F.C. Ikle - How nations Negotiate, New York, Praeger, 1967
13. G.K. Mookerjee - Diplomacy: Theory and History, New Delhi, Trimurti Publications, 1973
14. L.B. Pearson - Diplomacy in a Nuclear Age, Cambridge Massachusetts, Harvard University Press, 1959
15. E. M. Satow - A Guide to Diplomatic Practice, revised 2nd ed., London, Longmans Green, 1922
16. A. Watson - Diplomacy, New York, McGraw Hill, 1983
17. E. L. Woodward - The Old and New Diplomacy, the Yale Review, 36, No. 3, Spring, 1947
18. G. Young - The Practical Negotiator, New Haven CT, Yale University Press, 1982
19. G. Alperovitz, Atomic Diplomacy, New York, Vintage Books, 1967.
20. G. Chan, Chinese Perspective on International Relations, New Zealand, Macmillan University Press, 1999.
21. R. A. Cossa, Restructuring the US-Japan Alliance, Washington DC, CSIS Press, 1997.
22. P. M. Cronin, From Globalism to Regionalism: New Perspective on US Foreign and Defence Policies, Washington, National Defence University Press, 1993.
23. J. Dumbrell, American Foreign Policy: Carter to Clinton, London, Macmillan, 1997.
24. J. B. Dunlop, The Rise of Russia and the Fall of the Soviet Empire, Princeton NJ, Princeton University Press, 1993.
25. J. Dower, Japan in Peace and War, New York, New Press, 1994.
26. F. R. Dulles, American Foreign Policy towards Communist China, New York, Crowell, 1972.
27. J. Frankel, The Making of Foreign Policy, London, Oxford University Press, 1963.
28. H. L. Gaddis, Strategies of Containment: A Critical Appraisal to Post War American National Security Policy, Oxford, Oxford University Press, 1990.
29. R. N. Haas, Intervention: The Use of American Military Forces in the Post Cold

- WarWorld, New York, Carnell Endowment of International Peace, 1998.
30. C. Hill, Changing Politics of Foreign Policy, Hampshire, Macmillan, 2001.
  31. G. E. Kennan, American Diplomacy: 1900-1950, Chicago, University of Chicago Press, 1951.
  32. H. J. Morgenthau, In Defense of the National Interest, New York, Knopf, 1951.
  33. Hkkjr dh fons'k furh] MkW- ,l- lh- flagy] y{ehukjk;.k vxzoky izdk'ku] vkxjk] vko`Rrh 2008-
  34. Hkkjrkph fons'k furh] MkW- pan'ks[kj fnok.k] fo | k izdk'ku] ukxiwj-z
  35. Hkkjr dh fons'k uhfr] vkj- flag] ikabZVj izdk'ku] t;iwj] 2005-
  36. jktu;] izk- fp- x- ?kkaxjsdj] fo | k izdk'ku] ukxiwj-
  37. Hkkjrh; ijjk"V<sup>a</sup> /kksj.k lkrR; o fLFkR;arj] 'kSysanz nsoG.kdj] izfrHkk izdk'ku] iq.ks] 2007-

## **SEMESTER - II**

### **CORE PAPERS**

#### **POL-2T1 : COMPARATIVE POLITICS**

(With reference to political systems in UK, USA, Switzerland, Russia & China)

##### **UNIT-I**

- a. Comparative Politics: Meaning Nature and Scope, Growth of Comparative Politics;Traditional Approaches to the Study of Comparative politics: Philosophical, Historical, Legal- Institutional
- b. Modern Approaches to the Study of Comparative Politics: Systems, Structural Functionalism, Political Sociology and Political Economy.

##### **UNIT-II:**

- a. Constitutionalism: Meaning and Features, Development of Constitutionalism
- b. Comparative Study of Political Institutions: Executive, Legislature and Judiciary

##### **UNIT-III:**

- a. Political Development, Modernization and Change: Definition, Implications and Dimensions- Marxian Perspective, Sustainable Development Perspective
- b. Political Parties, Elections and Voting Behaviour; Leadership, Elites and Role of Women in Politics, Pressure Groups and Social Movements

##### **UNIT-IV:**

- a. Political Culture: Meaning, Nature and Components
- b. Political Socialization and Communication: Meaning Nature and Agents of Political Socialization and mobilization

**Reading Material :**

1. Almond and G.B. Powell Jr.- Comparative Politics; a Development Approach, Boston, Little Brown, 1966.
2. R. Hague and M. Harrop, Comparative Government and Politics : An Intordducation, 5th edn., New York, Palgrave, 2001.
3. G.A. Almond and J.S. Coleman- The Politics of Developing Areas, Princeton NJ, Princeton University Press, 1960.
4. G.A. Almond and S. Verba- The Civic Culture; Political Attitudes and Democracy in Five Nations, Princeton NJ, Princeton University Press, 1963
5. G.A. Almond- Comparative Politics Today : A World View, 7th edn., New York, London, Harper/Collins, 2000.
6. D.E. Apter, The Politics of Modernization, Chicago, University of Chicago Press, 1965.
7. A. Bebler and J. Seroka (eds.), Contemporary Political Systems : Classifications and Typologies, Boulder Colorado, Lynne Reinner Publishers, 1990.
8. L.J. Cantori and A.H. Zeigler (ed.), Comparative Politics in the Post-Behaviouralist Era, London, Lynne Reinner Publisher, 1988.
9. R.H. Chalcote, Theories of Comparative Politics : The Search for a Paradigm Reconsidered, Boulder Colorado, Westview Press, 1994.
10. J.E. Goldthrope, The Sociology of Post-Colonial Societies : Economic Disparity, Cultural Diversity and Development, Cambridge University Press, 1996.
11. J.C. Johari, Comparative Political Theory : New Dimensions, Basic Concepts and Major Trends, New Delhi, Sterling, 1987.
12. R.C. Macridis, The Study of Comparative Government, New York, Doubleday, 1955.
13. G. Sartori, Parties and Party Systems : A Framework for Analysis, Cambridge, Cambridge University Press, 1976.
14. T. Skocpol, States and Social Relations : A Comparative Analysis of France, Russia and China, Cambridge, Cambridge University Press, 1979.
15. A. Stephan, Arguing Comparative Politics, Oxford, Oxford University Press, 2001.
16. Tks- lh- tksgjh & rqyukRed jktuhrh & fnYyh] Lvfxax ifCyds"ku-
17. Ekgs"ojh ,l- vkj- rqyukRed jktuhrh] vlxjk] y{ehukjk;.k ifCyds"ku-
18. Ek- n- ns"kikaMs] "kklu laLFkk vkf.k jkT; in~/krh % rkSyfud fopkj] dksYgkiwj] egkjk'V<sup>a</sup> fo | kihB  
xzaFk fufeZrh eaMG-
19. rkSyfud 'kklu vkf.k jktdkj.k & MkW- Hkk- y- HkksG] fiaiGkiwjs izdk'ku] ukxiwj-s
20. rqyukRed 'kklu vkf.k jktfurh] MkW- vydk ns'keq[k] MkW- lat; xksjs] Jh- lkbZukFk izdk'ku]  
ukxiwj-
21. rqyukRed 'kklu vkf.k jktdkj.k] MkW- tks- o- xobZ] 'ks[k gk'ke] fo'o ifCyds'ku]  
ukxiwj-
22. rqyukRed 'kklu vkf.k jktdkj.k] MkW- Jhjke ;sj.kdj] Jh- lkbZukFk izdk'ku] ukxiwj
23. rqyukRed jktuhfr] MkW- ,l- vkj- ekgs'ojh] y{eh ukjk;.k vxzoky izdk'ku] vlxjk]  
2008-
24. rqyukRed 'kklu ,oa jktuhfr] MkW- ,l- lh- flagy] y{ehukjk;.k vxzoky izdk'ku] vlxjk

2008-

## **POL-2T2 : WESTERN POLITICAL THOUGHT**

### **UNIT-I :**

- a. Classical political thought : Meaning, nature, characteristics and significance, Evolution of a political theory
- b. Plato and Aristotle

### **UNIT-II :**

- a. Social Contract : Meaning, Nature and Significance; achievements of social contract theory
- b. Hobbes, Locke and Rousseau

### **UNIT-III :**

- a. Theory of Utilitarianism : Meaning, nature, significance and Contributions
- b. Bentham and Mill

### **UNIT-IV :**

- a. Scientific Socialism : Meaning, nature, significance and impact on political theory
- b. Hegel and Marx

### **Reading Material :**

1. Adams Ian and R. W Dyson., 2004, Fifty Great Political Thinkers, London, Routledge
2. Boucher David and Paul Kelly, 2003, Political Thinkers, Oxford University Press.
3. Jones W. T. (series editor), 1959, Masters of Political Thought, (Vols.2 & 3), London, George Harrap & Co.
4. Mehta V. R., 1996, Foundations of Indian Political Thought, New Delhi, Manohar.
5. Nelson Brian, 2004, Western Political Thought, Pearson Education
6. Parekh Bhikhu and Thomas Pantham, Political Discourse: Explorations in Indian and Western Political Thought, 1987, New Delhi, Sage.
7. Sabine G. H., 1971, A History of Political Theory, Calcutta, Oxford & I.B.H.
8. Blakeley Georgina & Valerie Bryson (eds.), 2002, Contemporary Political Concepts, London, Pluto Press.
9. Goodwin Barbara, 2004, Using Political Ideas, Chichester, John Wiley & Sons.
10. Hampton Jean, 1998, Political Philosophy, New Delhi, OUP.
11. Hawkesworth Mary and Maurice Kogan (eds.), 1992, Encyclopaedia of Government and Politics (Vol. I), London, Routledge Knowles Dudley, 2001, Political Philosophy, London, Routledge.
12. Pierson Christopher, 2004, The Modern State, London, Routledge.
13. Swift Adam, 2001, Political Philosophy, Cambridge, Polity
14. Nelson Brian R, 2006, Western Political Thought, Second Edition, Pearson Education, New Delhi.
15. ik'pkR; jktuhfrd fl/nkar] MkW- ,l- lh- flagy] y{ehukjk;.k vxzoky izdk'ku] vkxjk]

2008-

16. ik'pkR; jktdh; fopkjoar] MkW- uk- ;- MksGs-
17. ik'pkR; jktdh; fopkjoar] MkW- Hkk- y- HkksG] fiaiGkiqjs ifCyds'ku] ukxiwj-1995s
18. Rege, M. P., Swatantrya, Samata ani Nyaya, Mumbai, Shanta Rege-2005
19. Rege, M. P., Pashchatya Nitishastracha Itihas, Pune, Samaj Prabodhan Sanstha, 1974
20. Bhole Bhaskar, Rajakiya Siddhanta ani Vishleshan, Nagpur, Pimpalapure, 2002

## **POL-2T3 : INTERNATIONAL RELATIONS**

**UNIT-I : International Relations:**

- a. Meaning, Nature, Development and Scope,  
Classical Theories of International Relations: Realism, Liberalism and Marxism
- b. Later Developments: Neo-Realism, Neo-Liberalism, Constructivism and feminism

**UNIT-II : Concepts :**

- a. National Power, National Interest, Balance of Power and Sovereignty
- b. Security- Collective Security and Cooperative Security, Human Security

**UNIT-III : Phases and Issues in World Politics:**

- a. End of Cold War and Post-Cold War World Order
- b. Race, Caste and Gender in International Relations, Globalization, issues of global justice and global terrorism

**UNIT-IV : Global, Regional Organizations and related issues**

- a. United Nations, WTO and SAARC- Its Structure, Role and Impact
- b. Human Rights, Environmentalism and Development

**Reading Material**

1. S.P.Verma - International System and Third World, New Delhi, Vikas Pub., 1988.
2. Vinaykumar Malhotra - International Relations.
3. Ghosh, Peu – International Relations, PHI Learning Pvt. Ltd., Delhi, 2009.
4. Prem Arora - Comparative Politics and International relations, Bookhives, New Delhi.
5. Kashikar, M. S. – SAARC : Its Genesis, Development & Prospects, Himalaya Publishing House, Mumbai, 2000.
6. P. Allan & Goldman (Ed.) - The End of the Cold War, Dordrecht, Martinus Nijhoff, 1992
7. A. Appadurai - National Interest and Non-Alignment, New Delhi, Kalinga Publication, 1999
8. R. Aron - Peace and War: A Theory of International Relations, London, Fontana, 1966
9. S. Burchill et. Al., - Theories of International Relations, Hampshire, Macmillan, 2001
10. I. Claude- Power and International Relations, New York, Random House, 1962.
11. A.A Couloumbis & Wolf - Introduction to International relations: power and Justice, New York, Praeger, 1989.

12. K.W. Deutsch - The Analysis of International Relations, New Delhi, Prentice Hall, 1989
13. Dougherty & Ofaltzfraff Jr. - Contending Theories of International Relations, Philadelphia, J.B. Lippincott Co., 1970
14. J. Frankel - The Making of Foreign Policy, London, Oxford University Press, 1963
15. J. Fankel - Contemporary International Theory and the behavior of States, New York, Oxford University press, 1973
16. Greenstein & Polksby - Theory of International Relations, Reading Massachusetts, Addison-Wesley, 1979
17. Groom & Lights (Ed.) - Contemporary International Relations: A Guide to Theory, London, Printer, 1993
18. S.H. Hoffman - Essays in Theory and Practice of International relations, Boulder Colorado, Westview Press, 1989
19. K.J. Holsti - International Relations: A Framework of Analysis, Englewood Cliffs NJ, Prentice Hall, 1967
20. Hans J. Margenthau - Politics Among Nations, 6th edition, revised by K.W. Thompson, New York, Alfred Knopf, 1985
21. W.C. Olson & A.J.R. Groom - International Relations: Then and Now, London, Harpercollins Academic, 1991
22. J.N. Rosenau - International Studies and Social Sciences, Beverly Hills California and London, Sage, 1973
23. M.P. Sullivan - Theories of International Politics: Enduring Paradigm in a Changing World, Hampshire, Macmillan, 2001
24. Oklar jk;iwjdj] varjjk'V^h; laca/k( lq/kkfjr vkoLRrh] ukxiwj] Jh eaxs"k izdk"ku] 2006-
25. QkMh;k ch- ,y- varjjk'V^h; laca/k lkfgR; izdk"ku flfjt] vkxjk-
26. Hkkjr vkf.k tx] MkW- ch- Mh- rksMdj] Mk;eaM ifCyds'kU] iq.ks] 2011-
27. la;qDr jk"V^a vlf.k brj vkarjjk"V^h; la?kVuk] izk - tkWULu ckstsZl] Mk;eaM ifCyds'kU] iq.ks] 2011-
28. vkarjjk"V^h; laca/k] MkW- olar jk;iwjdj] Jh eax'k izdk'ku] ukxiwj] 2006-s
29. vkarjjk"V^h; laca/k fl/nkar vlf.k O:ogkj] izk - ch- vk;- dqyd.khZ] izk- v'kksd ukbZdokMs] Jhfo | k izdk'ku] iq.ks] 2004-
30. vkarjjk"V^h; laca/k] MkW- ,l- lh- flagy] y{ehukjk;.k vxzoky izdk'ku] vkxjk] 2008-
31. vkarjjk"V^h; laca/k] 'kSysanz nsoG.kdj] vkSjaxkckn] fo | k cqDl-
32. vkarjjk"V^h; laca/k] 'khr;q/nksrj o tkxfrdhdj.kkps jktdkj.k] v:.kk isaMls] mRrjk lgL=cq/ns] vksfj,aV ykxeu] 2008-

## **ELECTIVE PAPERS**

(Choose any one paper from the following elective papers)

### **POL-2T4.1 : POLITICAL SOCIOLOGY**

#### **UNIT-I**

- a. Political Sociology : Meaning, nature and Scope
- b. Approaches : Systems, Marxist and Developmental

#### **UNIT-II**

- a. Bureaucracy – Meaning & Nature, Weber's Contribution
- b. Power, Authority, Legitimacy, Social Stratification

#### **UNIT-III**

- a. Political Culture – Meaning, Nature and Types
- b. Political Socialization – Meaning, Nature, Process

#### **UNIT-IV**

- a. Change and Development: Westernization, modernization and underdevelopment
- b. Political Participation: Political Parties, interest groups, Political Mobilization and mass media

#### **Reading Material :**

1. Saroj Kumar Jena - Political Sociology, Anmol Publications
2. Ali Ashraf & L.N. Sharma - Political Sociology : A New Grammar of Politics, University Press
3. Ram Ahuja - Indian Social System, Rawat Publications
4. Harihar Dass & B. C. Chaudhary : Introduction to Political Sociology, Vikas Publishing House, Delhi, 1997.
5. D. C. Bhattacharya : Political Sociology, Vijaya Publishing House, Kolkata, 2005.
6. G.A. Almond, and S. Verba, The Civic Culture, Princeton NJ, Princeton University Press, 1963.
7. S. Bayly, Caste, Society and Politics in India from the Eighteenth Century to the Modern Age, Cambridge, Cambridge University Press, 1999.
8. U. Baxi, Political Justice, Legislative Reservation for Scheduled Castes, and Social Change, Madras, University of Madras, 1990.
9. R. Benaix, and S. M. Lipset, Class, Status and Power, 2nd edn., New York, The Free Press, 1966.
10. P. R. Brass, Caste, Faction and Party in Indian Politics, Vols.2, Delhi, Chanakya Publications, 1984-1985.
11. J. Dennis, Socialization of Politics, New York, Wiley, 1973.
12. R. Kothari, Caste and politics in India, New Delhi, Orient Longman, 1970.
13. K.P. Langton, Political Socialization, New York, Oxford University Press, 1969.
14. K. Murali Manohar (ed.), Socio-economic Status of Indian Women, Delhi, Seema, 1983.
15. G. Omvedt, Dalits and the Democratic Revolution : Dr. Ambedkar and the Dalit Movement in Colonial India, New Delhi, Sage, 1994.
16. T. K. Oomen, Protest and Change : Studies in Social Movements , New Delhi, Sage, 1990.
17. R. D. Putnam, The Comparative Study of Political Elites, Englewood Cliffs NJ, Prentice-Hall, 1976.

18. D. Sheth, "Caste and Class : Social reality and political representations" in V.A. PaiPanandikar and A. Nandy (eds.), *Contemporary India*, Delhi, Tata McGraw-Hill, 1999.
  19. M. N. Srinivas, *Caste in Modern India and Other Essays*, Bombay, Asia Publishing House, 1962.
  20. \_\_\_, *The Cohesive Role of Sanskritization and other Essays*, Delhi, Oxford University Press, 1989.
  21. E. Zelliot, "Gandhi and Ambedkar : a Study in Leadership" in M. Mahar (Ed.), *The Untouchables in Contemporary India*, Tuscon, University of Arizona Press, 1972.
  22. \_\_\_, *From Untouchables to Dalit : Essays on the Ambedkar Movement*, Delhi, Manohar, 1992.
  23. jktuhfrd lekt'kkL=] MkW- ,l- lh- flagy] y{eh ukjk;k vxzoky izdk'ku] vkxjk] vko`Rrh 2008-
  24. dfolkO;k 'krdrhy cnyrs lektdkj.k vkf.k jktdkj.k] MkW - vydk fo- ns'keq[k] Jh lkbZukFk izdk'ku] ukxiwj-
  25. Hkkjrkrhy lkekftd pGoGh] ?ku';ke 'kgk] Mk;eaM izdk'ku] iq.ks] 2008-

## **POL-2T4.2 : POLITICAL ANTHROPOLOGY**

**Unit-1 : (a) Political Anthropology : Meaning, Nature, Scope & Development  
(b) Ordering and establishment of Human Relations, Control of Human Behaviour**

**Unit-2 : (a) Nature & Aspects of Culture, Culture & Political Sphere  
(b) Economic Organisation of Human Society at different stages**

**Unit-3 : (a) Social Organisations and Leadership in Human Society at different stages of development**

(b) Kinship and Power; Social Stratification in Primitive Society  
Unit-4 : (a) Religion and Power, Value System in Primitive Society  
(b) Political System in Primitive and Traditional societies

## Reading Material :

1. Political Anthropology: An Introduction [Paperback]; Ted Lewellen Publisher: Bergin & Garvey, Westport, CT; 1992.
  2. Irawati Karve (1989) [1928]. The Chitpavan Brahmins - A Social and Ethnic Study. pp. 96–97. ISBN 81-7022-235-4.
  3. Oroon K. Ghosh. The changing Indian civilization: a perspective on India.
  4. Pran Nath Chopra (1982). Religions and communities of India. Vision Books. pp. 49.
  5. Bernard S. Cohn, Milton Singer (2007). Structure and Change in Indian Society. pp. 399–400. ISBN 978-0-202-36138-3.
  6. John Wilson (2001). Indian Caste. Volume 2. Adegi Graphics. p. 20. ISBN 978-1-4021-8002-6. Retrieved 2010-06-18. "among the fairest (probably the fairest) of the Hinduraces"
  7. Sonali Gaikwad, V. Kashyap (July 19, 2005). "Molecular Insight into the

- Genesis of Ranked Caste Populations". *Genome Biology* 6 (8): P10. doi:10.1186/gb-2005-6-8-p10.
8. Sir Ramakrishna Gopal Bhandarkar (1888). The critical, comparative, and historical method of inquiry, as .... pp. 13, 14.
  9. Kumar Suresh Singh, B. V. Bhanu, B. V. Mehta. People of India. Anthropological Survey of India.
  10. Gopal Guru, with Shiraz Sidhva. India's "hidden apartheid".
  11. William A. Haviland, *Anthropology: The Human Challenge*, 13th edition, ThomsonWadsworth, 2010, ISBN 978-0-495-81084-1
  12. Ambedkar B. R.: *The Annihilation of Caste*. p. 49 of his Writings and Speeches, vol.1, Education Dpt., Government of Maharashtra 1979.
  13. Ayesha Jalal, Democracy and Authoritarianism in South Asia: A Comparative and Historical Perspective (Contemporary South Asia), Cambridge University Press (May 26, 1995), ISBN 0-521-47862-6.
  14. Anne Waldrop (2004). "Dalit Politics in India and New Meaning of Caste". *Forum for Development Studies* 31 (2). doi:10.1080/08039410.2004.9666283
  15. Swami Sahajanand Saraswati Rachnawali (Selected works of Swami Sahajanand Saraswati), Prakashan Sansthan, Delhi, 2003.
  16. Baldev Upadhyaya, *Kashi Ki Panditya Parampara*, Sharda Sansthan, Varanasi, 1985.
  17. M.A. Sherring, *Hindu Tribes and Castes as Reproduced in Benaras*, Asian Educational Services, New Delhi, First edition 1872, new edition 2008.
  18. Jogendra Nath Bhattacharya, *Hindu Castes and Sects*, Munshiram Manoharlal, Delhi, first edition 1896, new edition 1995.
  19. E.A.H. Blunt, *The Caste System of North India*, first edition in 1931 by Oxford University Press, new edition by S.Chand Publishers, 1969.
  20. Christopher Alan Bayly, *Rulers, Townsmen, and Bazaars: North Indian Society in the Age of British Expansion, 1770–1870*, Cambridge University Press, 1983.
  21. Anand A. Yang, *Bazaar India: Markets, Society, and the Colonial State in Bihar*, University of California Press, 1999.
  22. Acharya Hazari Prasad Dwivedi Rachnawali, Rajkamal Prakashan, Delhi. Bibha Jha's Ph.D thesis Bhumihar Brahmins: A Sociological Study submitted to the Patna University.
  23. Arvind Narayan Das, *Agrarian movements in India : studies on 20th century Bihar* (Library of Peasant Studies), Routledge, London, 1982.
  24. M. N. Srinivas, *Social Change in Modern India*, Orient Longman, Delhi, 1995.
  25. Ambedkar, B.R. (1946). *The Untouchables: Who Were They and Why They Became Untouchables?* as reprinted in Volume 7 of Dr. Babasaheb Ambedkar Writings and Speeches, published by Government of Maharashtra 1990; Complete Writings.
  26. Ambedkar, B.R. (1946) Who were the Shudras
  27. Atal, Yogesh (1968) "The Changing Frontiers of Caste" Delhi, National Publishing House.
  28. Atal, Yogesh (2006) "Changing Indian Society" Chapter on Varna and Jati. Jaipur, Rawat Publications.
  29. Baines, Jervoise Athelstane (1893). General report on the Census of India,

- 1891, London, Her Majesty's Stationery Office.
30. Blunt, E.A.H. (1931). *The Caste System of Northern India*, republished 1964, S. Chand, Delhi.
  31. Crooke, William (1896). *Tribes and Castes of the North-Western Provinces and Oudh*, 4 vols.
  32. Duiker/Spielvogel. *The Essential World History Vol I: to 1800*. 2nd Edition 2005.
  33. Dumont, Louis. *Homo Hierarchicus: The Caste System and Its Implications*. Complete English edition, revised. 540 p. 1970, 1980 Series: (Nature of Human Society).
  34. Forrester, Duncan B., 'Indian Christians' Attitudes to Caste in the Nineteenth Century,' in *Indian Church History Review* 8, no. 2 (1974): 131-147.
  35. Forrester, Duncan B., 'Christian Theology in a Hindu Context,' in *South Asian Review* 8, no. 4 (1975): 343-358.
  36. Forrester, Duncan B., 'Indian Christians' Attitudes to Caste in the Twentieth Century,' in *Indian Church History Review* 9, no. 1 (1975): 3-22.
  37. Forrester, Duncan B., *Caste and Christianity: Attitudes and Policies on Caste of Anglo-Saxon Protestant Missions in India* (London and Atlantic Highlands, NJ: Curzon Press and Humanities Press, 1980).
  38. Ghurye, G. S. (1961). *Caste, Class and Occupation*. Popular Book Depot, Bombay.
  39. Ghurye, G. S. (1969). *Caste and Race in India*, Popular Prakashan, Mumbai 1969(1932).
  40. Jaffrelot, Christophe (2003). *India's Silent Revolution: The Rise of the Lower Castes*, C.Hurst & Co.
  41. Kane, Pandurang Vaman: *History of Dharmashastra: (ancient and mediaeval, religious and civil law)* — Poona : Bhandarkar Oriental Research Institute, 1962-1975.
  42. Lal, K. S. *Growth of Scheduled Tribes and Castes in Medieval India* (1995).
  43. Murray Milner, Jr. (1994). *Status and Sacredness: A General Theory of Status Relations and an Analysis of Indian Culture*, New York: Oxford University Press.
  44. Raj, Papia & Aditya Raj (2004) "Caste Variation in Reproductive Health of Women in Eastern Region of India: A Study Based on NFHS Data" *Sociological Bulletin* 53 (3):326-346.
  45. Ranganayakamma (2001). For the solution of the "Caste" question, Buddha is not enough, Ambedkar is not enough either, Marx is a must, Hyderabad : Sweet Home Publications.
  46. Russell, R.V. and R.B. Hira Lal (1916). *The Tribes and Castes of the Central Provinces of India*, 4 vols., London.
  47. Liz Stuart, in the *Guardian Weekly*, January 10, 2002
  48. Stanley Diamond, *In Search of the Primitive*, Transaction Publishers, U.S. 1987, ISBN 0-87855-582-X
  49. Adam Kuper, *The Reinvention of Primitive Society. Transformations of a Myth*, Taylor & Francis Ltd. 2005, ISBN 0-415-35761-6
  50. Joseph Campbell, *The Masks of God: Primitive Mythology*, Viking, 1959;

- reissued by Penguin, 1991 ISBN 978-0-14-019443-2
51. Joseph Campbell, *The Historical Atlas of World Mythology*, vols. I and II, Harper and Row 1988, 1989.
  52. Primitive Religion Its Nature And Origin (1937). Author: Paul Radin Publisher: The Viking Press
  53. E Durkheim, *The Elementary Forms of Religious Life* (1915)
  54. M Eliade, *The Sacred and the Profane* (1959), and *A History of Religious Ideas* (1978)
  55. E E Evans - Pritchard, *Theories of Primitive Religion* (1965);
  56. B Malinowski, *Magic, Science and Religion and Other Essays* (1948)
  57. J Skorupski, *Symbol and Theory: A Philosophical Study of Theories of Religion* in So E B Tylor, *Primitive Culture* (1891);
  58. A F C Wallace, *Religion: An Anthropological View* (1966).
  59. Geertz, Clifford : *The Interpretation of Cultures* (1973), Basic Books 2000 paperback: ISBN 0-465-09719-7
  60. Pritchard, E. E., *Theories of Primitive Religion*. Oxford University Press. 1965 ISBN 0-19-823131-8.
  61. Stark, Rodney & William Sims Bainbridge "Theory of Religion". Rutgers University
  62. Press 1996, (originally published in 1987) ISBN 0-8135-2330-3. *cial Anthropology* (1976)

## **POL-2T4.3 WESTERN POLITICAL THEORY**

### **UNIT-I**

- a. Nature and significance: Meaning, nature, related Concepts, political thought, political Philosophy, political ideology
- b. Importance of Classical Traditions: Meaning, nature, development, emphasis on political philosophy, ethics, search for a perfect political order.

### **UNIT-II**

- a. Different Interpretations: Conflicting political ideas, problems of generalizations and categorizations, problems of interpretations in political theory.
- b. Limitations of classical traditions: lack of scientific methodology, non-inclusion of third world studies, lack of study infrastructure and processes.

### **UNIT-III**

- a. Debate on the Decline of Political Theory: Causes of the decline of political theory-historical development of science and technology, expansion of empiricism
- b. Nature of the revival of political theory: Arguments of Berlin, Blondel and Strauss

### **UNIT-IV**

- a. End of Ideology debate and its impact on Political theory: Arguments of Daniel Bell and S. M. Lipset
- b. New trends in political theory- post modernism, environmentalism, euro-communism and LPG

## Reading Material:

1. Daniel Bell, *The End of Ideology*, the free Press, New York, 1960
  2. I. Berlin, *Does Political Theory Still Exist?* In *Philosophy, Politics and Society*, 2<sup>nd</sup> Series ed. P. Lasletyt and W.G. Runciman. Oxford, Blackwell 1964.
  3. J. Blondel, *The Discipline of Politics*, London, Butterworth, 1981.
  4. D. Easton, *The Political System: An Inquiry into the State of Political Science*, New York Wiley, 1953.
  5. D. Germino, *Beyond Ideology: The Revival of Political Theory*, New York, Harper and Row, 1967.
  6. R.E.Goodin, *Green Political Theory*, Cambridge Polity Press, 1992.
  7. J.G. Gunnell, *Political Theory: Traditions and Interpretations*, Cambridge, Winthrop, 1979.
  8. A. Hacker, *Political Philosophy*, USA, Westview Press, 1997.

## **POL-2T4.4 : SOUTH ASIAN POLITICAL SYSTEM (Pakistan, Bangladesh, Sri Lanka and Nepal)**

- Unit-1 : (a) South Asia - Historical Background during the Colonial Period
    - (b) Independence and the efforts at Constitution Making in South Asia
  - Unit-2 : (a) Nature of the Political System: A Comparative Assessment
    - (b) Democracy in the Region: Problems and Prospects
  - Unit-3 : (a) Role of Military and Nuclear Politics in South Asia
    - (b) Developmental Issues and Dilemma of Strategies
  - Unit-4 : (a) Major Issues: Border Dispute, Language, Ethnicity and Religion
    - (b) Impact of Globalization on South Asia

## Reading Material :

- 1) Kashikar, M. S. : "SAARC : Its Genesis,Development & Prospects"; Himalaya Publishing House, Mumbai, (2000)
  - 2) N. Ahmed and P. Norton (eds.), Parliaments in Asia, London, Frank Cass, 1999.
  - 3) Alavi, H. "Authoritarianism and legitimation of state power in Pakistan", in S.K.Mira (ed.) The Post-Colonial State in Asia: Dialectics of Politics and Culture, London, Harvester Wheatsheaf, 1990.
  - 4) \_\_\_\_\_ and T. Shanin (eds.), Introduction to the Sociology of Developing Societies, London: Macmillan, 1982.
  - 5) \_\_\_\_\_ and J. Harriss, The Sociology of Developing States in South Asia, Basingstoke, Macmillan, 1987.
  - 6) G. A. Almond and J. Coleman (eds.), The Politics of the Developing Areas, Princeton NJ, Princeton University Press, 1960.
  - 7) K. Bahadur, Democracy in Pakistan: Crises and Conflicts, New Delhi, Har Anand, 1998.
  - 8) C. Baxter et.al., Government and Politics in South Asia, Lahore, Vanguard,

1988.

- 9) P. Bidwai, and A. Vanaik, *South Asia on a Short Fuse: Nuclear Politics and the Future of Global Disarmament*, Delhi, Oxford University Press, 1999.
- 10) M. Brecher, "Political instability in the new states of Asia", in H. Eckstein and D.E. Apter (eds.), *Comparative Politics: A Reader*, New York, The Free Press, 1963.
- 11) M. Chadda, *Building Democracy in South Asia: India, Nepal, Pakistan*, Boulder Colorado, Lynne Rienner, 2000.
- 12) V. D. Chopra (ed.), *Religious Fundamentalism in Asia*, Delhi, Gyan Publishers, 1994.
- 13) C. Clapham and G. Philip (eds.), *The Political Dilemmas of Military Regimes*, London, Croom Helm, 1985.
- 14) S. P. Cohen, *The Pakistan Army*, New Delhi, Himalay Books, 1984.
- 15) B. Crow, "The state in Bangladesh: the extension of a weak state" in S.K. Mitra (ed.)*The Post-Colonial State in Asia: Dialectics of Politics and Culture*, London, Harvester Wheatsheaf, 1990.
- 16) R. E. Dowse, "The military and political development", in C. Leys (ed.) *Politics and Change in Developing Countries*, Cambridge, Cambridge University Press, 1969.
- 17) E. Emerson, *From Empire to Nation: The Rise to Self-Assertion of Asian and African People*, Cambridge Massachusetts, Harvard University Press, 1960.
- 18) S. E. Finer, *The Man on Horseback: The Role of the Military in Politics*, London, Pall Mall Press, 1962.
- 19) H. Gardesi and J. Rashid (eds.), *Pakistan: The Roots of Dictatorship: The Political Economy of a Praetorian State*, Delhi, Oxford University Press, 1983.
- 20) B. K. Gordon, *The Dimensions of Conflict in South Asia*, Englewood Cliffs, Prentice Hall, 1966.
- 21) K. Gough and H. P. Sharma (eds.), *Imperialism and Revolution in South Asia*, London, Monthly Review Press, 1990.
- 22) S. P. Huntington, *The Third Wave: Democratization in the Late Twentieth Century*, Norman Oklahoma and London, University of Oklahoma Press, 1991.
- 23) \_\_\_\_\_, *Political Order in Changing Societies*, New Haven CT, Yale University Press, 1968.
- 24) \_\_\_\_\_(ed.), *Changing Patterns of Military Politics*, International Yearbook of Political Behaviour Research vol.3, Glencoe Illinois, The Free Press, 1962.
- 25) R. B. Jain, "Bureaucracy, Public Policy and Socio-Economic Development", in H.K. Asmerom, R. Hope and R.B. Jain (eds.), *Bureaucracy and Development Politics in the Third World*, Amsterdam, VU University Press, 1992.
- 26) S. U. Kodikara (ed.), *External Compulsion of South Asian Politics*, New Delhi, Sage, 1993.
- 27) J. S. Migdal, *Peasants, Politics and Revolution: Pressures toward Political and Social Change in the Third World*, Princeton NJ, Princeton University Press, 1974.
- 28) S. K. Mira (ed.), *The Post-Colonial State in Asia: Dialectics of Politics and Culture*, London, Harvester Wheatsheaf, 1990.
- 29) G. Mydral, *Asian Drama: An Inquiry into the Poverty of Nations*,

- Harmondsworth, Penguin, 1968.
- 30) U. Phadnis and R. Ganguli, Ethnicity and Nation Building in South Asia, New Delhi, Sage, 2000.
- 31) D. Potter, "Democratization in Asia", in D. Held (ed.), Prospects for Democracy: North South, East, West, Cambridge, Polity Press, 1992.
- 32) R. Rais, State, Society and Democratic Change in Pakistan, Oxford, Oxford University Press, 1997.
- 33) V. Randall, Political Parties in the Third World, London, Sage Publications, 1988.
- 34) F. W. Riggs, Administration in Developing Countries: The Theory of Prismatic Society, Boston, Houghton Mifflin, 1964.
- 35) G. Rosen, Peasant Society in a Changing Economy: Comparative Development in Southeast Asia and India, Urbana, University of Illinois Press, 1975.
- 36) R. W. Stern, Democracy and Dictatorship in South Asia: Dominant Classes and Political Outcomes in India, Pakistan, and Bangladesh, New Delhi, India Research Press, 2001.
- 37) C. Thomas and P. Saravanamuttu (eds.), The State and Instability in the South, London, Macmillan, 1989.
- 38) M. Weiner, Party Politics in India: The Development of a Multi-Party System, Princeton NJ, Princeton University Press, 1957.
- 39) Wilson and D. Dalton (Eds), The States of South Asia: Problems of National Integration, London, Hurst, 1982.
- 40) T. P. Wright, "South Asian Separatist Movements", in W.H. Morris-Jones (ed.), The Politics of Separatism, Collected Seminar Papers No.19, London, University of London Institute of Commonwealth Studies, 1976.

## **M.A. II**

### **SEMESTER - III**

#### **CORE PAPERS**

#### **POL-3T1 : RESEARCH METHODOLOGY**

##### **UNIT-I :**

- a. Scientific methodology: meaning, Nature and development in the studies of Social Sciences
- b. Fundamentals of scientific Research: Objectivity, Generality, Probability and Neutrality

##### **UNIT-II :**

- a. Research design, Literature Review & Its importance, Hypotheses and Variables
- b. Tools and Techniques of Data Collection - Observation, Questionnaire,

## Interviews

### UNIT-III

- a. Sampling : Meaning, Significance, Types and Selection
- b. Field Survey method and Library Research

### UNIT-IV

- a. Data Processing & analysis - Statistical techniques of data analysis, Use of Computers
- b. Thesis and Report Writing, bibliography, footnotes, references, Chapterization, Characteristics of a Good Report

### Reading Material :

1. Techniques of Social Research: Dr. P.L. Bhandarkar and Wilkinson, Himalaya
2. Publishing House.
3. Research Methodology Methods/Techniques. C.R. Kothari, Vishwa Prakashan, New Delhi.
4. Methodology & Social Science Research. Dr. Raj Kumar, Book Enclave- Jaipur.
5. Research Methodology in Political Science. Theory and Analysis. S. L. Verma, Rawat Publication- Jaipur.
6. H.N. Blalock, An Introduction to Social Research, Englewood Cliffs NJ, Prentice Hall, 1970.
7. M.J. Brenner, J. Brown and D. Canter (eds.), The Research Interview : Uses and Approaches, London, Academic Press, 1985.
8. Bryman, Quantity and Quality in Social Research, London, Unwin Hyman, 1988.
9. Bulmer (ed.), Sociological Research Methods : An Introduction, London, Macmillan, 1984.
10. De D.A. Vaus, Surveys in Social Research, 2nd edn., London, Unwin Hyman 1991.
11. Gilbert (ed.), Researching Social Life, London, Sage, 1993.
12. W.J. Goode and P.K. Hatt, Methods of Social Research, New York, McGraw Hill, 1952.
13. A.C. Isaak, Scope and Methods of Political Science, Homewood Illinois, Dorsey Press, 1985.
14. J.B. Johnson and R.A. Joslyn, Political Science Research Methods, Washington DC, C.O. Press, 1986.
15. Kaplan, The Conduct of Inquiry, Methodology for Behavioural Science.
16. D. Marsh and G. Stoker (ed.), Theory and Methods in Political Science, Basingstoke, Macmillan, 1995.
17. G. Mydral, Objectivity in Social Science, New York, Pantheon Books, 1969.
18. Sir, K.R. Popper, The Logic of Scientific Discovery, London, Hutchinson, 1959.
19. Smith, Political Research Methods, Boston, Houghton Milton, 1976.
20. D.P. Warwick and M. Bulmer (eds.), Social Research in Developing Countries :
21. Surveys and Consciousness in the Third World, Delhi, research Press, 1993.
22. P.V. Young, Scientific Social Surveys and Research.
23. MkW- Ogh-,y- tjkjs] lkekftd "kkL=kaph lacks/ku iz.kkyh (Research Methodology) vOnSr

24. izdk"ku] vdksyk-  
25. MkW- Ogh-,y- tjkjs] "kks/k iz.kkyh ,chMh ifCy"klZ-

## **POL-3T2 : PUBLIC ADMINISTRATION**

### **UNIT-I : Public Administration :**

- (a) Meaning, Nature, Evolution, objectives, Role, and Scope
- (b) Theories : Decision-making, Human Relations, Scientific Management

### **UNIT-II : Basic Concepts:**

- (a) Organisation, Hierarchy, Unity of Command
- (b) Authority, Responsibility, Delegation of powers

### **UNIT-III : Financial Administration :**

- (a) Role of Administration in Planning, Budgeting and Development
- (b) Accountability & Control of the Legislature & Executive

### **UNIT-IV :**

- (a) Personnel Administration - Recruitment, Training, Performance Appraisal and Promotion
- (b) Issues & New Trends - Role of Civil Society, Ombudsmen, Good Governance, E-Governance

### **Reading Material :**

1. Avasthi R. and Maheshwari S.R., 2004, Public Administration, Agra, Laxmi Narian Agrawal.
2. Goel S.L., 2003, Public Administration, Theory And Practice, New Delhi, Deep & Deep Publishers.
3. Maheshwari Shriram, 1998, New Delhi, Macmillan.
4. Maheshwari S.R., 1991, Issues and Concepts In Public Administration, New Delhi, Allied Publishers.
5. Naidu S.P., 1996, Public Administration: Concepts and Theories, Hyderabad, New Age, International Publishers
6. Sahni, Pradeep and Vayunandan, Etakula – Administrative Theory, PHI Learning Pvt. Ltd, Delhi; 2010.
7. Nigro Felix A. and Llyod Nigro, 1970, Modern Public Administration, N.Y., Harper & Row
8. Shafritz Jay M. and Hyde Albert C., 1987, Classics of Public Administration, Chicago, Illinois, The Dorsey Press
9. Sharma M.P. and Saldana B. L., 2001, Public Administration in Theory and Practice, Allahabad, Kitab Mahal
10. Dye Thomas R 2004, Understanding Public Policy, Tenth Edition, Pearson Education, New Delhi.
11. Dimock and Dimock - Public Administration, Oxford, 1975.
12. Basu D.D., Administrative Law, Prentice Hall, 1996.
13. Rumki Basu, Public Administration, Concepts and Theories (2nd Ed.), Sterling, New Delhi, 1990.

14. L.D. White, *Introduction to the Study of Public Administration*, New York, Mcmillan, 1955
15. B. P. Bhambri, *Administration in changing society*, National, Delhi, 1978.
16. N. Bhattacharya, *Bureaucracy and Development Administration*, Uppal, Delhi, 1979.
17. yksdiz'kklu] ekgs'ojh Jhjke o voLFkh] vxzoky izdk'ku] vkxjk] 2006-
18. yksd iz'kklu] Nk;k cdk.ks] Jh fo | k izdk'ku] iq.ks-
19. yksdiz'kklu ds u;s vk;ke] eksfgr HkV~Vkpkl;Z] tokgj izdk'ku] fnYyh-
20. yksdiz'kklu] uk- j- bukenkj] nkLrkus izdk'ku] iq.ks-
21. yksd iz'kklukph ewyrRos] vfye odhy] fnyhi /keZ] nwj fk{k.k dsan] iq.ks fo | kihB-z
22. Tukaram Jadhav – Good Governance, Unique Bulletin. (Marathi)

## **ELECTIVES**

(Choose any one from the following elective papers)

### **POL-3T3.1 : POLITICS OF MAHARASHTRA**

#### **UNIT-I :**

- (a) Historical background of State of Maharashtra, Role of Maharashtra Ekikaran Samiti
- (b) Reorganization of States- Reports of various commissions and committees, Socio-Cultural Determinants of Maharashtra Politics

#### **UNIT-II:**

- (a) Socio-Economic determinants of Politics in Maharashtra: Caste, Sub-Region, language, industrialization, Agriculture, Trade Unions and Cooperative sector
- (b) Major Political Parties in Maharashtra-Congress, BJP, Shiv Sena, NCP and RPI: Ideology, Support Base and Electoral Performance, Role of Leadership

#### **UNIT-III :**

- a) Role of Political Elites in the formation of state- Y.B.Chavhan, A.A.Dange, S.M.Joshi, N.G.Gore and Madhu Limaye; Role of Elites in Contemporary Politics- V.P.Naik, S.B.Chavhan, Vasantdada Patil, Sharad Pawar and Bal Thakre
- b) Coalition Governments in Maharashtra post 1990, Pressure Groups and Social Movements in Maharashtra

#### **UNIT-IV :**

- (a) Emerging issues in politics of Maharashtra : Demand for Separate Vidarbha, Farmers' Suicide, Naxalism, Political & bureaucratic corruption
- (b) Dalit Assertion, women's movement, recent demands for caste and communal reservation, demand for reservation in private sector, RTI & its impact

#### **Reading Material :**

1. V.M. Sirsikar - *Politics of Modern Maharashtra*, Orient Longman Pub.,

2. Usha Thakkar & Mangesh Kulkarni - Politics in Maharashtra, Himalaya Publishing House, Mumbai, 1990.
3. Livi Rodrigues - Rural Political Protest in Western Maharashtra, Oxford University Press, New Delhi.
4. K.R. Bombwall - The Foundations of Indian Federalism, Bombay, Asia Publishing House, 1967
5. P. Chatterjee (Ed.) - States and Politics in India, Delhi, Oxford University Press, 1997
6. Zoya Hasan - Politics and States in India, New Delhi, Sage, 2000
7. Rajani Kothari - Politics in India, New Delhi, Orient Longman, 1970
8. Iqbal Narain (Ed.) - State Politics in India, Meerut, Meenakshi Publication, 1967
9. Baviskar B. S.; The Politics of Development, Sugar Co-operative in Rural Maharashtra, Oxford Uty, 1980.
10. Jayant Lele - Elite Pluralism and Class Rule, Political Development in Maharashtra, Popular, Mumbai, 1982
11. S. A Rao/Francis Frankel, 'Politics in Maharashtra' Vol.2 Oxford University Press, 1990
12. Phadake Y. D.; Language and Politics, Himalaya, 1969.
13. Inamdar N. R. & others (Ed.) Social, Political and Economic Processes in Contemporary India.
14. Gail Omvedit; 'New social movements in India'
15. Zellot and Eleanor; Buddhism and Politics in Maharashtra', in Smith D. E. (Ed.) South Asian Politics and Religion, Princeton Uty. Press, 1966.
16. ---; From untouchables to Dalits.
17. Jugale, V. B. and Dange, S. A.; 'Challenges to economy of Maharashtra'
18. tkr o egkjk"V<sup>a</sup>krhy lRrkdkj.k] lqgkl iG'khedj] lqxkok izdk'ku] iq.ks] 1998-
19. egkjk"V<sup>a</sup>krhy lRrk la?k"kZ] jktdh; ;'kkph okVpky] lqgkl iG'khedj] lqgkl dquydkhZ] ledkyhu izdk'ku] iq.ks-
20. egkjk"V<sup>a</sup>kps jktdkj.k] jktdh; izfØ;sps LFkkfud lanHkZ] lqgkl iG'khedj] furhu fcjey] izfrHkk izdk'ku] iq.ks 2007-
21. folkO;k 'krdrkrhy egkjk"V<sup>a</sup>] ;- nh- QMds] [kaM 1 rs 8] Jh fo|k o ekSt izdk'ku] iq.ks- cnyrk egkjk"V<sup>a</sup>] HkkLdj HkksG] fd'kksj csMfdgkG MkW- vkacsMdj vdkneh] lkrkj] 2003-s
22. tkr vkf.k jktdkj.k] HkkLdj HkksG] MkW- vkacsMdj vdkneh] lkrkj] 1999s
23. egkjk"V<sup>a</sup>krhy lRrkarj] jktsanz Ogksjk] lqgkl iG'khedj] xzaFkkyh izdk'ku] eqacbZ] 1996-
24. vk/lqfud egkjk"V<sup>a</sup>kps jktdkj.k] o- e- fljhedj dkWfUVusUVy izdk'ku] iq.ks-
25. vktpk egkjk"V<sup>a</sup>] iUukyky lqjk.kk] fd'kksj csMfdgkG] Jh fo|k izdk'ku] iq.ks 1988-
26. Hkkjr; 'kklu vkf.k jktdkj.k] MkW- vydk fo- ns'keq[k] Jh lkbZukFk izdk'ku] ukxiw]

## **POL-3T3.2 : ANCIENT INDIAN POLITICAL THOUGHT**

UNIT-I

- a. Issues of Interpretations of Ancient Indian Political Thought; Various Schools of Thought & their Nature; Nature of politics in Ancient India
- b. Political Philosophy of Vedanta - basic concepts, evolution, character and interpretations; Vedic Popular assemblies: Sabha, Samiti, Gana and Vidatha

#### **UNIT-II**

- a. Political ideas in Kautilya's Arthashastra and the Shantiparva; Concepts of Caste and Varna; Dharma and Rajdharma.
- b. Elements of the State: the Saptanga Theory and inter-state relations, Mandala theory; King and his Duties & Functions

#### **UNIT-III**

- a. Theories of the Origin of the State: Theory of Property, Family and Varna regarding the origin; the contract theory and other theories.
- b. Buddhist Political Philosophy - basic concepts, evolution, character and interpretations.

#### **UNIT-IV**

- a. Ministries: Council of Ministers, important functionaries, their functions and working
- b. Local Republics: Their Types, Governance system, Nature of Kingship, Limitations on the Monarchy

#### **Reading Material**

1. U.N. Ghoshal, A history of Indian Political Ideas, London, 1956
2. U.N. Ghoshal, Indian Political Ideas, Ancient period and the Period of Transition to the Middle Ages, OUP, Bombay, 1959.
3. P.V.Kane, History of Dharma shastra, Vol. 3, Pune, 1946.
4. R.P. Kangade, The Kautilya Arthashastra-III, Bombay 1965.
5. A.S.Altekar, State and Government in Ancient India, Varanasi, 1962
6. Romila Thapar, From Lineage to State,
7. R.S.Sharma, Aspects of Political Ideas and Institutions in Ancient India,
8. V.P.Verma, Studies in Hindu Political Thought,
9. Ranga Swamy Iyengar, Some Aspects of Ancient Indian Polity, Madras 1935
10. A. A. Anjaria, Nature and Grounds of Political Obligation in the Hindu State, Calcutta, 1935.
11. N.C.Bandopadhyaya, Development of Hindu Polity and Political Theories, Part I and II, Calcutta, 1927- 30
12. D.R.Bhandarkar, Some Aspects of Hindu Polity, Varanasi, 1963.
13. R.P. Kangale, Kautilya's Artha Shastra Part-III- A study, Bombay 1965.

## **POL-3T3.3 : ELECTORAL POLITICS IN INDIA**

### **UNIT-I**

- a. Electoral Politics in India-Pre and Post Independence: Nature Characteristics and Change
- b. Electoral Process: Nature, Characteristics, significance, Mechanism and Implementation

### **UNIT-II**

- a. Election Commission of India: Power, Functions and Role
- b. Determinants of Voting Behavior- Role of Caste, Religion, Language, region and social and economic class

### **UNIT-III**

- a. Party System in India: Nature, classification, ideology and programmes, organization and leadership
- b. Issues in Electoral politics: corruption, money power, muscle power, electoral rigging, undemocratic party system

### **UNIT-IV**

- a. Electoral Reforms: Tarkunde, Goswamy and Indrajeet Gupta Committee Reports
- b. Electoral Reforms by the Election Commission during T.N.Seshan and Lingdoh regime.

### **Reading Material:**

1. J.C.Agarwal and N. K. Choudhari, Election in India, Shipra Publications, New Delhi, 1998
2. R.Ali, Representative Democracy and Concept of Free and Fair Elections, Deep and Deep, New Delhi, 1996
3. D.Anand, Electoral Reforms-Curbing Role of Money Power, Indian Institutie of Public Administration, New Delhi, 1995
4. A.Bajpai, Indian Electoral System- an Analytical Study, Nardeen Book Centre, New Delhi , 1992.
5. A.K. Bhagat, Elections and Electoral Reforms in India, Vikas, Delhi, 1996.
6. R.P.Bhalla, The Electoral System, its Operation and Implications for Democracy in India, Teaching Politics, Vol. XV No. 3-4, 1989.
7. J.K.Chopra, Politics of Electoral Reforms in India, Mittal Publication, Delhi, 1989.
8. R. Hedge, Electoral Reforms-Lack of Political Will, Bangalore, Karnataka State Janata Party, 1987.
9. P. N. Sharma, Elections and National Politics, Shipra Publications, New Delhi, 1994.
- 10.M.P.Singh, Lok Sabha Elections-1989 Indian Politics in 90s, Kalinga Publications, New Delhi, 1992.

## **POL-3T3.4 : GLOBALIZATION AND ITS IMPACT ON INDIA**

**Unit-I :**

- (a) Globalization : Meaning, nature and theories
- (b) Causes of India's participation in the Globalization process

**Unit-II :**

- (a) Impact of Globalization on India : Issues of national Sovereignty and Jurisdiction
- (b) Political Economy and Globalization - Impact of Trans National Corporations and Multinational Corporations on India

**Unit-III :**

- (a) Impact of Financial Regimes: Role of WTO, IMF and IBRD
- (b) Global Conflicts and India: Issues of national security and diplomatic Alliances

**Unit IV :**

- (a) Impact of Globalization on Indian Economy: Privatization, Liberalization, and the issues of economic inclusion and exclusion
- (b) Critics of Globalization, Alternative models and Protest Movements against Globalization

**Reading Material :**

1. P. Aghin and J. Williamson, *Growth Inequality and Globalization*, Cambridge, Cambridge University Press, 1998.
2. M. Albrow and E. King (eds.), *Globalization, Knowledge and Society*, London, Sage, 1990.
3. ———, *The Global Age*, Cambridge, Polity, 1996.
4. A. Alesina, E. Spolaore and R. Wacziarg, *Economic Integration and Political Disintegration*, Working Paper 6163, Chicago, National Bureau of Economic Research, 1997.
5. J. Anderson, C. Brook and A. Cockrane (eds.), *A Global World? Re-ordering Political Space*, Oxford, Oxford University Press, 1995.
6. M. Anderson, *Frontiers: Territory and State Formation in the Modern World*, London, Polity Press, 1996.
7. J. T. Bhagwati, *A Stream of Windows: Unsettling Reflections on Trade, Immigration, and Democracy*, Cambridge Massachusetts, MIT Press, 1998.
8. ——— (ed.), *Trading Blocs: Alternative Approaches to Analyzing Preferential Trade Agreements*, Cambridge Massachusetts, MIT Press, 1999.
9. D. Blake and R. Walters, *The Politics of Global Economic Relations*, 5th edn., Englewood Cliffs, Prentice Hall, 2001.
10. J. Boli and G. Thomas (eds.), *Constructing World Culture: International Non-Governmental Organizations since 1875*, Stanford CA, Stanford University Press, 1999.
11. M. Bordo, B. Eichengreen, and D. Irwin, "Is Globalization Really Different Than Globalization a Hundred Years Ago?" National Bureau of Economic Research, Working Paper, 1995.
12. J. Boston (ed.), *The State under Contract*, Wellington, Bridget Williams, 1995.
13. L. Bryan and D. Farrell, *Market Unbound: Unleashing Global Capitalism*, New

- York, John Wiley and Sons, 1996.
14. P. Buchanan, *The Great Betrayal: How American Sovereignty and Social Justice Are Being Sacrificed to the Gods of the Global Economy*, New York, Little Brown, 1998.
  15. R. Burbach, O. Núñez and B. Kagatitsky, *Globalization and its Discontents: The Rise of Postmodern Socialisms*, London, Pluto, 1997.
  16. J. M. Bystdzienski (ed.), *Women Transforming Politics: Worldwide strategies for Empowerment*, Bloomington, Indiana University Press, 1992.
  17. P. Dicken, *Global Shift: The Internationalization of Economic Activity*, London, Paul Chapman, 1992.
  18. P. Doremus, et al., *The Myth of the Global Corporation*, Princeton NJ, Princeton University Press, 1998.
  19. F. Cairncross, *The Death of Distance: How the Communications Revolution Will Change Our Lives*, Boston, Harvard Business School Press, 1997.
  20. T. Courschene, *Room to Maneuver? Globalization and Policy Convergence*, Kingston Ontario, McGill-Queen's University Press, 1999.
  21. A. Davis, and D. Wessel, *Prosperity: The Coming Twenty-Year Boom and What It Means to You*, New York, Times Books, 1998.
  22. R. dehoussse, "European Integration and the Nation State" in M. Rhodes, P. Heywood and V. Wright (eds.), *Developments in West European Politics*, Basingstoke, Macmillan, 1997.
  23. L. Diamond. J. Linz and S. Lipset (eds.), *Politics in Developing Countries: Comparing experiences with Democracy*, Boulder Colorado and London, Lynne Rienner, 1995.
  24. ——— and M. Plattner, *The Global Resurgence of Democracy*, 2nd edn., Baltimore, Johns Hopkins Press, 1996.
  25. P. Drucker, "The Global Economy and the Nation State", *Foreign Affairs*, September/October, 1997.
  26. ———, *Managing in a time of Great Change*, New York, Truman Talley, 1996.
  27. ———, *The Concept of the Corporation*, New York, Mentor, 1983.
  28. A. Elazar, *Constitutionalizing Globalization: the Postmodern Revival of Confederal Arrangements*, Lanham Oxford, Rowman and Littlefield, 1998.
  29. G. Esping-Andersen (ed.), *Welfare States in Transition: National Adaptations in Global Economies*, Thousand Oaks California, Sage, 1996.
  30. P. Evans, D. Rueschemeyer and T. Skocpol (eds.), *Bringing the State Back In*, Cambridge, Cambridge University Press, 1985.
  31. F. Fukuyama, *The End of History and the Last Man*, Harmondsworth, Penguin, 1992.
  32. J. K. Galbraith, *The Good Society: The Human Agenda*, Boston, Houghton Mifflin, 1996.
  33. A. Gamble and A. Payne (eds.), *Regionalism and World Order*, Basingstoke, Macmillan, 1996.
  34. S. Ghoshal and C. Barlett, *The Individualized Corporation*, New York, Harper Business, 1997.
  35. A. Hettne, *Globalism and the New Regionalism*, Basingstoke, Macmillan, 1999.
  36. P. Hirst and G. Thompson, *Globalization in Question: the international Economy*

- and the Possibilities of Governance, 2nd edn., Oxford and Cambridge Massachusetts, Blackwell, 1999.
37. R. Holton, Globalization and the Nation State, Basingstoke, Macmillan, 1998.
  38. A. M. Hoogvelt, Globalization and the Post-colonial World: The New Political Economy of Development, Basingstoke, Macmillan, 1997.
  39. S. P. Huntington, The Clash of Civilizations and the Remaking of World Order, New York, Simon and Schuster, 1996.
  40. H. Jacobson, Networks of Interdependence: International Organizations and the Global System, New York, Alfred A. Knopf, 1985.
  41. J. Jackson, The World Trade Organization, London, Cassell, 1998.
  42. R. Jackson, Quasi-States: Sovereignty, International Relations and the Third World, Cambridge, Cambridge University Press, 1989.
  43. H. Jacobson, Networks of Interdependence: International Organizations and the Global System, New York, Alfred Knopf, 1985.
  44. A. Jones and M. Keating (eds.), The European Union and the Regions, Oxford, Oxford University Press, 1995.
  45. M. Kahler (ed.), Capital Flows and Financial Crises, Ithaca NY, Cornell University Press, 1998.
  46. Kamarck and J. Nye, Democracy.com? Governance in a Networked World, Hollis NH, Hollis, 1999.
  47. I. Kaul, I. Grunberg and M. Stern, Global Public Goods, Oxford, Oxford University Press, 1999,
  48. A. W. Kegley and E. R. Wittkopf, World Politics: Trends and Transformation, New York, St. Martin's Press, 1995.
  49. A. Kratochwil and E. Mansfield (ed.), International Organization: A Reader, New York, HarperCollins, 1994.
  50. A. Lister, The European Union, the United Nations and the Revival of Confederal Governance, Westport Connecticut, Greenwood Press, 1996.
  51. A. Loader, The Governance of Cyberspace, London and New York, Routledge, 1997.
  52. P. Norris (ed.), Critical Citizens: Global Support for Democratic Governance, Oxford, Oxford University Press, 1999.
  53. K. Ohmae, The Borderless World, New York, Harper Business, 1990.
  54. ——— (ed.), The Evolving Global Economy: Making Sense of the New World Order, Boston, Harvard Business School Press, 1985.
  55. M. Waters, Globalization, 2nd edn., London, Routledge, 2000.

## **FOUNDATION COURSE**

*(Following paper is for students of discipline other than political science ONLY)*

### **POL-3T4.1 : POLITICAL SCIENCE : IDEAS AND CONCEPTS**

UNIT- I:

- a. Science of Politics - Genesis, development, nature and Scope
- b. Political theory, political philosophy and Thought

## **UNIT-II**

- a. State: theories of origin- social contract, utility and class theory.
- b. Sovereignty: Concept, definition, meaning and nature, singular and pluralist theory of sovereignty

## **UNIT-III**

- a. Power- meaning, nature, scope and types; Authority and Legitimacy: Definition, meaning, nature and Significance.
- b. Citizenship, Rights, Equality, liberty, Justice and Civil Society

## **UNIT-IV**

- a. Constitutionalism and Development of liberal and Marxist constitution
- b. Democracy: Theories, development, types, modernization, welfare state and theories of social change

### **Reading Material**

1. Asirvatham, Eddi, Political Theory, S.Chand And Company, New Delhi, 1988.
2. Kashikar, M.S. and Merkap, D. K. : Political Science: Principles, Ideas and Concepts; AGB Publishing, Nagpur; 2015; ISBN : 978-81-923117-3-9
3. David Held, , Political Theory Today, Policy Press, Cambridge, 1991.
4. Andreq Hacker, Political Theory Macmillan, New York, 1968.
5. M.N. Hagopian, Ideas and Ideologies, longman, new York, 1985.
6. Leslie Lipson, The Great Issues of Politics, Blackwell, London, 1984.
7. A. Leftwitch, What is Politics, Blackwell, London, 1984.
8. R.M. MacIver, The modern state, OUP, Oxford, 1966.
9. O.P. Gauba, Introduction to Political Theory, Macmillan, Delhi,
10. Sushila Ramaswami, Ideas and Concepts in Politics,
11. Rajeev Bhargava, Political Theory, Pearson, New Delhi,

*(Students of Political Science who do not wish to offer foundation course from other disciplines can choose **any ONE paper** from the following as foundation course)*

## **POL-3T4.2 : INDIA AND THE WORLD**

### **UNIT-I**

- a. Idea of India- Self perception and self image
- b. India in the World- India's perception of the world and world's perception of India
  - Historical-colonialism, imperialism, third-wordlist
  - Evolutionary- power sharing, multilateral interest orientation

### **UNIT-II**

- a. India's Foreign Policy- Domestic Determinants- (geography, history, culture, society, polity, leadership etc.)

- b. India's Foreign Policy- External Determinants- (geo-political environment, relations with neighbors, global/regional Economic environment, global leadership, Interests of Super Powers etc.)

#### **UNIT-III**

- a. India in post cold war World order: Foreign policy shifts in relation to great powers, foreign policy with regards to SAARC countries
- b. India's relation in west Asia and South East Asia

#### **UNIT-IV**

- a. India and Global issues: Terrorism, Environmentalism, Nuclear Proliferation
- b. India Specific Issues: Democratic Expansion of UN and India's inclusion, Border dispute with Pakistan and China, Liberalization policy

#### **Reading Material**

1. J. Bandopadhyaya, the Making of India's Foreign Policy, Calcutta, Allied Publications, 1995.
2. Vandana Ashtahan, India's Foreign Policy and Subcontinental Politics
3. A. Appadorai, Domestic Roots of India's Foreign Policy New Delhi OUP, 1981.
4. S. Bhattacharya, Persuit of National Interest through Non alignment, Calcutta, university press, 1978.
5. R. Badrock, India's Foreign Policy Since 1971, London, Royal Institute for International Affairs, 1990.
6. V.P.Dutta, India's Foreign Policy in Changing World, new Delhi, Vikas, 1999.
7. C. Hill, Changing Politics of Foreign Policy, Hampshire, Macmillan, 2001.
8. S. Mansingh (ed), India's Foreign Policy in 21<sup>st</sup> Century, New Delhi, Foreign Policy Institute, 1999.
9. C. Raja Mohan, Crossing the Rubicon-The Shaping of India's New Foreign Policy, Palgrave Macmillan, delhi, 2004
10. J. N. Dikshit, India's Foreign Policy and its Neighbours, Gyan Publishers, new delhi, 2001.

### **POL-3T4.3 : LOCAL SELF-GOVERNMENT**

#### **UNIT-I**

- a. Local Self Government: meaning, nature, objectives and significance.
- b. Local Self Government and Indian Political Process: Structure, role, powers and functions

#### **UNIT-II**

- a. Local Self Government and Rural Development: Powers, functions, role of Zilla Parisahad, Panchayat Samiti and Gram Panchayat
- b. Local Self government and Urban development: powers, functions and role of Local Development Authorities.

#### **UNIT-III**

- a. Financial Sources of Local Self Governments- Urban and Rural
- b. Role of Bureaucracy in Local Self Government- Problems of political and Civil corruption

#### **UNIT-IV**

- a. Local Self Government- Representation of Women, SC/ST and the OBC
- b. Local Self Government- Demands for more autonomy (financial and administrative)

#### **Reading Material**

1. A.Vajpai, Panchayati Raj and Rural Development, Delhi, Sahitya Prakashan 1997.
2. M.S.Varma, Panchayati Raj In India: A New Thrust, Delhi, Sahitya Prakashan, 1995.
3. B.S.Bharvava, Grass Root Leadership: Study of Leadership in Panchayat Raj Institutions, Dehli, Ashish, 1979.
4. S.N.Jha and P.C.Mathur, Centralization and Local Politics, New Delhi Sage, 1999.
5. S.Kaushik, Women and Panchayati Raj, New Delhi, Har Anand Publications, 1993.
6. P.S.Khanna, Panchayati Raj In India, Deep and Deep, 1994.
7. S.Maheshwari, Local Government in India, Agra, Laxsminarayan Agrawal, 1996.
8. R.V.P.Singh, Financing of Panchayati Raj Institutions, New Delhi, Deep and Deep, 1993.
9. N. Shivanna, Panchayati Raj Reforms and Rural Development, Allahabad, Chug, 1990.
10. A.K.Majumdar and B.Singh (ed.), Historical and Conceptual Development of Panchayati Raj, New Delhi, Radha, 1997.

## **POL-3T3.4 : MAJOR ISSUES IN CONTEMPORARY WORLD POLITICS**

### **UNIT-I**

- a. Post Cold War World: Meaning, Nature, and Structure
- b. Globalization, Unipolarity and diffusion in regional power centres.

### **UNIT-II**

- a. Conflict in West Asia and the Arab Spring
- b. Changing nature of Terrorism in world politics

### **UNIT-III**

- a. Global Regimes: The United Nations System and its short comings, the WTO and global Economic order
- b. The emerging global justice systems: the International Court of Justice, International Criminal Court and war tribunals.

### **UNIT-IV**

- a. Clash of Civilizations, global market integration and interdependence
- b. Changing nature of security and global peace

#### **Reading Material**

1. S.P.Verma, International System and Third World, New Delhi, Vikas Pub.1988.
2. Vinaykumar Malhotra - International Relations.
3. Ghosh, Peu – International Relations, PHI Learning Pvt. Ltd., Delhi, 2009.
4. Prem Arora - Comparative Politics and International relations, Bookhives, NewDelhi.
5. Kashikar, M. S. – SAARC : Its Genesis, Development & Prospects, Himalaya Publishing House, Mumbai, 2000.
6. P. Allan & Goldman (Ed.) - The End of the Cold War, Dordrecht, Martinus Nijhoff, 1992
7. A. Appadurai - National Interest and Non-Alignment, New Delhi, Kalinga Publication, 1999
8. R. Aron - Peace and War: A Theory of International Relations, London, Fontana,1966
9. S. Burchill et. Al., - Theories of International Relations, Hampshire, Macmillan, 2001
10. I. Claude- Power and International Relations, New York, Random House, 1962.
11. A.A Couloumbis & Wolf - Introduction to International relations: power and Justice, New York, Praeger, 1989.
12. K.W. Deutsch - The Analysis of International Relations, New Delhi, Prentice Hall,1989
13. Dougherty & Ofaltzfrapp Jr. - Contending Theories of International Relations, Philadelphia, J.B. Lippincott Co., 1970
14. J. Frankel - The Making of Foreign Policy, London, Oxford University Press, 1963
15. J. Fankel - Contemporary International Theory and the behavior of States, New York, Oxford University press, 1973
16. Greenstein & Polsby - Theory of International Relations, Reading Massachusetts, Addison-Wesley,1979
17. Groom & Lights (Ed.) - Contemporary International Relations: A Guide to Theory, London, Printer, 1993
18. S.H. Hoffman - Essays in Theory and Practice of International relations, Boulder Colorado, Westview Press, 1989
19. K.J. Holsti - International Relations: A Framework of Analysis, Englewood Cliffs NJ, Prentice Hall, 1967
20. Hans J. Margenthau - Politics Among Nations, 6th edition, revised by K.W. Thompson, New York, Alfred Knopf, 1985.
21. W.C. Olson & A.J.R. Groom - International Relations: Then and Now, London, Harpercollins Academic, 1991
22. J.N. Rosenau - International Studies and Social Sciences, Beverly Hills California, London, Sage, 1973
23. M.P. Sullivan - Theories of International Politics: Enduring Paradigm in a Changing World, Hampshire, Macmillan, 2001
24. Oklar jk;iwjdj] varjjk'V^h; laca/k( lq/lkkfjr vkoLRrh] ukxiwj] Jh eaks"k izdk"ku] 2006-
25. QkMh;k ch- ,y- varjjk'V^h; laca/k lkfgR; izdk"ku flfjt] vkxjk-

26. Hkkjr vkf.k tx] MkW- ch- Mh- rksMdj] Mk;eaM ifCyds'kUl] iq.ks] 2011-
27. la;qDr jk"V<sup>a</sup> vkf.k brj vkarjjk"V<sup>a</sup>h; la?kVuk] izk - tkWUlu ckstsZl] Mk;eaM ifCyds'kUl] iq.ks] 2011-
28. vkarjjk"V<sup>a</sup>h; laca/k] MkW- olar jk;iwjdj] Jh eax'k izdk'ku] ukxiwj] 2006-s
29. vkarjjk"V<sup>a</sup>h; laca/k fl/nkar vkf.k O;ogkj] izk - ch- vk;- dqyd.khZ] izk- v'kksd ukbZdokMs] Jh fo | k izdk'ku] iq.ks] 2004-
30. vkarjjk"V<sup>a</sup>h; laca/k] MkW- ,l- lh- flagy] y{ehukjk;.k vxzoky izdk'ku] vkxjk] 2008-
31. vkarjjk"V<sup>a</sup>h; laca/k] 'kSysanz nsoG.kdj] vkSjaxkckn] fo | k cqDl-
32. vkarjjk"V<sup>a</sup>h; laca/k] 'khr;q/nksrj o tkxfrdhdj.kkps jktdkj.k] v..kk isaMls] mRrjk lgL=cq/ns] vksfj,aV ykxeu] 2008-

## **SEMESTER - IV**

### **CORE PAPERS**

#### **POL-4T1 : STATE POLITICS IN INDIA**

##### **UNIT-I :**

- (a) Nature and Significance of the study, Patterns of state politics
- (b) Socio-economic determinants of state politics

##### **UNIT-II:**

- (a) Centre-State federal relationship- legislative, administrative and financial
- (b) Impact of national politics on state politics; Role of Regional Political Parties

##### **UNIT-III :**

- (a) Issues in State Politics: Demand of autonomy and small states, border and river water sharing, Caste and Ethnic inclusion and exclusion
- (b) Linguistic, regional, religious communalism, development, environment and gender justice

##### **UNIT-IV:**

- (a) Electoral Politics: party politics of regional political parties, political elites- functions and roles and social movements,
- (b) Human Development issues: regional imbalances, literacy, sex ratio, poverty, unemployment

##### **Reading Material :**

1. S. P. Aiyar and U. Mehta (eds.), Essays on Indian Federalism, Bombay, Allied Publishers, 1965.
2. B. Arora and D. V. Verney (eds.), Multiple Identities in a Single State: Indian Federalism in a Comparative Perspective, Delhi, Konark, 1995.
3. G. Austin, The Indian Constitution: Corner Stone of a Nation, Oxford, Oxford University Press, 1966.
4. \_\_\_\_\_, "The Constitution, society and law, in P. Oldenburg (Ed.), India Briefing, 1993, Boulder Colorado, Westview Press, 1993.

5. ———, Working a Democratic Constitution: The Indian Experience, Delhi Oxford University Press, 2000.
6. K. R. Bombwall, The Foundations of Indian Federalism, Bombay, Asia Publishing House, 1967.
7. N. Chadda, Ethnicity, Security and Separatism in India, Delhi, Oxford University Press, 1997.
8. A. Chanda, Federalism in India : A Study of Union-State Relations, London, GeorgeAllen & Unwin, 1965.
- N. Chatterjee (ed.), States and Politics in India, Delhi, Oxford University Press, 1997.
9. R. Chatterjee (ed.), Politics in India: The State-Society Interface, New Delhi, South Asian Publishers, 2001.
10. V. Doss, Impact of Planning on Centre-State Financial Relations in India, New Delhi, National, 1978.
11. Z. Hasan, Politics and State in India, New Delhi, Sage, 2000.
12. R. Khan, Rethinking Indian Federalism, Simla, Indian Institute of Advanced Studies, 1997.
13. A. Kohli (ed.), India's Democracy: An Analysis of Changing State - Society Relations, Princeton, Princeton University Press, 1988.
14. ———, Democracy and Discontent: India's Growing Crisis of Governability, Cambridge, Cambridge University Press, 1991.
15. ——— (ed.), The Success of India's Democracy, Cambridge, Cambridge University Press, 2001.
16. R. Kothari, Politics in India, New Delhi, Orient Longman, 1970.
17. K. Kurien et.al., Centre-State Relations, Delhi, Macmillan, 1981.
18. W. S. Livingstone, Federalism and Constitutional Change, Oxford, Oxford University Press, 1956.
19. Iqbal Narain (ed.), State Politics in India, Meerut, Meenakshi Prakashan, 1967.
20. S. Pai, State Politics: New Dimensions: Party System, Liberalization and Politics of Identity, Delhi, 2000.
21. A. Prasad, Centre and State Powers under Indian Federalism, New Delhi, Deep and Deep, 1981.
22. A. Ray, Tension Areas in India's Federal System, Calcutta, The World Press, 1970.
23. L. Saez, Federalism without a Centre: The Impact of Political and Economic Reformon Indian System, New Delhi, Sage, 2002.
24. S. R. Sharma, The Indian Federal Structure, Allahabad, Central Book Depot, 1967.
27. S. Singh (ed.), Union-State Financial Relations in India with special reference to the underdeveloped states, New Delhi, Sterling, 1980.
28. G. Smith (ed.), Federalism: The Multi Ethnic Challenge, Harlow Longman, 1995.
29. Subhash Kashyap – National Resurgence through Electoral Reforms; Kshipra Publications, Delhi (2002)
30. K. C. Wheare, Modern Constitutions, 4th edn., Oxford, Oxford University Press, 1963.

31. nqljk yksd'kkgh mBko] laik] izdk'k ckG o fd'kksj csMfdgkG] MkW - vkacsMdj vdkneh] lkrkjlk-
32. yksd'kkgh ftankckn] ;ksaxnz ;kno] lqgkl iG'khedj] ihVj fMlq>k] ledkyhu izdk'ku] iq.ks] 2010-s
33. dsan&jkT; laca/k] ih- dey] ikabZVj izdk'ku] t;iwj] 2007-z
34. yksdra= vkSj fo/kkueaMG] ch- xksLokeh] ikabZaVj izdk'ku] t;iwj] 2005-
35. Hkkjrh; 'kklu vkf.k jktdkj.k] MkW- vydk fo- ns'keq[k] Jh- lkbZukFk izdk'ku] ukxiwj-
36. Diwan, Deodhar & Diwan : Bhartatil Rajyanche Shasan, Vidya Prakashan, Nagpur (2003)

## **POL-4T2 : INDIAN ADMINISTRATION**

### **UNIT-I**

- a. Evolution of Indian Administration : Colonial and Post-Independence Period
- b. Post independence Indian Administration: The Framework of Indian Constitution, Indian Administrative System

### **UNIT II : Political Structure and Administration:**

- a. Union Executive: President, Prime Minister, Central Ministries, Central Secretariats and Departments, Parliamentary Control over Administration
- b. State Executive: Governor, Chief Minister and State Secretariat, ministries and departments

### **UNIT III**

- a. Field Administration : 73rd & 74th Amendment Acts
- b. District Administration - Role & Functions of District Collector; Zilla Parishad and Role of the CEO, Panchayat Samiti and BDO, Gram Panchayat and Gram Sevak  
Urban Administration - Municipal Corporation, Municipal Commissioner and Mayor

### **UNIT-IV : Constitutional Functionaries and PSU's :**

- a. UPSC, CAG; Public Sector Undertakings – forms and functions; Issues in Indian Administration:
- b. Civil Services and other specialized services, Administrative Reforms, Corruption, Bureaucracy in the Globalised era, conflict between political and civil office

### **Reading Material :**

1. R. K. Arora (ed.), Administrative Change in India, Jaipur, Alekh Publishers, 1974.
2. O. L. Bansal, Administrative Development in India, New Delhi, Sterling, 1974.
3. B. P. Bhamri, Bureaucracy and Politics in India, Delhi, Vikas Publications, 1971.
4. M. Bhattacharya, Bureaucracy and Development Administration, New Delhi, Uppal, 1978.
5. R. Braibanti and J. Spengler (eds.), Administration and Economic

- Development in India, Durnham, Duke University Press, 1963.
6. Chandra, Indian Administration, London, Allen & Unwin, 1968.
  7. P. R. Dubash, Rural Development Administration in India, Bombay, Popular Prakasam, 1972.
  8. S. C. Dube (ed.), Public Services and Social Responsibility, Shimla, Institute of Advanced Studies, 1979.
  9. R. B. Jain, Contemporary Issues in Indian Administration, Delhi, Visha, 1976.
  10. S. R. Maheswari, Evolution of Indian Administration, Agra, Lakshmi Narain Aggarwal, 1970.
  11. ———, Indian Administration, New Delhi, Orient Longman, 1998.
  12. M. V. Mathur, and I. Narain (ed.), Panchayati Raj, Planning & Democracy, Bombay, Asia Publishing House, 1969.
  13. O. P. Motiwala (ed.), Changing Aspects of Public Administration in India, Allahabad, Chugh Publications, 1976.
  14. Organization of Government of India, Department of Personnel and Administrative Reforms, Ministry of Home Affairs, Govt. of India, New Delhi, 1971.
  15. V. A. PaiPanandiker (ed.), Development Administration in India, Madras, Macmillan, 1974.
  16. G. R. Reddy (ed.), Pattern of Panchayati Raj in India, Madras, Macmillan, 1977.
  17. Prasad K (ed.) - Planning & its implementation, New Delhi, IIPA, 1984.
  18. Maheshwari Shriram, Local Government in India, Laxminarayan Agrawal, Agra, 1996
  19. Hoshiar Singh & Monindar Singh, Pub Administration in India, Sterling Publishes, Delhi, 1995.
  20. R. Hooja, Planning Concepts, Setting and State level application, Jaipur, Alok, 1979.
  22. G. Ram Reddy, Patterns of Panchayati Raj in India, MacMillion, Delhi 1971
  23. Somasekhara, State's Planning in India, Bombay, Himalaya, 1984.
  24. Hkkjrh; iz'kklu] voLFkh ,oa voLFkh] y{eh ukjk;.k vxzoky izdk'ku] vkxjk-
  25. Hkkjrh; iz'kklu bldk fodkl] MkW- ,l- vkj- ekgs'ojh] y{eh ukjk;.k vxzoky izdk'ku] vkxjk-
  26. Hkkjr es yksdiz'kklu] voLFkh ,oa voLFkh] y{eh ukjk;.k vxzoky izdk'ku] vkxjk-

## **ELECTIVES**

(Choose any ONE from the following elective papers)

### **POL-4T3.1 : PRESSURE GROUPS AND SOCIAL MOVEMENTS**

#### **UNIT I**

- a. Pressure Groups and Social Movements: Meaning, nature, and Significance, Group Theories-
- b. Pressure Groups – Evolution, Kinds and Techniques

#### **UNIT-II :**

- a. Relationship between Pressure Groups and Political Parties-complementary relationship, cooperation and conflict
- b. Dynamics of Social Movements: Origin, ideology, Objectives, Means and Methods and Constraints

**UNIT-III**

- a. Social Movements in India- Old (Brahmo samaj, Satyashodhak samaj) and New (Dalit movement, environmental movement and peasant movement)
- b. Social Movements and the Development Process: Change, Progressive legislations and modernization

**UNIT-IV:**

- a. Pressure Groups, Social Movements and the Democratic Process- Role, Impact and contribution to democratic process
- b. Future of Pressure Groups & Social Movements in Global Perspective: New trends and challenges

**Reading Material :**

1. G. Almond and G. B. Powell, Comparative Politics Today: A World View, 6th edn., New York, Harper Collins, 2000.
2. A. Bentley, The Process of Government, Chicago, University of Chicago Press, 1908.
3. P. Brooker, Twentieth Century Dictatorships: The Ideological One Party States, Basingstoke, Macmillan, 1995.
4. C. Campbell and G. Wilson, The End of Whitehall: Death of a Paradigm? Oxford and Cambridge Massachusetts, Blackwell, 1995.
5. C. Cigler and B. Loomis (eds.), Interest Group Politics, 5th edn., Washington DC, Congressional Quarterly Press, 1998.
6. R. A. Dahl, Who Governs? Democracy and Power in an American City, New Haven CT, Yale University Press, 1961.
7. \_\_\_\_\_, Modern Political Analysis, 5th edn., Englewood Cliffs NJ, Prentice Hall, 1991.
8. \_\_\_\_\_, "Pluralism" in J. Krieger (ed.), The Oxford Companion to Politics of the World, New York and Oxford, Oxford University Press, 1993.
9. R. Dalton, The Green Rainbow: Environmental Groups in Western Europe, New Haven CT, Yale University Press, 1994.
10. \_\_\_\_\_ and M. Kuechler, Challenging the Political Order: New Social and Political Movements in Western Democracies, Cambridge, Polity, 1990.
11. \_\_\_\_\_ and M. Wattenberg, Politics without Partisans: Political Change in Advanced Industrial Democracies, Oxford, Oxford University Press, 2000.
12. R. Domoff, Who Rules America Now? A View for the 1980s, Engelwood Cliffs NJ, Prentice Hall, 1983.
13. I. Duchacek, Power Maps: The Comparative Politics of Constitutions, Santa Barbara California, ABC Clio, 1973.
14. A. Escobar and S. Alvarez (eds.), The Making of Social Movements in Latin America: Identity, Strategy and Democracy, Boulder Colorado, Westview Press, 1992.
15. R. Hrebenar and R. Scott, Interest Group Politics in America, 3rd edn.,

- Englewood Cliffs NJ, Prentice Hall 1997.
16. L. LeDuc, R. Niemi and R. Norris, *Elections and Voting in Global Perspective*, Thousand Oaks California, Sage, 1996.
  17. R. Kvavik, *Interest Groups in Norwegian Politics*, Oslo, Bergen and Tromsø, Universitetforlaget, 1976.
  18. T. Lowi, *The End of Liberalism*, New York, Norton, 1969.
  19. T. Mathews, "Interest Groups" in R. Smith and L. Watson (ed.), *Politics in Australia*, Sydney, Allen and Unwin, 1989.
  20. S. Mazey and J. Richardson (eds.), *Interest Inter-Mediation and the EU*, London and New York, Routledge, 1998.
  21. D. McKay, *American Politics and Society*, 4th edn., Oxford, and Cambridge Massachusetts, Blackwell, 1997.
  22. T. Moe, *The Organization of Interests*, Chicago, University of Chicago Press, 1980.
  23. M. Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups*, New York, Schoken Books, 1968.
  24. J. Richardson (ed.), *Pressure Groups*, Oxford and New York, Oxford University Press, 1993.
  25. W. Riker, *The Theory of Political Coalitions*, New Haven CT, Yale University Press, 1962.
  26. M. Smith, *Pressure Politics*, Manchester UK, Baseline Books, 1995.
  27. S. Tarrow, *Power in Movement: Social Movements and Contentious Politics* 2nd edn., Cambridge, Cambridge University Press, 1998.
  28. C. Thomas (ed.), *First World Interest Groups: A Comparative Perspective*, Westport Connecticut, Greenwood Press, 1993.
  29. C. Thomas (ed.), *Political Parties and Interest Groups: Shaping Democratic Governance*, Boulder Colorado, Lynne Rienner, 2001.
  30. J. Waddington and R. Hoffman (eds.), *Trade Unions in Europe: Challenging and Searching for Solutions*, Brussels, European Trade Union Institute, 2001.
  31. T. Weiss and C. Gordenker (ed.), *Nongovernmental Organizations, the United Nations and Global Governance*, Boulder Colorado, Lynne Rienner, 1996.
  32. G. Wilson, *Interest Groups*, Oxford and Cambridge Massachusetts, Blackwell, 1990.

## **POL-4T3.2 RESERVATION POLICY IN INDIA**

### **UNIT-I**

- a. Reservation Policy- philosophy and foundational ideas of equality and equal representation
- b. Reservation policy- scope, objectives and significance

### **UNIT-II**

- a. Constitutional reservation policy: provisions under the constitution of India for the SC/ST and OBC
- b. Legislations relating to Reservations at the Central and Maharashtra state level.

### **UNIT-III**

- a. Reservation policy and Judicial Interpretations: Land Mark cases on Reservations from 1950 to 1988
- b. Reservation Policy and Judicial interpretations: Land Mark Cases on Reservations from 1989-2015

#### **UNIT-IV**

- a. Reservation in private sector- the recent debate
- b. Controversy over the Reservation Policy: the pro and against arguments.

#### **Reading material:**

1. Constituent Assembly Debates (C.A.D.).
2. Constitution of America.
3. Constitution of India 1950.
4. Supreme Court Case Laws on Reservation Statutes:
  1. Government of India Act, 1919.
  2. Government of India Act, 1935.
  3. The Bonded Labour System (Abolition) Act, 1976.
  4. The Central Educational Institution (Reservation in Admission) Act, 2006.
  5. The Child Labour (Prohibition and Regulation) Act, 1986.
  6. The Minimum Wages Act, 1948.
  7. The Panchayat (Extension to the Scheduled Areas) Act, 1996.
  8. The Protection of Civil Rights Act, 1955.
  9. The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989.
  10. The Untouchability (Offences) Act, 1955.
- Books
  11. Basu Durga Das: Commentary on The Constitution of India, S.C. Sarkar and Sons Pvt. Ltd., 1964.
  12. Bhattacharya, Mohit: Reservation Policy: The West Bengal Scene, in Pai Panindiker (ed): The Politics of Backwardness, Delhi: Konark, 1997.
  13. Galanter Marc: Competing Equalities; Law and the Backward Classes in India, New Delhi, Oxford University Press, 1984.
  14. Goldman: Justice and Reverse Discrimination (Princeton University Press), 1979.
  15. Hasan, Zoya: Politics of Inclusion, Cases, Minorities, and Affirmative Action, 1<sup>st</sup>published 2009, Oxford University, New Delhi.
  16. Kumar Santosh, V.: Social Justice and the Politics of Reservation in India, The Post Mandal Phase, 1<sup>st</sup> published in 2008, Mittal Publications, New Delhi.
  17. Nesiah, Devanesan: Discrimination with Reason? The Policy of Reservation in United States, India and Malaysia, Oxford University Press, Delhi, 1997.
  18. Prabhash, J.: Affirmative Action and Social Change, 2001.Prasad, Anirudha: Reservation Justice to Other Backward Classes (OBCs) Theoretical and Practical Issues, 1997, Deep and Deep Publications, New Delhi.
  19. Rajasekhariah, A.M.: Dr. B.R. Ambedkar on Reservation Policy, Trivendrum, Light and Life Publishers, 1980.

## **POL-4T3.3 : INTERNATIONAL HUMAN RIGHTS : PROBLEMS AND PROSPECTS**

### **UNIT-I**

- a. Human Rights: Conceptual, theoretical and Historical Development
- b. The Internationalization of Human Rights: The evolving inter-governmental institutional structure of Human rights

### **UNIT-II**

- a. Human Rights and the United Nations: Charter Provisions
- b. Universal Declaration of Human Rights and the Various other Conventions

### **UNIT III**

- a. Individual Rights- Rights of Women, Children & deprived sections
- b. Collective Rights- Group rights and right to self determination

### **UNIT IV**

- a. International Protection and Promotion of Human Rights : Civil, Political, Social and Economic Rights
- a. Human Rights Issues in Developing countries, Human Rights in World Perspective - Problems and Prospects

#### **Reading Material :**

1. G. Alfredsson, et.al., (eds.), *The University Declaration of Human Rights, A Commentary*, Oslo, Scandinavian University Press, 1992.
2. \_\_\_\_\_ and A. de Zayas, Alfred, "Minority Rights: Protection by the United Nations", *HRLJ*, Volume 14, Numbers 1-2, 1993.
3. \_\_\_\_\_ and G. Melander, *A Compilation of Minority Rights Standards: A Selection of Texts from International and Regional Human Rights Instruments and other Documents*, Lund, Raoul Wallenberg Institute of Human Rights and Humanitarian Law, Report Number 24, 1997.
4. P. Alston, "Making and Breaking Human Rights. The UN's Specialized Agencies and Implementation of the International Covenant on Economic, Social and Cultural Rights", *Working Papers*, Number 1, London, Anti-Slavery Society, 1979.
5. \_\_\_\_\_, *The United Nations and Human Rights: A Critical Appraisal*, Oxford, The Clarendon Press, 1995.
6. J. A. Andrews (ed.), *Human Rights in Criminal Procedure, A Comparative Study*, The Hague, Martinus Nijhoff Publishers, 1982.
7. A. An-Na'im (ed.), *Human Rights in Cross-Cultural Perspectives*, Philadelphia: University of Pennsylvania Press, 1991.
8. D. Beetham (ed.), *Politics and Human Rights*, Oxford, Blackwell, 1995.
9. T. V. Boven, "The United Nations and Human Rights: A Critical Appraisal", *Bulletin of Peace Proposals*, No.3, 1977.
10. I. Brownlie (ed.), *Basic Documents on Human Rights*, Oxford, The Clarendon Press, 1992.
11. T. Buergenthal, *International Human Rights in a Nutshell*, St. Paul Minnesota, West

- Publishing Company, 1995.
12. \_\_\_\_\_ and L. B. Sohn, International Protection of Human Rights, Indianapolis, The Bobbs-Merrill Company, 1973.
  13. M. M. J. Chan, "The Rights to a Nationality as a Human Rights", *HRLJ*, Volume 12, 1991.
  14. Claude, National Minorities - an International Problem, Cambridge Massachusetts, Harvard University Press, 1955.
  15. S. Davidson, Human Rights, Buckingham and Philadelphia, Open University Press, 1992.
  16. J. Donnelly, The Concept of Human Rights, London, Croom Helm, 1985.
  17. Eide and H. Bernt, Human Rights in Perspective: A Global Assessment, London, Blackwell, 1992.
  18. T. Evans, The Politics of Human Rights: A Global Perspective, London, Pluto Press, 2001.
  19. T. J. Farer and F. Gaer, "The United Nations and Human Rights: At the End of the Beginning" in A. Roberts and B. Kingburg (eds.), United Nations, Divided World: The UN's Role in International Relations, Oxford, Oxford University Press, 1993.
  20. Fouad, "Human Rights and World Order Politics", *Alternatives*, 5, 3, 1978.
  21. A. Gewirth, Human Rights: Essays on Justification and Applications, Chicago and London, University of Chicago Press, 1982.
  22. J. F. Green, The United Nations and Human Rights, Washington DC, The Brookings Institution, 1956.
  23. E. B. Haas, Human Rights and International Action: The Case of Freedom of Action, Stanford CA, Stanford University Press, 1970.
  24. L. Henkin (ed.), The International Bill of Rights, The Covenants on Civil and Political Rights, New York, Columbia University Press, 1981.
  25. ICJ, "Implementation of the International Covenant on Economic, Social and Cultural Rights: ECOSOC Working Group", *ICJ Review*, Number 27, 1981.
  26. M. Ignatieff, Human Rights as Politics and Idolatry, Princeton NJ, Princeton University Press, 2001.
  27. F. G. Jacobs, and R. C. A. White, The European Convention on Human Rights, Oxford, The Clarendon Press, 1996.
  28. T. D. Jones, Human Rights, Group Defamation, Freedom of Expression and the Law of Nations, Dordrecht, Martinus Nijhoff Publishers, Kluwer Law International, 1998.
  29. K. Krause and W. A. Knight (eds.), Society and UN System: Changing Perspectives on Multilateralism, Tokyo, UN University Press, 1995.
  30. A. C. Kiss, "Permissible Limitations on Rights" in Louis Henkin (ed.), The International Bill of Rights, The Covenant on Civil and Political Rights, New York, Columbia University Press, 1981.
  31. R. Lillich and F. Newman, International Human Rights: Problems of Law and Policy, Law School Case Book Series, Boston, Little Brown, 1979.
  32. I. Melden (ed.), Human Rights, Belmont California, Wadsworth, 1970.
  33. T. Meron (ed.), Human Rights in International Law, Legal and Policy Issues, Oxford, Oxford University Press, 1984.

34. G. A. Mower, International Cooperation for Social Justice: Global and Regional Protection of Economic/Social Rights, London, Greenwood Press, 1985.
35. D. P. Moynihan, "The Politics of Human Rights", Commentary, 63, 4, April, 1977.
36. J. W. Nicke, Making Sense of Human Rights: Philosophical Reflections on the Universal Declaration of Human Rights, Berkeley, University of California Press, 1987.
37. M. Nowak, U.N. Covenant on Civil and Political Rights, CCPR Commentary, Kehl am Rhein, N.P. Engel, 1993.
38. G. Ramcharan (ed.), Human Rights Thirty years After the Universal Declaration, The Hague, Martinus Nijhoff Publishers, 1979.
39. R. A. Ralk, "Comparative Protection of Human Rights in Capitalist, Socialist and Third World Countries", Universal Human Rights, 1, April-June, 1969.
40. A. Rosad and J. Helgesen (eds.), Human Rights in a Changing East-West Perspective, London and New York, Pinter Publishers, 1990.
41. Rosas and J. Helgesen (eds.), The Strength of Diversity: Human Rights and Pluralist Democracy, Dordrecht, Martinus Nijhoff Publishers, 1992.
42. N. Robinson, The Universal Declaration of Human Rights, New York, Institute of Jewish Affairs, 1958.
43. K. P. Saksena (ed.), Human Rights: Fifty Years of India's Independence, Delhi, Gyan, 1999.
44. L. Sermet, The European Convention on Human Rights and Property Rights, Document H. (90) 2, 10 May 1990, Strasbourg, Council of Europe, 1990.
45. P. Sieghart, The International Law of Human Rights, Oxford, The Clarendon Press, 1983.
46. SIM Special Publication Number 18: The Right to Complain about Economic, Social and Cultural Rights, 1995.
47. S. Subramanian, Human Rights: International Challenges, Delhi, Manas, 1997.
48. P. Thornberry, International Law and the Rights of Minorities, Oxford, The Clarendon Press, 1991.
49. R. Tuck, Natural Rights Theories, Cambridge, Cambridge University Press, 1979.
50. UNESCO (ed.), Human Rights, Comments and Interpretations, with an Introduction by Jacques Maritain, London and New York, Alan Wingatet, 1949.
51. van D. Pieter and van G.J.H. Hoof, Theory and Practice of the European Convention on Human Rights, 2nd edn., Deventer, Kluwer Law and Taxation Publishers, 1990.
52. J. J. Waldron (ed.), Theories of Rights, Oxford, Oxford University Press, 1984.

## **POL-4T3.4 : PUBLIC POLICY IN INDIA**

### **UNIT-I**

- a. Public policy: Meaning, definition, nature, scope, objectives, role and importance
- b. Policy making: factors- social, economic, political, administrative and geographical; Institutions- Governments, Non Governmental Organizations (NGOs)

#### **UNIT-II**

- a. Policy Implementation: meaning and elements- ministries, departments, corporations, boards and commissions
- b. Public policy articulations- Role of political parties, Pressure Groups, Interest Groups and general masses.

#### **UNIT-III**

- a. Nature of Public Policy in India with reference to Education policy, Employment policy
- b. Nature of public policy in India with reference to Health, food and nutrition

#### **UNIT-IV**

- a. Policy Evaluation: criteria, methods and problems (with reference to education, employment, health and food)
- b. Assessment of public policy in India-Critical Appraisal

#### **Reading Material**

1. T.Dye, Understanding Public Policy, 9th Ed., Engle Wood Cliff NJ, Prentice Hall 1997.
2. G.R.Gillbird, Making and Managing Policy: Formulation Analysis and Evaluation, New York , Marcel Decker, 1984.
3. R.E.Goodin, Political Theory and Public Policy, University of Chicago Press, Chicago, 1982.
4. H. Ingram and S.R.Smith, public Policy for Democracy, Washington DC, Brokins Institution, 1993.
5. R.K. Sapru, Public Policy- Formulation Implementation and Evaluation, Sterling, New Delhi, 1994.
6. P.K.Saksena, (ed.) Comparative Public Policy, Rawat Publishers, Jaipur, 1993.
7. A.C.Tandau, Policy Implementation in India- A Case Study, Vikas publications, New Delhi, 1994.

## **FOUNDATION COURSE**

*(Following paper is ONLY for students of disciplines other than Political Science)*

### **POL-4T4.1 : INDIAN CONSTITUTION AND ITS WORKING**

#### **UNIT-I-**

- a. Making of the Indian Constitution and its Sources
- b. Basic features of the Indian Constitution and problems in Indian politics and society

#### **UNIT-II-**

- a. Role and Working of executive, legislature and Judiciary in the resolution of socio-economic and political problems- an overview
- b. Critical appraisal of Parliamentary system of government and Judiciary.

#### **UNIT-III-**

- a. Panchayat Raj System and the Introduction of 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendment for rural and urban development-
- b. Appraisal of the functioning of the Local self governments

**UNIT-IV-**

- a. Constitutional Civil offices and its working: Election commission, CAG, Public Services Commission.
- b. Agencies of Politics: Political Parties, Social movements and Civil Society and their role in Indian politics.

**Reading Material :**

1. G. Austin, Working a Democratic Constitution: The Indian Experience, OUP, Delhi,
2. Subhash Kashyap, Our Constitution, National Book Trust, new De4lhi, 2001
3. D.D.Basu, Introduction to Constitution of India, Pretence Hall, New Delhi, 1994
4. Rajeev Bhargav (ed), Ethics and Politics of Indian Constitution, OUP, Delhi
5. G. Austin, The Indian Co0nstitution: Corner Stone of a Nation, OUP, 1966.
6. I. Jennings, Some Characteristics of Indian Constitution, OUP, London, 1953
7. M. V. Paylee, Constitutional Government in India, Asia Publishing House, Bombay, 1977.
8. W.H. Morris Jones, Government and Politics in India, BI Publications, Delhi, 1974
9. B.L.Fadia, Indian Government and Politics, Sahitya Bhavan publications, Agra, 2014.

*(Students of Political Science who do not wish to offer foundation course from other disciplines can choose any ONE paper from the following as foundation course)*

## **POL-4T4.2 INTERNATIONAL ORGANISATIONS**

Unit-1 : (A) The Nature and Evolution of International Organizations;  
 (B) The League of Nations – Its Origin, Functions & Evaluation

Unit-2 : (A) The United Nations : Its origin, development, structure; United Nations in the Post Cold War Era  
 (B) Allied Organs of the UN; Their functions and performance

Unit-3 : (A) The World Bank: Structure and Development Activities  
 (B) The International Monetary Fund: Structure and Operational Review

Unit-4 : (A) European Union, OPEC  
 (B) SAARC, NAM

**Readings:**

R. C. Angell, The Quest for World Order, Ann Arbor, University of Michigan Press, 1979.

C. Archer, International Organization, New York, St. Martin Press, 1975.

- P. Baehr and L. Gordenker, *The United Nations in the 1990s*, London, Oxford University Press, 1992,
- \_\_\_\_\_, *The United Nations: Reality and Ideal*, London, Oxford University Press, 1989.
- Sir E. Barker, *The Confederation of Nations*, Oxford, The Clarendon Press, 1918.
- A. L. Bennett, *International Organizations: Principles and Issues*, Englewood Cliffs NJ, Prentice Hall, 1977.
- G. Berridge, *Return to the UN: UN Diplomacy in Regional Conflicts*, Sussex, Wheatsheaf, 1991.
- S. J. R. Bilgrami, *International Organization*, New Delhi, Vikas 1977.
- J. L. Brierly, *The Covenant and the Charter*, Cambridge, The University Press, 1947.
- I. Claude, *Swords into Ploughshares: The Problems and Progress of International Organization*, New York, Random House, 1971.
- \_\_\_\_\_, *Changing United Nations*, New York, Random House, 1967.
- \_\_\_\_\_, *Power and International Relations*, New York, Random House, 1967.
- B. V. Cohen, *The UN: Constitutional Developments, Growth and Possibilities*, Cambridge, Cambridge University Press, 1961.
- H. E. Davis, *Pioneers in World Order*, New York, Columbia University Press, 1944.
- L. M. Goodrich, *United Nature in a Changed World*, New York, Columbia University Press, 1974.
- \_\_\_\_\_, E. Hambro and A. P. Simons, *Charter of the United Nations*, 3rd edn., New York, Columbia University Press, 1969.
- S.S. Goodspeed, *The Nature and Functions of International Organization*, New York, Oxford University Press, 1967.
- H. K. Jacobson, *Networks of Interdependence: International Organizations and the Global Political System*, New York, Alfred Knopf, 1979.
- H. Kelsen, *The Law of the United Nations*, New York, Praegar, 1950.
- S. Kumar (ed.), *The United Nations at 50: An Indian View*, Delhi, UBSPD, 1995.
- W. H. Lewis (ed.), *The Security Role of the United Nations*, New York, Praegar, 1991.
- E. Luard, *A History of the United Nations*, London, Macmillan, 1989.
- \_\_\_\_\_, *The Evolution of International Organization*, London, Thames and Hudson, 1966.
- G. J. Mangone, *A Short History of International Organization*, New York, McGraw-Hill Book Co., 1954.
- L. B. Miller, *World Order and Local Disorder: The United Nations and International Conflict*, Princeton NJ, Princeton University Press, 1967.

H. J. Morgenthau (ed.), *Peace, Security and the United Nations*, Chicago, University of Chicago Press, 1946.

H. G. Nicholas, *The UN as a Political Institution*, Oxford, Oxford University Press, 1975. L. Oppenheim, *The League of Nations and its Problems*, London, Longman, 1919,

M. S. Rajan, "India and the Making of the United Nations Charter", *International Studies* (New Delhi), 13, 3, July-Sept, 1973.

——— (ed.), *United Nations at Fifty and Beyond*, New Delhi, Lancer Books, 1996. I. Rikhey, *Strengthening UN Peacekeeping*, London, Hurst and Co., 1993.

A. Ross, *The United Nations: Peace and Progress*, Totowa NJ, Bedminster Press, 1966.

K. P. Saxena, *Reforming the United Nations: The Challenge and Relevance*, New Delhi, Sage, 1993.

J. Stoessinger, *The United Nations and the Superpowers*, New York, Random House, 1965.

*The United Nations in its Second Half Century*, The Report of the Independent Working Group on the Future of the United Nations, New York, Ford Foundation.

*The Stanley Foundation's United Nations of the Next Decade 1997, Beyond Reform: the United Nations in a New Era*.

D. W. Wainhouse, *Remnants of Empire: The United Nations and the End of Colonialism*, New York, Harper and Row, 1964.

F. P. A. Walters, *A History of the League of Nations*, Vols 2, New York, Oxford University Press, 1983.

*World Organization, A Balance Sheet of the First Great Experiment*, Washington DC, American Council on Public Affairs, 1942.

A. Yoder, *Evolution of the UN System*, New York, Random House, 1989.

Sir A. E. Zimmern, *The League of Nations and the Rule of Law*, New York, Macmillan, 1939.

### **POL-4T4.3 : DEVELOPMENT ADMINISTRATION**

Unit-1: (A) Concept of development and Development Administration,  
(B) Public Administration as Instrument for Development.

Unit-2 : (A) Policies of Development; New trends in People's self-Development and empowerment.  
(B) Machinery of Development - Planning at the Central level

Unit-3 : (A) Machinery of Development at the State level  
(B) Machinery of Development at the Local levels.

Unit-4 : (A) Local self Government in Rural and Urban areas with special reference to administrative amendments.  
(B) Role of Bureaucracy & Ombudsmen; Supervision & Control over

Administration; Impact of Economic liberalization and globalization

**Readings:**

Almond, G. A. & G. B. Powell Jr., Comparative Politics: A Development Approach  
New Delhi, Amerind Publishing Company, 1966.

R. K. Arora and S. Sharma (eds.), Comparative & Development Administration: Ideas & Action, Jaipur, Arihant, 1992.

N. Bava, The Social Science Perspective & Method of Public Administration: Policy & Development Administration Approach, New Delhi, Uppal, 1992.

C. P. Bhambri, Administration in a Changing Society, Delhi, National, 1978.

M. Bhattacharya, Bureaucracy & Development Administration, Delhi, Uppal, 1979.

C. Bryant and L. While, Managing Development in the Third World, Boulder Colorado, Westview Press, 1987.

T. J. Byres (ed.), The State and Development Planning in India, Bombay, Oxford University Press 1994.

P. Cloke and Jo Little, The Rural State: Limits to Planning in Rural Society, Oxford, The Clarendon Press, 1990.

G. Craig and M. Mayo, Community Empowerment: A Reader in Participation & Development, London, Zed Books, 1995.

P. Datta, Major Issues in the Development Debate: Lessons in Empowerment From India, New Delhi, Kanishka, 1998.

\_\_\_\_\_, Decentralization: Expenditure Pattern & Organizational Realities, Delhi, Wiley Eastern, 1988.

P. R. Dubashi, Recent Trends in Public Administration, Delhi, Kaveri, 1995.

O. P. Dwivedi, Development Administration: From Underdeveloped to Sustainable Development, Hounds mills, Macmillan, 1994.

M. Franda, Voluntary Associations and Local Development in India, New Delhi, Young Asia, 1983.

V. R. Gaikwad and P. S. Parmar, Rural Development Administration Under Democratic Decentralization: Expenditure Pattern and Organizational Realities, Delhi, Wiley Eastern, 1980.

S. S. Gadkari and M. R. Kolhetkar, Introduction in Public Administration, New Delhi, Allied Publishers, 2000.

G. F. Grant, Development Administration: Concepts, Goals, Methods, Madison, University of Wisconsin, 1979.

J. F. Handler, Power from Bureaucracy: The Ambiguity of Privatization & Empowerment, Princeton NJ, Princeton University Press, 1996.

G. Haragopal, Administrative Leadership & Development in India, New Delhi, Light and Life, 1980

- B. Hettne, *Development theory and The Three Worlds*, England, Longman Group, 1996.
- R. Hooja, *District Planning: concept, Settings & State Level Applications*, Jaipur, Aalekh, 1986.
- R. B. Jain and P.N. Chaudhari (eds.), *Bureaucratic Values in Development*, New Delhi, Uppal. C. Kay, *Development and Underdevelopment: A Marxist Analysis*, London, Macmillan, 1975. R. M. Khandelwal, *State Level Plan Administration in India*, Jaipur, RBSC Publishers, 1985.
- D. C. Korten (ed.), *Bureaucracy & The Poor: Closing the Gap*, Singapore, McGraw Hill, 1981.
- D. C. Korten and R. Klaus (eds.), *People Centred Development: Construction Towards Theory and Planning Frameworks*, Hart Ford CT, Rumarian Press, 1984.
- J. La Palombara (ed.), *Bureaucracy & Political Development*, Princeton NJ, Princeton University, 1967.
- S. R. Maheshwari, *Administrative Theories*, New Delhi, Allied, 1994.
- S. R. Melkote, *Communication for Development in the Third World: Theory and Practice for Empowerment*, New Delhi, Sage Publications, 2001.
- G. K. Mishra and G. C. Mathur, *Private Partnership in Urban Development*, New Delhi, Intellectual Book Corner, 1997.
- J. D. Montgomery and W. J. Siffin (eds.), *Approaches to Development, Politics, Administration & Change*, New York, Mc Graw Hill, 1966.
- G. Myrdal, *Economic theory and Underdeveloped Regions*, London, G. Duckworth, 1957.
- D. Nandini, *Rural Development Administration*, Jaipur, Rawat Publication, 1992.
- V. A. Pai Panandikar (ed.), *Development Administration in India*, Delhi, Macmillan, 1974.
- \_\_\_\_\_ & S. S. Khirsagar (eds.), *Bureaucracy and Development Administration*, New Delhi, Centre for Policy Research, 1978
- H. K. Paranjape, *The Planning Commission: A Descriptive Account*, New Delhi, IIPA, 1964.
- Planning Commission, *The Planning Process*, Delhi, GOI, 1975.
- Planning Commission, *Report of the Working Group on Block Level Planning*, New Delhi, GOI, 1978.
- Planning Commission, *Report of the Working Group on District Planning*, New Delhi, GOI, 1984.
- K. Prasad (ed.), *Planning & its Implementation*, New Delhi, IIPA, 1984.
- P. W. Purushottam and M. Karamatullah, *Development Administration: A Rural Perspective*, Delhi, Kanishka, 1993.

- K. Reddy, K. Venugopal and L. Kosalram (eds.), *Multi - Level Planning in India*, Hyderabad, CESS & Booklinks Corporation, 1988.
- D. Reid, *Sustainable Development: An Introductionary Guide*, London, Earthscan, 1995.
- F. W. Riggs, *Administration in Developing Countries*, Boston, Houghton Mifflin, 1964.
- \_\_\_\_\_, and R. D. Krishna, *Development Debate*, Jaipur, Printwell, 1987.
- \_\_\_\_\_, (ed.), *Frontiers of Development Administration*, Durham, Duke University Press, 1970.
- C. K. Roy, et. al. (eds.), *Development Management & Administration: A Third World Perspective*, Calcutta, Wiley Eastern, 1993.
- A. Sarup and S. Brahma, *Planning for Millions*, New Delhi, Wiley Eastern, 1990.
- A. K. Sharma, *Planning for Rural Development Administration*, Jaipur, Rawat Publishing, 1995.
- \_\_\_\_\_, *People's Empowerment*, IJPA, 42(3), July - September 1996.
- S. K. Sharma (ed.), *Dynamics of Development: An International Perspective*, Delhi, Concept, 1978.
- A. Singh, *Public Administration: The Grassroot Concerns*, New Delhi, Mittal, 1998.
- H. Singh, *Administration of Rural Development in India*, New Delhi, Sterling, 1995.
- B. Smith (ed.), *Progress in Development Administration: Selected Papers from Public Administration & Development, 1981-1991*, Chi Chester, John Wiley & Sons, 1992.
- N. Somasekhara, *State's Planning in India*, Bombay, Himalaya Publishing House, 1984.
- K. B. Srivastava, *New Perspectives in Development Administration in India*, New Delhi, Concept Publishing, 1994.
- K. Staudt, *Managing Development: State, Society & International Contexts*, Newbury Park, Sage, 1991.
- D. C. Stone, *Administration for Development & the Effective Administration: Two Lectures*, New Delhi, IIPA, 1964.
- I. Swerdlow (ed.), *Development Administration: Concept & Problems*, Syracuse NY, Syracuse University Press, 1963.
- M. Umpathy, *Development Administration Today: Super or Sub - disciplines*, Mysore, Menu Publishing, 1994.
- J. S. Uppal, *Indian Economic Planning*, Delhi, Macmillan, 1984.
- S. P. Verma and S. K. Sharma (eds.), *Development Administration*, New Delhi, IIPA, 1984.
- D. Waldo (ed.), *Temporal Dimensions of Development Administrations*, Durham, Duke University Press, 1970.

## **POL-4T4.4 : HUMAN RIGHTS AND INDIAN CONSTITUTION**

### **UNIT-I**

- a. Human rights: Concept, nature, and significance
- b. Human rights in Indian constitution: nature, scope, objectives, significance and expansion

### **UNIT-II**

- a. Theoretical foundation of Human rights and Indian Constitutionalism
- b. Democracy and Human rights in India vis-à-vis Universal declaration of Human rights

### **UNIT-III**

- a. Human rights and Indian Constitution: Civil and political rights
- b. Human rights and Indian constitution: Social, Economic and Cultural rights

### **UNIT-IV**

- a. Protection and promotion mechanism of human rights in India: Constitutional provisions and judiciary, various commissions (NHRC, SHRC, SC/ST Commission, Women's commission)
- b. Critical Appraisal- success, failures, challenges and remedies

### **Reading Material:**

1. Agarwal, H.O Implementation of Human Rights Covenants with Special Reference to India, Kitab Mahal, Allahabad, 1983
2. -----International Law and Human Rights, Central Law Publication, Allahabad, 2002
3. -----Human Rights, Central Law Agency, Allahabad, 2010
4. Agarwal, R.S, Human Rights in the Modern World, chetana Publications, New Delhi, 1979
5. Austin, Granville,The Indian Constitution: Cornerstone of a Nation, Oxford University Press, Bombay, 1966
6. Basu, Durgadas, Human Rights in Constitutional Law, wadhwa and Company, Nagpur, New Delhi, 2003
7. Baxi, Upendra Human Rights in a Post Human World: Critical essays, Oxford University Press, New Delhi, 2007
8. -----The Future of Human Rights, Oxford University Press, New Delhi, 2008
9. Hingorani, R.C, Human Rights in India, Oxford and IBH publishing Company, New Delhi, 1985
10. Iyer, Krishna V.R, Human Rihgts and Inhuman Wrongs, B.R. Publishing Company, New Delhi, 1990
11. -----“----- The Dialectics and Dynamics of Human Rights in India, Yesterday, Today and Tomorrow, Eastern Law House, Calcutta, 1999

12. Sambare S, Bavge R : "Anaadhyna suraksha aani manavi hakka", sir sahitya prakashan Nagpur, 2014 ( Marathi)
13. Bavge R, Sambare S : "Adivasi aani manavi hakka", G.C prakashan Nagpur,2015(Marathi)
14. Sambare S, Kanhake N, Sheikh V : "Vyasamukti aani manavi hakka", G.C prakashan, Nagpur, 2016 (Marathi)



**RASHTRASANT TUKDOJI MAHARAJ**  
**NAGPUR UNIVERSITY, NAGPUR.**

**FACULTY OF SOCIAL SCIENCE**

**M.A. HOME ECONOMICS**

**CBCS Syllabus**

**Choice Based Credit System**

**2017-2018**

**Rashtrasant Tukdoji Maharaj Nagpur University.**

**Nagpur**

**Revised Syllabus of M.A. HOME-ECONOMICS.**

**Choice Based Credit System**

**Submitted**

**Date:** **Dr. Shubhangi K. Dange**

**Coordinator,**

**Board of Studies, Home-Economics,**

**Faculty of Social Science.**

**Syllabus Framing Committee:**

**Dr. Vaijayanti Deshpande**

**Dr. Anuradha Nisal**

**Dr. Advita Deshmukh**

**Dr. Sadhana Patil**

**Dr. Mina Kalele**

**Rashtrasant Tukdoji Maharaj Nagpur University.**

**Nagpur**

**Revised Syllabus of M.A. HOME-ECONOMICS.**

**M. A. Semester I & II (Choice Based Credit System)**

**Effective from June 2017 onwards**

**Curriculum Structure & Scheme of Evaluation**

**Theory: 4 periods/Week/Subject (4 Credits)**

**Practical/Sessional : 2 periods/Week/ Subject (1Credit)**

**Textile and Clothing Practical (1P3) : 4 periods/Week (2 Credits)**

**No. of Students/Practical Batch: 10 per Practical Batch**

**Eligibility for Admission to M.A. Home- Economics.**

An applicant for admission to Semester I examination shall have passed the Bachelor Degree examination of this University or of any other statutory recognized University as equivalent to Bachelor Degree of this University.

**Pattern of Question Paper and Examination**

1. There will be four units in each paper.
2. Question paper will consist of five questions and all questions shall be compulsory.
3. Four questions will be on four units with internal choice (one question on each unit).
4. Fifth question will be compulsory with questions from each of the four units having equal weightage and there will be no internal choice.
5. Each paper will be of 3 hours duration.
6. Minimum passing marks will be 40%.



**Rashtra Sant Tukadoji Maharaj Nagpur University, Nagpur.**

**M.A. Home Economics (Choice Based Credit System)**

**Semester I**

Sr. No.	Paper	Subject code	Subject	Teaching Scheme (Hrs/Week)			Credit  1 Hr.Th.= 1 2 Hr. Pr.= 1	Examination Scheme				
				Theory (Hours)	Practical/ Project (Hours)	Total (Hours)		Duration (Hours)	Max. Marks		Total Marks	Min. Passing Marks
1	I	1T1	Resource Management	04	02	06	05	03	80	20	100	40
2	II	1T2	Human Development	04	02	06	05	03	80	20	100	40
3	III	1T3	Textile and Clothing	04	02	06	05	03	80	20	100	40
4	IV	1T4	Research Methods and Statistics	04	02	06	05	03	80	20	100	40
5	Practical	1P3	Textile and Clothing Practical	---	04	04	02	03	80	20	100	40
			Total	16	12	28	22	15	400	100	500	200

(Subject Code: 1-Semester I, T-Theory, P-Practical)

**Rashtra Sant Tukadoji Maharaj Nagpur University, Nagpur.**

**M.A. Home Economics (Choice Based Credit System)**

**Semester II**

Sr. No.	Paper	Subject code	Subject	Teaching Scheme (Hrs/Week)			Credit  1Hr.Th.= 1 2Hr. Pr.= 1	Examination Scheme				
				Theory (Hours)	Practical/ Project (Hours)	Total (Hours)		Duration (Hours)	Max. Marks		Total Marks	Min. Passing Marks
1	I	2T1	Resource Management	04	02	06	05	03	80	20	100	40
2	II	2T2	Human Development	04	02	06	05	03	80	20	100	40
3	III	2T3	Textile and Clothing	04	02	06	05	03	80	20	100	40
4	IV	2T4	Research Methods and Statistics	04	02	06	05	03	80	20	100	40
5	Practical	2P3	Textile and Clothing Practical	----	04	04	02	03	80	20	100	40
			Total	16	12	28	22	15	400	100	500	200

(Subject Code: 2-Semester II, T-Theory , P-Practical)

**M. A. Home Economics**  
**Semester I**  
**Paper – I**

**RESOURCE MANAGEMENT**

**Subject Code - 1T1**

**Total Marks : 100**

**Theory : 80**

**Sessional : 20**

**Objective :- To enable students to –**

- 1) Understand various concepts and principles of management and its functions.
- 2) Understand the significance of management in changing environment.
- 3) To develop the ability to use motion and time techniques.
- 4) To create awareness about resources.

**Unit – I**

**a) Family Resources**

Concept, definition and meaning, characteristics and classification of resources.

Objectives and principles of use of resources.

Factors affecting family resources and methods to maximize the utilization of resources.

**b) Aspect of Home Management –**

Concepts, philosophy, definition and objectives of Home Management.

Obstacles in the improvement of Home Management and Process of Management.

Qualities associated with management and methods of evaluating managerial ability.

**c) Decision Making –**

Definitions, importance and steps of decision making.

Techniques and tools for decision making and the role of decision making in home management.

Stress and conflict during decision making.

## Unit – II

### **a) Determinants of management process –**

Values – Definitions, sources of values, patterns, status security.

Goals – Definitions, types and factors affecting choice of goals;

Standard – Quality control and total quality management.

Harmony and Ethics- Definition and importance.

### **b) Family life cycle-**

Concept and stages of family life cycle.

Management during various stages of family life cycle.

Role of woman in the various stages of family life cycle.

### **c) Management of material resources-**

Concept and importance of material resources.

Complexity of managing materials.

Planning, controlling and evaluating material resources.

## Unit - III

### **a) Money Management**

Definition, meaning and importance and Techniques of money management.

Role of woman in managing family income budgets.

Contribution of working woman in improving economic conditions.

### **b) Savings and Investments**

Saving facilities and investment opportunity.

Role of credit in finance.

Economic security and financial alternatives.

### **c) Community Services / Resources:**

Definition, importance in daily life, Local and National development.

Reality and problems of community services.

Role of home makers in management of these resources.

## **UNIT: IV**

### **a) Ergonomics:**

Definition, scope and nature of ergonomics in home and other occupation.

Ergonomics in Home-Anthropometric dimension of workers at work and at rest.

Man –Machine – Environment System. Normal and maximum vertical and horizontal reaches.

### **b) Work Simplification:**

Definition, meaning and importance of work simplification.

Principles and Techniques of work Simplification.

Mendel's classes of Change and Correct and Incorrect Work Practices.

### **c) Stress Management:**

Definition, meaning and importance of stress and stress management.

Causes and effect of stress.

Stress management techniques / Coping techniques.

**Sessional: 20 Marks**

1. Seminar / Assignment on related Topics
2. Maximum and comfortable reaching heights in different household activities.
  - (a) Use of Different Pen – Pencil Techniques for house hold activities-
    - (i) Process Chart- Washing Utensils, Roti Making.
    - (ii) Operation Chart – Vegetable Cutting, Dough kneading.
    - (iii) Pathway Chart –, Tea Making, Table Laying.
  - (b) Kneading of dough at three different heights.
  - (c) Ironing of clothes at three different heights.

## **References:**

- 1) Management for Modern families - Gross and Crandall
- 2) Management in family living - Nickel and Dorsey.
- 3) Motion and Time Study - Alph M. Barnes.
- 4) Work Simplification- Gerald Nadler
- 5) Time and Motion Study - Mundel
- 6) Home Management Context & Concepts - R. E. Deawn and F. M. Firebough (Haughton Muffin Co-Boston 1975)
- 7) Modern Management Issues and Ideas - David R. Hampton.
- 8) Management a decision making Approach - Young Stanley.
- 9) Ergonomics of Home - Francis and Taylor Co.
- 10) çxr x`gO;oLFkkiu & MkW- vk'kk fuedj
- 11) Parivarik Sansadhah Vyavastha –Dr. Vrunda Singh
- 12) Gruha Vyavastha aevam Gruha Kala- Dr G.P. Shiery
- 13) Introduction to HomeManagement- Swanson

# **M. A. Home Economics**

## **Semester I**

### **Paper II**

#### **Human Development**

**Subject Code - 1T2**

**Total Marks : 100**

**Theory : 80**

**Sessional : 20**

**Objectives :-**

- To make students aware of Human Development.
- To enable students understand the importance and use of different psychometric tests.
- To understand different approaches and theories of learning, creativity and intelligence.

#### **Unit I: The study of Human Development**

a) The Three domain

- Biosocial Development
- Cognitive Development
- Psychological Development

b) Methods of child study- Importance and its Need.

- Scientific method.
- Observation method
- Interview method

c) Psychological Tests-Meaning, Importance and use of Psychological Tests.

- Psychometric method
- Scale for infant assessment
- Draw a man test
- Children Apperception Test.

## **Unit II: Theories of Learning**

- a) Definition of learning, Process, steps and stages of learning, Characteristics of Learning  
Pavlov- Classical conditioning Experiment.  
J.B. Watson's Experiment-  
Principles- 1. Time Principle 2. Principle of intensity 3. Principle of Consistency 4.  
Principle of Repetition 5. Principle of Inhibition. Criticisms of Theory.
- b) Skinner-Operant Conditioning-Meaning, Operant Behaviour, Elicitate Behaviour,  
Meaning of Reinforcement, Types of Reinforcement- Positive and Negative  
reinforcement. Experiments conducted by Skinner,1,2 and 3.  
Criticisms of Theory. Educational importance or implications of Skinner's Theory.
- c) Thorndike's Theory- Law of Learning, Law of Readiness, Law of Exercise, Law of Effect.  
Secondary Laws-Law of multiple response, Law of mental state, Law of partial activity,  
Law of Assimilation and Analogy, Law of Associative uplifting.  
Educational Implications of Theory.

## **Unit III: Personality Development-**

- a) Definitions, Meaning, Importance.
- b) Determinants of Personality
  - a) Self-Concept, Factors affecting Self Concept, Components of Self Concept- Self Identity, Self Evaluation, Self Ideal.
  - b) Heredity & environment
  - c) Learning & maturation
  - d) Classification of Personality- a) Hippocrates b)Sheldon c) Kreshmer

## **Unit IV: Theories of Intelligence**

- a)** Definition, Developments of Intelligence, Factors affecting intelligence.
  - Binet's Uni factor Theory
  - Spearman's two factor theory
- b)** i) Thurston's Group factor Theory  
ii) Gilford's three dimensional model of Intelligence.
- c)** Definition and concept of creativity
  - Types and degree of creativity ( everyday creativity and eminent creativity, Gifted Child)
  - Different approaches to the study of creativity-
    - Dynamical approach ( Freud )
    - Cognitive approach ( Mckinnen)
    - Gardener Approach (Brain storming, problem solving.)
  - Factors affecting creativity.

### **Sessional: 20 Marks**

- a)** Assignment on curriculum related topics 05 Marks
- b)** Psychological Test
  - (i) Self Concept Test for Adolescents 15 Marks
  - (ii) Emotional Stability Test for Children

### **Reference Books: -**

1. Child Development by Elizabeth Hurlock
2. Developmental psychology by Elizabeth Hurlock
3. Nursery school by Katherina Road
4. Nursery schools in India by Pramila Barookh
5. Personality and Education by David Eontana
6. Kishoravastha by Nalinee Chandwaskar
7. Chils psychology by H. Rudolph Schaffer
8. The developing person through the life span by Kathleen Stassen Berger
9. Vasta, R (Ed) (1992) Six Theories of child Development. Revised Formulations and current issues. London: Sessica Kingsley Publishers Ltd.
10. oSdkfld ekul'kkL= ----- dqeBsdj] cks:Ms] nsIkbZ
11. Human Development by – Diane E Papalia and Sally Wendkos old<sup>s</sup> 5<sup>th</sup> Edition 1981. Tata McGraw Hill Publishing Company New Delhi.
12. The psychology of Adolescents - A.T. Jersild 7<sup>th</sup> Edition Prentice Hall INC Englewood Cliff<sup>s</sup> N. J. USA

# **M. A. Home Economics**

## **Semester I**

### **Paper III**

#### **Textile & Clothing**

#### **Subject Code - 1T3**

**Total Marks - 100**

**Theory - 80**

**Sessional - 20**

#### **Objectives:-**

- 1) To develop an understanding of different types of fibers, yarns and finishes.
- 2) To gain practical knowledge of dyeing and weaving.

#### **Unit – I Introduction**

- a) Classification of Textile fibers, Manufacturing process, properties and uses of Natural fibres – cotton, silk, wool. Synthetic fibres – polyester, Nylon, Acetate.
- b) Yarn formation – Mechanical and chemical spinning.
- c) Types of yarns – Simple, Novelty, Textured yarn.

#### **Unit –II Fabric Construction**

- a) Weaving - Handloom and its parts and functions, basic weaves and Jacquard.
- b) Knitting -Types of knits – warp & weft knit and their uses.
- c) Non Woven -Felts, Bonded fabric, Braiding, their uses.

## **Unit – III Finishes and Dyeing**

- a) Finishes -Definition, classification and Purpose of finishes
  - General Finishes - Scouring, Bleaching, Tentering, Singing and Sizing
  - Special Finishes -Mercerizing, special calendaring, waterproof and water repellent, fire proof, wrinkle resistant, shrinkage control. (Sanforizing )
- b) Dyeing - Classification of dyes- Natural, Synthetic, Pigments, Vegetable dyes.
  - Different types and their suitability to different fibers , Direct, Acid, Basic, Mordant, Vat, Sulphur, Reactive, Acetate, Azo dyes.
  - Different dyeing Methods - Fiber dyeing, Yarn dyeing, Piece dyeing and Garment dyeing.
- c) Methods of Fabric Printing-Tie & dye, Batik, Screen, Stencil, Roller and Block Printing.

## **Unit – IV Traditional Textiles of India –**

- a) Sarees - Chanderi, Paithani, Dacca, Patola, Bandhani ,Baluchari and Sarees from Maharashtra.
- b) Broccade - Himru - Amru, Kam - Khwab, Bafta , Abi rawan.
  - Painted fabric - Madhubani and Kalamkari.
- C) Regional Embroideries of India.

<b>Sessional :</b>	<b>20 Marks</b>
1. Seminar on related Topics.	<b>10 marks</b>
2. Preparing Album of Motifs of Various Printing Techniques/ Traditional Textiles of India.	<b>10 marks</b>

## **References:-**

- 1) Hess - Textile fabric and their uses
- 2) Joseph ML - Essential of Textiles - by Hot Winston New York
- 3) Potter MD 4 Corbman B.P. Textiles - Fibre for fabrics, By Mc Gowhill Inc, USA
- 4) Doongaji S & Deshpande R - Basic Process of Clothing Construction.
- 5) Prayag - Textile Printing
- 6) Pandit savitri - Indian Embroidery.
- 7) Dorothy Siegart - Lyle, Modern Textiles, John Wiley and Sonss Inc New York
- 8) Ritu Jindal - Hand book for fashion designing Mittal Publication, New DelhiU
- 9) Zarapkar K.R. Systems of Cutting, Bombay Zarapkar Tailoring College.
- 10) John willow Nicholas Barnard - Traditional Indian Textiles.
- 11) Dr. Vimal Adhau.- Vastrashastra
- 12) Dr.Pramila Verma.Vastra-Vidyan aevam Paridhan .
- 13) Dr Vrunda Singh.- Vastra-Vidyan aevam Paridhan

# **M. A. Home Economics**

## **Semester I**

### **Paper - IV**

#### **Research Methods and Statistics**

#### **Subject Code - 1T4**

**Total Marks: 100**

**Theory : 80**

**Sessional : 20**

#### **Objectives: To enable students to -**

- 1) Understand the significance of research method in research.
- 2) Apply statistical techniques to research data for analyzing, interpreting and tabulating data meaningfully.
- 3) To develop ability to present and interpret data in a research report of thesis.

#### **Unit - I Introduction to Research**

- a) Scientific Method-Meaning, Definition and characteristics of Scientific Method.
- b) Meaning and definition of Research, Steps of Scientific Research. Research Process, Basic and Applied Research.
- c) Types of Research Methods: Historical, Survey and Experimental Research

#### **Unit – II Formulation of Research Plan**

- a) Formulation of Research Problem, Qualities of good research worker.
- b) Research Design-Meaning, Definition and characteristics of Research Design, Objectives, Importance and Steps of Research Design.
- c) Formulation of Hypothesis-Sources of Hypothesis, Characteristics of Good/Usable hypothesis, Importance and Types of Hypothesis.  
Variables: Importance and Types.

#### **Unit – III Fundamentals of Statistics**

- a) Meaning , Definitions and Scope of Statistics, Functions of Statistics, Importance and Limitations of Statistics in Research.
- b) Measures of central tendency: Mean, Mode, Median, Variability.
- c) Concept of Deviation - Range, Quartile Deviation, Mean Deviation and Standard Deviation.

## **Unit – IV**

- a) Correlation: Concept of Correlation, Co-efficient of Correlation, Rank Correlation.
- b) Concept of Normal Distribution Curve and Probability: Formal & empirical concept, Use of Normal Distribution Curve.
- c) Properties of Normal Distribution Curve and its Applications.

**Sessional:** **20 Marks**

**Pilot Study – (Sample Size – 25)** **10 Marks.**

- 1. Selection of topic for research.
- 2. Formulation of Null hypothesis and conducting a survey on related topic.

**Assignment -** **10 Marks.**

- 1. Statistical problems on related topics.

## **References:**

1. The Science of Educational Research – G.J. Mouley.
2. The Elements of Research – F.L. Whitney.
3. An Introduction of Scientific Research – E.B. Wilson.
4. A Handbook of Methodology of Research – Dr. R.P. Devdas
5. Methods in Social Research – Goode & Hart.
6. Statistical Analysis in Psychology and Education – Ferguson.
7. Methodology an Technique of Social Research – Wilkinson and Bhandarkar.
8. Fundamentals of Applied Statistics – S.C. Gupta
9. An Introduction of Statistical Methods – C.B. Gupta
10. Practical Problems in Statistics – D.N. Elhance.
11. Fundamental Statistical in Psychology and Education – By J.P. Guilford.
12. Statistics in Psychology and Education – Henry Garett.
13. Applied General Statistics – Crowdon & Croxton
14. Sampling Methods for census and Education – G.A. Ferguson.
15. Surveys, Polls and Sampling – Mildred Parton.

# **M. A. Home Economics**

## **Semester I**

### **Textile and Clothing Practical**

#### **Subject Code – 1P3**

<b>Total Marks:</b>	<b>100</b>
<b>External:</b>	<b>80</b>
<b>Internal:</b>	<b>20</b>

**1. Preparing an album of samples of different regional Embroideries of India- 20 Marks**

- a) Kashida of Kashmir
- b) Kasuti of Karnataka
- c) Phulkari of Punjab
- d) Kantha of Bengal
- e) Chikankari of Utter-Pradesh
- f) Embroidery of Manipur
- g) Chamba of Himachal Pradesh
- h) Kathiyawadi Embroidery
- i) Kutchha Embroidery of Gujarat
- j) Zardoji work

**2. Making samples of different types of printing- 10 Marks**

Tie and Dye,Batik,Block,Stencil and Screen printing

**Article Making- Total: 25 Marks**

- Making Article using Regional Embroidery Stitches (Any One)- 15 Marks  
Yoke/Sleeves/Boarder/Wall Frame/Cushion covers.

- Making Article using Printing techniques (Any One)- 10 Marks  
Scarves/Dupatta/Table cloth/Table mats/Table runner/Cushion covers.

**Marking Scheme for Practical examination- Total: 25 Marks (Time – Three Hours)**

- Embroidery sample(Any one) 12
- Sample of any type of printing 08
- Viva- Voce 05
- 

**Internal Activity- 20 (10+10)**

1. Visit to weavers center/Sericulture center/Exhibitions/Printing Units and writing a report of the visit.
2. Collection of samples of different types of Fibers, yarns and fabric and making a Album .

# **M. A. Home Economics**

## **Semester II**

### **Paper I**

#### **RESOURCE MANAGEMENT**

#### **Subject Code - 2T1**

<b>Total Marks :</b>	<b>100</b>
<b>Theory :</b>	<b>80</b>
<b>Sessional:</b>	<b>20</b>

#### **Objective :- To enable students to –**

- 1) Understand various concepts and principles of management and its functions.
- 2) Understand the significance of management in changing environment.
- 3) To develop the ability to use motion and time techniques.
- 4) To create awareness about resources.

#### **UNIT: I**

##### **a) Management as a system-**

Definition and elements of general system theory.

Advantages and limitations of system approach.

Comparison of linear and systems thinking, Application of resource management in Families and Institutions.

##### **b) Family Health Management**

Contribution of public and private agencies in maintaining family health.

Planning of preventive measures.

Annual budget for family medical care.

##### **c) Resident Course:**

Concept and importance of resident course.

Values, goals, standards and decision making in resident course.

Organization of house, rotation of duties and evaluation of managerial abilities.

#### **UNIT: II**

##### **a) Entrepreneurship Development**

Concept, need and process of Entrepreneurship Development.

Role of Enterprise in National and Global Economy.

Types of enterprises – Merits and Demerits.

**b) Government and Private policies and schemes for enterprise development**

Government policies /schemes – MFSC ( Maharashtra State Finance Corporation), DIC (District Industries Centers ), MIDC (Maharashtra Industrial Development Corporation), MAVM (Mahila ArthiK Vikas Mahamandal)  
Private policies / schemes- Co-operative Banks and Commercial Banks.  
Semi Government policies/Schemes NABARD, SIDBI , MUDC (Mahila Udyojakta Vikas Mahamandal).

**c) The Entrepreneur-**

Entrepreneurial motivation. Entrepreneurial Competency- Concepts.  
Developing Entrepreneurial Competency- requirements and understanding the process of entrepreneurship development, self awareness,interpersonal skills, creativity, assertiveness and achievements.

## **UNIT: III**

**a) Time Management -**

Nature and meaning of time, Process of Time Management.  
Time demands in different stages of family life cycle.  
Tools of Time Management.

**b) Energy Management**

Nature and meaning of energy and Process of Energy Management.  
Energy demands in different stages of family life cycle, Energy costs of different home making activities.  
Fatigue – (i) Physiological (ii) Psychological, Workload, heart rate (pulse rate) as a measure of body stress.

**c) Labour Saving Equipments**

Concept and utility of labour saving equipment.  
Trends in equipments available in market.  
Electrical and non-electrical labour saving equipment.

## **UNIT: IV**

**a) Leisure Time**

Definition, concept and importance of leisure time.  
Types of spending leisure time.  
Changing nature of leisure time and factors affecting leisure time.

**b) Family Recreation Management.**

Definition and importance of recreation.  
Family centered recreation.  
Annual budget on family recreation.

**c) Contribution of Public and Private agencies in providing recreation facilities.**

Clubs- International, National and Local.

Libraries-- International, National and Local.

Cinema/Theatre, Parks, Tourism.

**Sessional:** **20 Marks**

**1. Seminar/Assignment on curriculum related topics.** **10 Marks**

**2. Practical should include:** **10 Marks**

- Table Setting and Decoration- (Formal, informal and buffet./Decoration- Flower arrangement for dining Table, fruit display. /Napkin Folding.)
- Thermal regulation of the body at rest and during work. Body temperature to be recorded before and after work
- Determination of workload of some selected household activities, pulse rate before and after the activity, and time taken while performing the activity, to be recorded.

**(Any two activities from the given - Sweeping and mopping of kitchen, cleaning utensils, cleaning the kitchen platform and sink, cleaning of kitchen cabinets and cupboards)**

**OR**

**Cottage Stay**

**References:**

- 1) Management for Modern families - Gross and Crandall
- 2) Management in family living - Nickel and Dorsey.
- 3) Motion and Time Study - Alph M. Barnes.
- 4) Work Simplification - Gerold Nadler
- 5) Time and Motion Study - Mundel
- 6) Home Management Context & Concepts - R. E. Deawn and F. M. Firebough (Haughton Muffin Co-Boston 1975)
- 7) Modern Management Issues and Ideas - David R. Hampton.
- 8) Management a decision making Approach - Young Stanley.
- 9) Ergonomics of Home - Francis and Taylor Co.
- 10) çxr x`gO;oLFkkiu & MkW- vk"kk fuejd
- 11) Parivarik Sansadhan Vyavastha –Dr. Vrunda Singh
- 12) Gruha Vyavastha aevam Gruha Kala- Dr G.P. Shiery
- 13) Introduction toHomeManagement- Swanson

# **M. A. Home Economics**

## **Semester II**

### **Paper – II**

#### **Human Development**

#### **Subject Code - 2T2**

**Total Marks : 100**

**Theory : 80**

**Sessional: 20**

#### **Objectives:-**

- a) To enable students become aware of Early Childhood care & Education.
- b) To understand the changes, characteristics & problems of Adolescence.
- c) To get acquainted with the process of counselling.

#### **Unit I: - Early Childhood Care and Education.( ECCE)**

- a) i) Importance, need and scope of ECCE
- ii) Objectives of ECCE. Types of preschools – Play Centres, Day Care, Montessori, Kindergarten, Balwadi, Anganwadi, etc.
- iii) ECCE in India

Kothari commission, contribution of Five year plan to ECCE, Yashpal committee, Maharashtra Preschool Centre Act.

- b) i) Organization of preschool centers
- ii) Location and site, arrangement of rooms, different types and size of room, play ground, storage facility, selection of different types of indoor and outdoor equipments.
- c) i) Role and responsibilities of care giver and teacher.
- ii) Record and Report.
- iii) Types - aim and purpose / need, general, characteristic. E.g. anecdotal, cumulative sample work, medical etc.

#### **Unit: II**

- a) Early childhood – characteristics, Developmental task, Skills of early childhood, Emotions during early childhood, Socialization and social behaviour, Happiness and Hazards during early childhood.
- b) Late childhood - Characteristics, developmental tasks, skills of late childhood, Hazards and happiness of late childhood, Moral Development
- c) Theory of Kohlberg – Behaviour during late childhood.

### **Unit: III      Puberty and Adolescence**

- a) Puberty - Characteristics, causes of Puberty, Primary and Secondary sex Characteristics, Developmental tasks, problems during puberty, Happiness and interest, Vocational interest, self discipline and family relationship.
- b) Adolescence – Characteristics, Developmental Tasks, physical changes during Adolescence, sex interest and sex behaviour, causes of family frictions during adolescence, Hazards and Happiness.
- c) Adolescent conflicts - Parent, School Authority, Grandparents. Guidance and counselling of adolescents.

### **Unit: IV**

- a) Counselling: History of counselling, meaning, need, objectives, functions.
- b) Qualities and skills of Counsellor, Distinction between Guidance and counselling.
- c) Mental Health -
  - Definition, concept and importance of holistic health, well being and happiness.
  - Sense of Identity, autonomy, individualism during adolescence
  - Problems related to physical appearance and sexuality during adolescence

### **Sessional:**

**20 Marks**

- a) Preparation of teaching aids and materials for young children  
such as puppets, posters, blocks, flash cards or any other. **05 Marks**
- b) Nursery Visit/ Day care centre visit using prepared teaching aids  
and report writing - **10 Marks**
- c) Assignment on curriculum related topics. **05 Marks**

### **Reference Books: -**

1. Child Development by Elizabeth Hurlock
2. Developmental psychology by Elizabeth Hurlock
3. Nursery school by Katherina Road
4. Nursery schools in India by Pramila Barookh
5. Personality and Education by David Eontana
6. Kishoravastha by Nalinee Chandwaskar
7. Chils psychology by H. Rudolph Schaffer
8. The developing person through the life span by Kathleen Stassen Berger
9. Vasta, R (Ed) (1992) Six Theories of child Development. Revised Formulations and current issues. London: Sessica Kingsley Publishers Ltd.
10. oSdkfld ekul'kkL= ----- dqeBsdj] cks:Ms] nsIkbZ
11. Human Development by – Diane E Papalia and Sally Wendkos old<sup>s</sup> 5<sup>th</sup> Edition 1981. Tata McGraw Hill Publishing Company New Delhi.
12. The psychology of Adolescents - A.T. Jersild 7<sup>th</sup> Edition Prentice Hall INC Englewood Cliff<sup>s</sup> N. J. USA.

# **M. A. Home Economics**

## **Semester II**

### **Paper III**

#### **Textile & Clothing**

#### **Subject Code - 2T3**

**Total Marks: 100**

**Theory: 80**

**Sessional: 20**

#### **Objectives:**

- 1) To gain practical knowledge of dyeing, printing .
- 2) To develop the skills of making paper pattern for different types of garments.

#### **Unit -I**

- a) History of Clothing, Psychological effects of clothing and factors affecting selection of clothing.
- b) Design Analysis - Application of Elements of Arts and principles of design in clothing-Principle of design - Harmony, Balance, Proportion, Rhythm, and Emphasis.  
Elements of Art – Line, Form, Shape, Colour & Texture
- c) Definition of fashion, Origin of fashion, fashion cycle, factor affecting fashion, fashion trends.

#### **Unit -II**

- a) Body measurement and its importance and preparing measurement chart.
- b) Basic blocks - Child's basic bodice block, Adult basic bodice block, Skirt and sleeve basic block.
- c) Methods of pattern making - Drafting, Draping, and Flat patterns.  
Preparation of fabric for clothing construction, placing and cutting paper patterns in relation to texture and design (Stripe, Printed, Checks and Boardered Fabric)

#### **Unit - III**

- a) Seams:- Definition, Types and Functions.
- b) Shaping devices: - Darts, Tucks, Gathers, Pleats, Yoke, and Ruffles
- c) Types of Sleeves - Flared, Puff, Raglan, Magyar, Kimono.  
Types of Collars -Flat Collar, Peterpan, Cape, Bishop, Shawl and Shirt collar.
- Types of Skirts - Pleated, A-line, Half and Full circular,(umbrella), yoke skirt and Wrap Around.

## **Unit -IV**

- a) Selection of dress design according to different types of figure.
- b) Fitting problems and their remedies.
- c) Wardrobe Planning, Clothing for different age groups.  
Renovation of garments and household articles.

### **Sessional :**

**20 Marks**

1. Seminar on related Topics.
2. Preparing Album on dress design according to different types of figures.

### **References:-**

- 1) Hess - Textile fabric and their uses
- 2) Joseph ML - Essential of Textiles - by Hot Winston New York
- 3) Potter MD 4 Corbman B.P. Textiles - Fibre for fabrics, By Mc Gowhill Inc, USA
- 4) Deongajis, & Deshpande R - Basic Process of Clothing Construction.
- 5) Prayag - Textile Printing
- 6) Pandit savitri - Indian Embriodary.
- 7) Dorothy Siegart - Lyle, Modern Textiles, John Wiley and Sonss Inc New York
- 8) Ritu Jindal - Hand book for fashion designing Mittal Publication, New Delhi
- 9) Zarapkar K.R. Systems of Cutting, Bombay Zarapkar Tailoring College.
- 10) John willow Nicholas Barnard - Traditional Indian Textiles.
- 11) Vastrashastra -Dr. Vimal Adhau.
- 12) Vastra-Vidyan aevam Paridhan –Dr.Pramila Verma.
- 13) Vastra-Vidyan aevam Paridhan - Dr Vrunda Singh.

# **M. A. Home Economics**

## **Semester II**

### **Paper - IV**

#### **Research Methods and Statistics**

#### **Subject Code - 2T4**

**Total Mark:** **100**

**Theory :** **80**

**Sessional:** **20**

#### **Objectives : To enable students to -**

- 1) Understand the significance of research method in research.
- 2) Apply statistical techniques to research data for analyzing, interpreting and tabulating data meaningfully.
- 3) To develop ability to present and interpret data in a research report of thesis.

#### **Unit - I**

- a) Sample and Census Method- Meaning and definition of sample and census, characteristics of good sample, difference between census and sample, Main steps of sampling, Advantages of sampling, Limitations of sampling, Size of sample.
- b) Sampling Techniques- Methods of Sampling Techniques.
- c) Data collection- Meaning and Definition of data, Data Collection - Meaning and Definition, Importance & Types of Data, Sources of Data, Methods of Data collection, their merits and demerits.

#### **Unit - II**

- a) Classification of Data - Definitions, characteristics and objectives of Classification, Types of Classification, characteristics of Ideal Classification.
- b) Tabulation of Data - Definitions, Objectives of the tabulation, Characteristics of a good Table, Types of Tables, Rules and precautions while preparing Tables, Advantages of tabulation.
- c) Interpretation of Data- Process of Analysis and Interpretation.

### **Unit - III**

- a) Report Writing – Preparation of report, Objectives of Research Report, content of good Report, characteristics of good Report, Steps in Report Writing, Importance of report writing, Bibliography, preparation of an abstract and research paper for publication.
- b) Graphical and diagrammatic representation- Types of graphs, Importance/Merits of graphical representation, Demerits of graphs. Objectives of Diagram, Importance/Merits of Diagrammatic representation, Limitations, characteristics of Diagrammatic representation. Importance and Application of Computer in Research.
- c) Association of attributes.

### **Unit – IV**

- a) Chi square and its application.
- b) t test and f test and its application.
- c) Analysis of Variance (One way ANOVA).

#### **Sessional:**

**20 Marks.**

#### **Pilot Study – (Sample Size – 25)**

**10Marks**

- Classification and tabulation of collected data in First Semester .
- Diagrammatic and graphical representation of data.
- Interpretation of data and Conclusions.
- Report writing.

#### **Assignment -**

**10 Marks.**

- 1. Statistical problems on related topics.

#### **References:**

- 1 The Science of Educational Research – G.J. Mouley.
- 2 The Elements of Research – F.L. Whitney.
- 3 An Introduction of Scientific Research – E.B. Wilson.
- 4 A Handbook of Methodology of Research – Dr. R.P. Devdas
- 5 Methods in Social Research – Goode & Hart.
- 6 Statistical Analysis in Psychology and Education – Ferguson.
- 7 Methodology an Technique of Social Research – Wilkinson and Bhandarkar.
- 8 Fundamentals of Applied Statistics – S.C. Gupta
- 9 An Introduction of Statistical Methods – C.B. Gupta
- 10 Practical Problems in Statistics – D.N. Elhance.
- 11 Fundamental Statistical in Psychology and Education – By J.P. Guilford.
- 12 Statistics in Psychology and Education – Henry Garrett.
- 13 Applied General Statistics – Crowdon & Croxton
- 14 Sampling Methods for census and Education – G.A. Ferguson.
- 15 Surveys, Polls and Sampling – Mildred Parton.

# M. A. Home Economics

# Semester II

## **Textile and Clothing Practical**

## **Subject Code – 2P3**

Total Mark:	100
External:	80
Internal:	20

- 1. Drafting Cutting and Stitching of five garments-** 20

  - a) Salwar/Chudidar
  - b) Kurta
  - c) Skirt
  - d) Top
  - e) Blouse with yoke/Katori Blouse

**2. Making Two samples of--** 10

Seams, Pockets, Plackets, Tucks and Pleats

**3. Article making-** Total Marks: 25

**1. Making Article using surface ornamentation techniques** 15

(Tucks/Gathers/Pleats/Piping/Ruffles)- (Any One) -  
Pillow cover/Cushion Cover/Table mats/Table Runner/Bags

**2. Making different types of yoke-(Any two)** 10

**Marking Scheme for Practical Examination- Total Marks: 25 (Time – Three Hours)**

- |  |           |
|--|-----------|
| <b>1. Drafting, Cutting and Stitching of Any one garment-</b>              | <b>15</b> |
| a) Salwar/Chudidar b) Kurta c)Skirt d)Top e)Blouse with yoke/Katori Blouse |           |
| Drafting   | 05        |
| Stitching  | 08        |
| Finishing  | 02        |
| <b>2. Any two Sample</b>   | <b>05</b> |
| Seams, Pockets, Plackets, Tucks and Pleats                                 |           |
| <b>3. Viva-Voce</b>  | <b>05</b> |

**Internal Activity-** **20 (10+10)**

1. Visit to Boutique/Ready made garment showrooms /Garment Exhibition and writing a report of the visit.
  2. Making survey of recent Fashion trends and presentation.

**Rashtrasant Tukdoji Maharaj Nagpur University.**

**Nagpur**

**Revised Syllabus of M.A. HOME-ECONOMICS.**

**M.A. Semester III & IV (With CBCS)**

**Choice Based Credit System**

**Curriculum Structure & Scheme of Evaluation**

**Theory: 4 periods/Week/Subject (4 Credits)**

**Practical/Sessional: 2 periods/Week/ Subject (1Credit)**

**Food and Nutrition Practical: (3P1): 4 periods/Week (2 Credit)**

**No. of Students/Practical Batch: 10 per Practical Batch**

**M.A. Home Economics Semester III Students will have –**

- **Core Course (Two Compulsory Subjects )**

**Paper I (3T1) - Food and Nutrition.**

**Paper II (3T2) - Family Dynamics.**

- **Elective Course**

**Paper III (3T3) – Optional Subjects (Any One From Elective 1(a) and 1(b))**

**Elective 1(a) - Home Science Extension Education.**

**Elective 1(b) - Housing and Interiors.**

- **Paper IV (3T4) – A) Core- Consumer and The Market**

**OR**

**B) Foundation Course (As per Direction No. 13 of 2017(15/5 Appendix A)**

- **Practical - (3P1) – Food & Nutrition**

### **Pattern of Question Paper and Examination**

1. There will be four units in each paper.
2. Question paper will consist of five questions and all questions shall be compulsory.
3. Four questions will be on four units with internal choice ( one question on each unit ).
4. Fifth question will be compulsory with questions from each of the four units having equal weightage and there will be no internal choice.
5. Each paper will be of 3 hours duration.
6. Minimum passing marks will be 40% .

**Theory: 4 periods/Week/Subject (4 Credits)**

**Practical/Sessional: 2 periods/Week/ Subject (1Credit)**

**Food and Nutrition Practical: (4P1): 4 periods/Week (2 Credit)**

**No. of Students/Practical Batch: 10 per Practical Batch**

**M.A. Home Economics Semester IV Students will have –**

- **Core Course (Two Compulsory Subjects )**

**Paper I (4T1) - Food and Nutrition.**

**Paper II (4T2) - Family Dynamics.**

- **Elective Course**

**Paper III (4T3) – Optional Subjects (Any One From Elective 1(a) and 1(b)**

**Elective 1(a) - Home Science Extension Education.**

**Elective 1(b) - Housing and Interiors.**

- **Paper IV (4T4) – A) Core- Consumer and The Market**

**OR**

**B) Foundation Course (As per Direction No. 13 of 2017(15/5 Appendix A)**

- **Practical - (4P1) – Food & Nutrition**

### **Pattern of Question Paper and Examination**

1. There will be four units in each paper.
2. Question paper will consist of five questions and all questions shall be compulsory.
3. Four questions will be on four units with internal choice (one question on each unit ).
4. Fifth question will be compulsory with questions from each of the four units having equal weightage and there will be no internal choice.
5. Each paper will be of 3hours duration.
6. Minimum passing marks will be 40%.

**Rashtra Sant Tukadoji Maharaj Nagpur University, Nagpur.**

**M.A. Home Economics (Choice Based Credit System)**

**Semester III**

Sr. No.	Paper	Subject Code	Subject	Teaching Scheme (Hrs/Week)			Credit  <b>1Hr.Th.= 1 2Hr. Pr.=1</b>	Duration (Hours)	Examination Scheme					
				Theory (Hours)	Practical/ Project (Hours)	Total (Hours)			Max. Marks		Total Marks	Min. Passing Marks		
									External Th. Marks	Pract./ Internal Marks.				
1	I	3T1	Food and Nutrition	04	02	06	05	03	80	20	100	40		
2	II	3T2	Family Dynamics	04	02	06	05	03	80	20	100	40		
3	III	3T3	<b>Elective 1(a)</b> Home Science Extension Education <b>OR</b> <b>Elective 1(b)</b> Housing and Interior	04	02	06	05	03	80	20	100	40		
4	IV	3T4	A) - Core- Consumer and The Market <b>OR</b> B) -Foundation Course	04	02	06	05	03	80	20	100	40		

<b>5</b>	Practical	3P1	Food and Nutrition Practical	--	04	04	02	03	80	20	100	40
			Total	16	12	28	22	15	400	100	500	200

**(Subject Code: 3-Semester III, T-Theory, P-Practical)**

**Note: Foundation Course for Students from Other Discipline.**

**Rashtra Sant Tukadoji Maharaj Nagpur University, Nagpur.**

**M.A. Home Economics (Choice Based Credit System)**

**Semester IV**

Sr. No.	Paper	Subject Code	Subject	Teaching Scheme (Hrs/Week)			Credit	Duration (Hours)	Examination Scheme			
				Theory (Hours)	Practical/ Project (Hours)	Total (Hours)			Max. Marks	External Th. Marks	Pract./ Internal Marks.	Total Marks
1	I	4T1	Food and Nutrition	04	02	06	05	03	80	20	100	40
2	II	4T2	Family Dynamics	04	02	06	05	03	80	20	100	40
3	III	4T3	<b>Elective 1(a)</b> Home Science Extension Education <b>OR</b> <b>Elective 1(b)</b> Housing and Interior	04	02	06	05	03	80	20	100	40
4	IV	4T4	A.- Core- Consumer and The Market <b>OR</b> B.-Foundation Course	04	02	06	05	03	80	20	100	40

<b>5</b>	Practical	4P1	Food and Nutrition Practical	--	04	04	02	03	80	20	100	40
			Total	16	12	28	22	15	400	100	500	200

**(Subject Code: 4-Semester IV, T-Theory, P-Practical)**

**Note: Foundation Course for Students from Other Discipline.**

# **M. A. Home Economics**

**Semester III**

**(Core Course)**

**Paper – I**

**Food and Nutrition**

**Subject Code - 3T1**

**Total Marks: 100**

**Theory: 80**

**Sessional: 20**

**Objectives : To enable students to –**

- 1) To understand role of diet in management of various diseases, to plan, calculate and prepare diets for these diseases.
- 2) To understand causes & consequences of nutritional problems in society.
- 3) To understand the relationship between nutritional status and Health of women.
- 4) To understand Food Chemistry.

## **Unit I:**

- a) Review of nutrients- Proteins, Carbohydrates, fats, Vitamins A,D,E,K,C,B1,B2,B3, B6,B12, Folic acid, Minerals- Calcium, Phosphorus, Iron, Iodine.
- a) Digestive System: Review of structures, digestive and absorptive functions, Role of liver, pancreas and gall bladder. Digestion, absorption and metabolism of all nutrients.
- b) Diet Therapy: Causes, Symptoms and Principle of Dietary Management of
  - Peptic Ulcer
  - Atherosclerosis
  - Diabetes
  - Obesity.

## **Unit II:**

- a) Community Nutrition
  - Population and food production, Current Nutritional problems in India and their Causes.
  - Nutrition Education- Objectives, Importance, Methods of Nutrition Education.
- b) Nutrition and Infection: Vicious Cycle of Malnutrition and infection,
  - Mechanism of immune response to infection,
  - Malnutrition and mental health.
- c) Existing programmes to combat malnutrition in India – ICDS, SNP, ANP,
  - Vitamin A Prophylaxis programme, Prophylaxis against nutritional Anemia, Control of Iodine Deficiency Disorder.
  - National agencies – ICMR, ICAR, CFTRI and NIN.
  - International agencies – FAO, WHO, UNICEF and CARE.

## **Unit III:**

- a) Assessment of Nutritional Status
  - Anthropometry, Diet Survey, Clinical Assessment ,Radiological & biophysical Assessment
  - Vital Statistics, Ecological Factors.
- b) Women and Nutrition
  - Situation of women in Global, National and Local context, Improving their Nutritional & Health status, Health problems of women.
  - Intervention throughout the life cycle, Empowerment of women, Role of education.
- C) Various National Schemes- Janani Suraksha yojana, Kishori Swastha yojana.
  - Prajanan &Balaarogya karyakram

## **Unit IV:**

- a) Toxins : Aflatoxins, BOAA, in Khesari Dal, Ergot Poisoning and Radioactive materials.
- b) New Food : Natural foods or uncommon foods structure, composition, uses in Cookery e.g. Bamboo rice, Oil Cake, Tapioca, Blue Green Algae, Leaf Protein concentrates.
- c) Space Food –Structure, Composition and Use

**Sessional: 20 Marks**

- 1. Seminar / Assignment on related topics.**
- 2. Preparing charts on curriculum related topics.**

**References:**

1. NIN Publications
2. Human Nutrition and Dietetics, Davidson and Passmore.
3. Normal and Therapeutic Nutrition Proud fit and Robinson.
4. Applied Nutrition, R. Raj Laxmi.
5. Essentials of food and Nutrition (Vol. I & II) by M. Swaminathan
6. Text Book on Human nutrition, M.S. Bamji, N. Prahalad Rao, V. Reddy Oxford & IBM publishing Co. Pvt. Ltd. New Delhi & Calcutta
7. Dietetics, B. Srilakshmi (2000) Published by K.K. Gupta for Newage International Pvt. Ltd. New Delhi.
8. Clinical Nutrition and Dietctics, F.P. Antia Philip Abraham Oxford publishing Company.
9. Experimental Cookery, Belle Lowe.
10. Food Science, B. Srilakshmi, New Age International (P) Ltd., Publishers
11. Food Chemistry : A.H. Mayer.
12. Preventive and Social medicine, K. Park.
13. Women and Nutrition in India (1989) Gopalan C. and Kaur, S. Nutrition Foundation of India.
14. Nutritional Problems of India. Prentice Hall of India (1982) P.K. Shukla

# **M.A. Home Economics**

**Semester III**

**(Core Course)**

**Paper – II**

**Family Dynamics**

**Subject Code - 3T2**

**Total Marks: 100**

**Theory: 80**

**Sessional: 20**

**Objectives : To enable students to –**

1. To familiarize the students with the role of marriage in family life.
2. To make students aware about the necessity of marriage counseling.
3. To familiarize the students with the laws related to marriage and divorce.
4. To introduce basic skills of counseling to the students.
5. To understand the family as a component of socio – cultural milieu and its context.

**Unit – I**

**Marriage :**

- a) Definitions, Motives for marriage- Earlier and Now. Age and time factor, social experience, motivation and maturity, vocational and educational readiness, parental readiness. readiness for marriage, functions of marriage, factors affecting marital relationship.
- b) Marital Success. Changing concept of marriage.  
Dual career marriage- benefits, job establishment, child care, effects on children, strains.
- c) Marriage Counseling

Need of marriage counseling, History,  
Phases of marriage Counseling- Premarital Counseling, Counseling for marital harmony,  
Crisis intervention, The counseling process-

- An initial appointment
- Exploration of client's problems.
- Goal specification
- Development and implementation of programme towards goal achievement.
- Evaluation of results.
- Termination of relationship with client.
- Follow-up.

## **Unit II Laws**

- a) Laws related to marriage and divorce. Importance of Laws.  
Hindu Marriage and divorce act.
- b) Muslim Marriage and divorce.  
Christian Marriage and divorce.
- c) Parsi Marriage and divorce.  
Special Marriage and divorce.

## **Unit – III The Family**

- a) The family in the social context.
  - a. Family as a component of social system, structure and context.
  - b. Family as an evolving and dynamic institution.
  - c. Functions of family.
- b) Socio – cultural studies of family pattern in India.  
Family structure: Traditional, Extended, Nuclear, Joint families.
- c) Family disorganization and tension- definition and meaning, causes of family disorganization, causes of family tension- situation of Fundamental and Primary tension.

Tensions in Secondary and Familial situation.

Alternate families – Single Parent, Childless Families and Female Headed Families.

## **Unit - IV**

**a) Family relationships**

Influence of the family on children.

Influence of parental attitude on family relationship.

Disciplinary methods used by elders, its effect on the family.

**b) Family size, its influence on family relationship.**

Sibling relationship, its effect on family relationship.

Influence of broken homes on family relationship

**c) Preference for one parent and its effect on parent – child relationship.**

Influence of concept of family roles on family relationship.

### **Sessional:**

**20 Marks**

a. Assignment on curriculum related topics.

**10 Marks**

b. Survey and Report writing. (Sample size 20)

**10 Marks**

- Types of family/Types of Marriage.

### **References:**

1. Marriage and Parenthood – F. Philip Rice. University of Maine.
2. Marriage, the family and personal fulfillment – David Schulz.
3. Marriage and divorce problems – S.K. Sharma.
4. Personal adjustment and Marriage – Landis and Landis.
5. Sociology – Bogardus.
6. Vivaha aani Kautimbik Sambandh- Triveni Pharkade.

**M.A. Home Economics**  
**Semester III**  
**Core Elective Course I**  
**Paper – III**  
**Elective (1a)**

**Home Science Extension Education**

**Subject Code - 3T3**

	<b>Total Mark:</b>	<b>100</b>
	<b>Theory:</b>	<b>80</b>
	<b>Sessional:</b>	<b>20</b>

**Objectives : To enable students to –**

7. To enable students understand the methods of teaching Home-Science.
8. To acquaint the students about the role of extension – education in community development.
9. To create awareness about the role of NGO's in community development.
10. To create an awareness about the importance of public relations.
11. To develop faith in the capacity of the people to take responsibility for their own development.

**Unit I**

- a) Definition, Philosophy and objectives of Home Science. Career opportunities in various branches of Home Science, Early development of Home Science programme.
- b) Methods of teaching Home Science. Importance of Methods.
- c) Selecting the methods and making the method effective. Role of Home Science in helping to solve the problems of the community. Contribution of Home Science Extension Worker in programmes for better living. Characteristics of Extension Education, Extension Education Process.

## **Unit – II**

- a) Definition, scope, philosophy and objectives of Extension Education. Methods of teaching Extension Education, classification of the methods.
- b) Role of the extension worker in community development. Role, function and contribution of Gram Sevika, Mahila Mandals, Youth Clubs.
- c) NGOs -Meaning, Nature, Functions. Some NGOs at State Level and other local agencies in Extension Education.

## **Unit III**

- a) Contribution of U.N. Agencies towards Extension work.-UNESCO, UNICEF.
- b) UNDP, ESOSOC
- c) Rashtriya Mahila Aayog, U.N. Resolution 1325

## **Unit IV Communication**

- a) Importance of communication in Extension work.  
Functions of communication- Information function, Instructive/command function  
Influence/persuasive function, integrated function.
- b) Models of Communication – Aristotal's Model, Shammon Weave's Model,  
JP Leagons's Model
- c) Characteristics of a good Communicator  
Problems related to Communication.

### **Sessional:** **20 Marks**

- |   |                 |
|---|-----------------|
| 1. Field work/survey, report writing        | <b>15 Marks</b> |
| 2. Assignment on curriculum related topics. | <b>05 Marks</b> |

### **References:**

- Dr. S.V. Supe. – An introduction to Extension – Education.
- Reddy A. (1997) – Extension Education, Sri Lakshmi Press. Bapatla.
- Education and communication for Development-.O.P. Dahama and D.P. Bhatnagar.
- Dr. Shail Bansal – Prasar Shiksha. (Hindi)
- Dr. Smt. Manju Patni- Gruah Vidnayn Prasar Shiksha (Hindi)

# **M.A. Home Economics**

## **Semester III**

### **Core Elective Course I**

#### **Paper –III**

#### **Elective (1b)**

#### **Housing and Interior**

#### **Subject Code - 3T3**

**Total Marks:** 100

**Theory :** 80

**Sessional:** 20

#### **Objectives: To enable students to –**

To enable students –

1. To recognize the family needs in relation to housing responsibilities, housing and interiors.
2. To acquire basic knowledge of principles involved in residential houses and its interiors.
3. To provide knowledge of the principles and methods of creating attractive interiors.

#### **Unit – I**

##### **a) History of housing –**

Concept and history of housing.

Changes in housing needs and standard.

Housing values and goals at the present time.

##### **b) Housing in India as affected by trends in Population and economics status.**

Occupation and family mobility.

Social and cultural status.

##### **c) Cost of house and finance for housing**

Factors influencing cost of house.

Estimation of the cost of housing.

Ways to control and economizing the cost of housing.

## **Unit –II**

### **a) Housing Schemes**

Public rural and urban housing schemes for various economic groups.

Role of Co-operative Societies in development of housing in urban and rural areas.

Role of private sector in development of housing in urban and rural areas.

### **b) Factors to be considered while designing interior spaces.**

Orientation, grouping of rooms, privacy of rooms.

Circulation between and within user's area, light, ventilation, and aesthetics.

Flexibility, roominess, services, cost.

### **c) Present housing conditions in India.**

Quality and quantity of housing available.

Availability of building material.

Housing management problems.

## **Unit –III**

### **a) Housing Loans.**

Loan providing agencies- Government and Private.

Legal procedure for purchase of house.

Factors affecting disbursement of housing loan.

### **b) Housing legislations and Building Byelaws**

Meaning, definition, and importance of housing legislations and building byelaws.

Housing legislations.

Building Codes/ Byelaws.

### **c) Essential Services**

Importance and need of essential services.

Types of services- Water supply, drainage system, electricity, telephone.

Bye-laws related to the essential services.

## **Unit –IV**

**a) Concept of Vastushastra in Housing**

Historical background of Vastushastra.

Location of rooms and walls.

Placement of doors and accessories.

**b) Landscaping :-**

Concept and importance of landscaping.

Approaching landscape design with an artistic touch – space, line, form, texture, colour, balance, rhythm, scale and proportion.

Factors associated with the choice of landscape design.

**c) Bonsai :-**

History.

Preparation of Soil and Selection of Plants.

Selection of Containers, Potting and Repotting, Care Of Bonsai.

### **Sessional:**

**20 Marks**

1. Seminar/Assignments based on curriculum
2. Project work, survey based on subject curriculum and Report writing .

### **References:**

1. Ruth Morran, 'The Home and Its Furnishings.
  2. Shrivastav – 'Remedial Vastushastra, Manoj Publications, Delhi, 2001.
  3. Wonderworld of Tropical – Bonsai - Jyoti & Nikunj Parekh
  4. The complete practical encyclopedia of Bonsai - Ken Norman.
-

# **M. A. Home Economics**

## **Semester III**

### **Core Course (Optional)**

### **Paper – IV**

## **Consumer and The Market**

### **Subject Code - 3T4**

<b>Total Marks:</b>	<b>100</b>
<b>Theory:</b>	<b>80</b>
<b>Sessional:</b>	<b>20</b>

#### **Objectives : To enable students to -**

- 1) To Understand basic concept of consumer economics.
- 2) Become familiar with the economic system and the market processes.
- 3) Understand the role and responsibilities of consumers in the market.
- 4) Know the techniques and principle in wise decision – making as a consumer.

#### **Unit – I**

##### **a) Introduction of the subject and Basic Economics Concept.**

The Scope and subject matter of consumer economics, special branch of economics, Different branches of economics .

##### **b) Types of economic systems. 1. Capitalist 2. Socialistic 3. Mixed economy, its characteristics & effect on consumer.**

##### **c) Basic economics, concepts of goods and services, its classification.**

#### **Unit -II**

##### **a) Consumption and laws of consumption, Utility-Types of utility.**

##### **b) Meaning of consumption, Nature of wants, classification of human wants and standard of living- socio - economic status.**

- c) Law of diminishing marginal utility, Marginal and Total Utility, utility and price of the commodity, consumer's equilibrium – scale of preference, Indifference curve.

### **Unit - III**

- a) Consumer's Demand, demand and types of elasticity of Demand.
- b) Determinants of Elasticity of Demand. Factors affecting Demand.
- c) Characteristics of a good budget planning, A budget for family with fixed income and seasonal income.

### **Unit – IV**

- a) Consumer Buyer Decision Process, Types and Motivating factors of purchase decision, social effects of consumer's decisions. Types of purchasing practices of consumers and their merits and demerits.
- b) Price and price level, Role of price, factors affecting price, demand and supply. Price determination under perfect competition and monopoly, Characteristics of Monopoly.
- c) Factors affecting price level and effect of price level and fluctuations on consumers and society.

### **Sessional:**

**20 Marks**

- i) Survey and report writing on (Sample size 20)
  - Motivating factors of purchase decisions  
OR
  - Types of purchasing Practices

**15 Marks**
- ii) Assignment on curriculum related topics.

**05 Marks**

### **Reference Books:**

- 1) Consumer Economics – Principles and Problems – Wilhelms and Heamer.
- 2) The Family as Consumers – Oppenheim
- 3) Economics for Consumers – L.J. Gordon

**M.A. Home Economics**  
**Semester III**  
**Paper: IV**  
**Foundation Course in Home Economics- I (Optional)**  
**Subject Code - 3T4**

<b>Total Marks:</b>	<b>100</b>
<b>Theory :</b>	<b>80</b>
<b>Sessional:</b>	<b>20</b>

**Objectives:-**

1. To create awareness among the students about management in the family.
2. To make students aware of human development.
3. To understand the relation of Nutrition to health.
4. To develop an understanding of Textile fibers and methods of Fabric production.
5. To train the students for self employment.

**Unit I**

- a) **Fundamentals of Home Management**  
Definitions and objectives of Home Management.  
Process of Management.  
Meaning, Definitions, characteristics and classification of resources, Factors affecting use of resources.
- b) **Decision Making**  
Definitions, importance and steps of decision making.  
The role of decision making in home management.  
Types of Decisions.
- c) **Elements and Principles of Art and Design**  
Line, Form and Texture, Light, Space, Colour, Pattern and Idea.  
Harmony and Balance, Scale and Proportion, Rhythm and Emphasis  
Classification of Colours, Effect of Colours, Colour Schemes and their use in interior decoration.

## **Unit II**

a. **Fundamentals of Human Development**

Definition and General Principles of Growth and Development.

Factors affecting Growth and Development. Stages of Development.

**Infancy and Toddler hood: (0-2 yrs.)**

Developmental Tasks, Motor Development, Factors affecting Motor

Development. Language Development - Pre-speech forms of communication.

Happiness and Hazards

b. **Early Childhood: (2 To 6 yrs.)**

Characteristics, Developmental Tasks, Happiness and Hazards, Motor skills.

Emotional Development - Characteristics of children's emotions; Types of emotions and factors affecting emotional development.

c. **Late Childhood: (6 to 12 yrs.)**

Characteristics, Developmental tasks, Happiness and Hazards.

Social development - The child in the family, significance of the family and changes in family expectations and sibling relations.

## **Unit III**

a) Definitions of Terms -Health, Nutrition, Dietetics, Food.

Functions of Food and its relation to Health. Nutrients: Macro and Micro Nutrients.

Macronutrients- Classification, Functions, RDA, Sources and Deficiency Diseases of – Proteins, Carbohydrates and Fats.

b) Micronutrients – Vitamins - Functions, RDA, Sources and Deficiency Diseases of Fat

Soluble Vitamins: A, D, E, K. Water Soluble Vitamins: Vitamin B Complex-B1,B2,B3,B6, Folic Acid and Vitamin C.

Micronutrients : Minerals - Functions, RDA, Sources and Deficiency Diseases of – Calcium, Phosphorus, Iron, Magnesium, Sodium and Iodine.

c) Water- Functions, Sources, Water Balance, Effect of Dehydration and its prevention.

Fibers- Functions, Sources, and Deficiency.

Basic Food Groups and the contribution of Food Groups to diet.

## **Unit IV Textile Fibres and Yarn**

a. Textile fibres – Introduction, Classification, Manufacturing process and Physical and Chemical properties of Natural fibres-Cotton, Jute, Wool, and Silk. Manmade fibres- Rayon, Polyester, Nylon

Yarn formation - Mechanical and Chemical spinning, Types of Yarn.

b. **Fabric Construction**-Weaving- Handloom weaving, Power looms, and Jacquard loom.

Knitting- Types of knits, Warp and Weft Knitting, Non Woven -Felts, Films, Foams, Braiding, Bonded and Laminated.

**c. Fabric Finishes**

Finishes- Definitions, Classification and Purpose of finishes.

General Finishes-

Mercerizing, Singing, Sanforizing, Scouring, Bleaching, Calendering, Brushing, Weighting, Degumming, Sizing, Delustering.

Special Finishes- Water proof, Fire Proof, Moth-proof, Crease resistant finish.

Dyeing methods-Fibre dyeing, Yarn dyeing and Piece dyeing.

Printing methods-Block printing, Tie and Dye, Batik printing, Roller printing, Screen printing

**Sessional:** **20 Marks**

**1. Fancy Cookery:**

Preparation, serving and calculation of nutritive value (Protein and Energy)- **10 Marks**

- Tomato Soup, Mix Vegetable Soup, Sweet Corn Soup.(Any Two)
- Cutlets, Paneer Preparation, Kabab, Samosa, Crysly Veg.(Any Two).
- Stuffed Paratha, Missi Roti, Chole Bhature. (Any Two)
- Gravies Red, Green, White (Any Two)
- Gulab Jamun, Halwa- (Gajar/ Moong /Lauki), Ice Cream/ Pudding/ Cake ( Any Two)

**Basic Embroidery- Preparing four samples using following stitches** **05 Marks**

(i)Chain Stitch (ii)Stem Stitch(iii)Laisy Daizy Stitch (iv)Feather Stitch(v)Button Hole  
Stitch(vi)Satin Stitch(vii)Open work(viii)Bullion Stitch

**Artificial Flower Making (Any Two) –** **05 Marks**

Organdie, Tissue Paper, Stocking, Duplex Paper, Satin Ribbon, Net, Satin Cloth, Crepe Paper,  
Tainted Paper.

**References:**

- 1) Management for Modern families - Gross and Crandall
- 2) Management in family living - Nickel and Dorsey.
- 3) çxr x`gO;oLFkkiu & MkW- vk'kk fuedj
- 4) Parivarik Sansadhh Vyavastha –Dr. Vrunda Singh
- 5) Gruha Vyavastha aevam Gruha Kala- Dr G.P. Shiery
- 6) Introduction to HomeManagement- Swanson
- 7) Child Development by Elizabeth Hurlock
- 8) Developmental psychology by Elizabeth Hurlock
- 9) Balvikas byDr. Neelima Sinha and Dr. Vaijayanti Deshpande.

10) M.S. Swaminathan : Essential of Nutrition, Part-I and Part-II

11) Nutritive Value of Indian Foods: Gopalan C, Rama Sastri and Balasubramanian S.C. National Institute of Nutrition , 1993

12) B. Srilakshmi Food Science, New Age International (P) Ltd., Publishers.

13) Poshan ani Aaharshastra by Dr. Anuradha Nisal and Dr. Prabha Chinchkhede.

14) Hess - Textile fabric and their uses

15) Dr. Vimal Adhau.- Vastrashastra

16) Dr.Pramila Verma.Vastra-Vidyan aevam Paridhan .

17) Dr Vrunda Singh.- Vastra-Vidyan aevam Paridhan

# **M. A. Home Economics**

## **Semester III**

### **Food and Nutrition Practical**

#### **Subject Code 3P1**

**Total Marks:** 100

**External:** 80

**Internal:** 20

- 1. Planning and Preparation of Diets. It's evaluation and Calculation of Nutritive Value for -** **20 Marks (Internal)**
  - Peptic Ulcer
  - Diabetes
  - Obesity
  - Atherosclerosis
  
- 2. Conducting surveys on various topics related to Community Nutrition and preparing a report and Presentation of the Report** **-30 marks**
  
- 3. Scheme for Practical Examination-** **50 Marks** **(Time- Three Hours)**  
Diet Planning and Calculation – 20 Marks  
Preparation and Presentation – 15 Marks  
Viva Voce – 15 Marks

# **M. A. Home Economics**

## **Semester IV**

### **Paper – I**

#### **(Core Course)**

#### **Food and Nutrition**

**Subject Code - 4T1**

**Total Mark: 100**

**Theory : 80**

**Sessional: 20**

**Objectives : To enable students to –**

- 1) To understand food Chemistry.
- 2) To know the principles underlying food preparation.

#### **Unit I:**

**a) Food Microbiology –**

Study of Bacteria, Yeast, Mould, Algae,  
Microbiology of Fruits, Vegetables, Milk and Water.

**b) Leavening agents – Chemical & Biological.**

Preservatives- Natural, Chemical.  
Antioxidants.

**c) Food sanitation and Hygiene**

Water –Sources of contamination of water, Treatment of Water.

Food – Food handling, Food contamination. Practical rules of Food sanitation,  
Control of rodents and Insects

#### **Unit II:**

- a) Methods of cooking-** Preliminary preparation methods with their Advantages and disadvantages. Objectives of cooking, Various cooking methods, their advantages

and disadvantages, Effect of cooking on nutrients especially - Protein, Fats and Carbohydrates.

### **Experimental Cookery**

- b)** Sugar Cookery – Processing of sugar, Properties of Sugar, Factors affecting Crystallization of Sugar, Solutions, Syrups, Sugar Crystals, Fudge and Fondants.
- c)** Cereal Cookery – Structure, Composition and Nutrition value  
Specific cereals- wheat & wheat product, Rice, Maize, Jowar, Ragi & Bajra.  
Cereal cookery- Cereal Protein- Gluten, factors affecting Gluten formation.  
Cereal starch- Effect of moist heat- Gelatinization, factors affecting Gelatinization. Effect of dry heat – Dextrinization, Fermented Products of cereals.  
Effect of cooking on nutritive value of cereals and Role of cereals in cookery.

### **Unit III:**

- a)** Pulse Cookery – Structure, Composition and nutritive value.  
Processing of pulses-mealing, soaking, germination, Fermentation, parching of Pulses, Effect of cooking methods on different forms of pulses, and role of pulses in cookery, Toxic constituents.
- a)** Egg Cookery - Structure, composition, nutritive value and quality of egg. Effect of different cooking methods on eggs. Evaluation of egg quality, deterioration during storage, Preservation of eggs.
- b)** Milk & Milk products- composition, nutritive value, effect of cooking methods on milk, Milk processing – clarification & pasteurization, Milk products, Role of milk and milk products in cookery.

### **Unit IV:**

- a)** Vegetable cookery – Classification, composition, pigments and nutritive value, Flavor compounds, changes during cooking- loss of nutrients during cooking, Storage of vegetable, Role of vegetables in cookery. Effect of different cooking methods on vegetables.
- b)** Fruit cookery – Classification, composition, nutritive value, pigments, enzymes, organic acids, flavonoids, Post Harvest changes & storage, Effect of cooking on fruits, medicinal value of fruits.

c) Fats and Oils -Nutritional importance, composition, emulsions, smoking point, rancidity,

Processing and refining of fats, specific fats- Lard, butter, margarine.

Role of fats in cookery.

### **Sessional:**

**20 Marks**

Assignment and Seminar on curriculum related topics.

### **References:**

1. NIN Publications
2. Human Nutrition and Dietetics, Davidson and Passmore.
3. Normal and Therapeutic Nutrition Proud fit and Robinson.
4. Applied Nutrition, R. Raj Laxmi.
5. Essentials of food and Nutrition (Vol. I & II) by M. Swaminathan
6. Text Book on Human nutrition, M.S. Bamji, N. Prahalad Rao, V. Reddy Oxford & IBM publishing Co. Pvt. Ltd. New Delhi & Calcutta
7. Dietetics, B. Srilakshmi (2000) Published by K.K. Gupta for New age International Pvt. Ltd. New Delhi.
8. Clinical Nutrition and Dietetics, F.P. Antia Philip Abraham Oxford publishing Company.
9. Experimental Cookery, Belle Lowe.
10. Food Science, B. Srilakshmi, New Age International (P) Ltd., Publishers
11. Food Chemistry: A.H. Mayer.
12. Preventive and Social medicine, K. Park.
13. Women and Nutrition in India (1989) Gopalan C. and Kaur, S. Nutrition Foundation of India.
14. Nutritional Problems of India. Prentice Hall of India (1982) P.K. Shukla.
15. Aaharshastra vividh drushtikonatun (1982) Dr. Asha Deoskar and Saral Lele

# **M.A. Home Economics**

## **Semester IV**

### **Paper – II**

**(Core Course)**

## **Family Dynamics**

**Subject Code - 4T2**

**Total Marks: 100**

**Theory: 80**

**Sessional: 20**

**Objectives : To enable students to –**

1. To understand the status of women during different eras.
2. To understand the problems of old age.
- 3 To understand the important of mental health and hygiene in the child's Life.
- 4 To identify mental health issues.

### **Unit – I : Women in India.**

- a) Women in ancient India.
  - Women in Pre – independence period.
  - Women in Post – independent period.
- b) Status of women in Indian society.
  - Educations and women, women and employment, women and Health, Social Status of women, political status of women,
- c) Changing role of women.

### **Unit – II**

- a) Violence against women - Types of Violence, Causes of violence.
- b) Domestic violence, Violence at work place- Definition, Types, Potential perpetrators, effects, safety tips, prevention.
- c) Women as peace builders.

Meaning of peace, importance of introduction of peace education at home and in schools.

### **Unit – III: Concept of Aging and the Aging Process**

- a) Biological and physiological aspects, psychological aspect, Social aspect, retired status, single status, economic status, security, social adjustment and recognition, spiritual aspect.
- b) Adjustment pattern and changing lifestyle during old – age. Family pattern during old-age :- changing roles and the aging family, conjugal husband-wife relationship, sexual adjustment. Intergenerational family relations, grand parenthood, widowhood, Alternative life style, second marriage in old-age.
- c) Services and programs for the aged : - Laws and facilities favoring the senior citizens. Categories of services : - Housing, Health, leisure time activities, institution for the aged, (old age homes, adoption of the old) day care centers, rearrangement after retirement, economic programmes – retirement pension, death cum retirement gratuity, provident fund, insurance schemes.

### **Unit – IV: Mental health and hygiene**

- a) Emotions and mental health :- Anger and hostility, fear and anxiety, defense mechanisms, kinds of mental illnesses, Reasons leading to Mental Ill health, Factors affecting mental health and maintaining mental health.
- b) Concept of mental hygiene. Value of prevention of mental ill health during child-hood.
- c) Mental health agencies- National Association of Mental Health, State Mental Health Agencies , Child Guidance Clinics, Government and non – government mental health agencies.
- d)

**Sessional:** **20 Marks**

- a. Assignment on curriculum related topics. **05 Marks**
- b. Survey and Report writing. (Sample size 20) **15Marks**

Problems faced by working women/Home for the aged (1 home)

### **References:**

1. Women in India – a search for identity – Sharada Rath.
2. Women and Society – G. Vijayeshwari Rao
3. Contemporary social problems in India. – B. Ghosh.
4. Aging and the aged.- Paul Chowdhry.
5. Women and the Law. – Anjani Kant.
6. Health and Safety for you – Franklin C. Vaughn.

**M.A. Home Economics**  
**Semester IV**  
**Core Elective Course I**  
**Paper – III**  
**Optional Elective (1a)**  
**Home Science Extension Education**

**Subject Code - 4T3**

<b>Total Marks:</b>	<b>100</b>
<b>Theory:</b>	<b>80</b>
<b>Sessional:</b>	<b>20</b>

**Objectives:-**

1. To understand the various programmes, favoring the wellbeing of the community.
2. To understand the relevance and importance of educating the Community at large.
3. To create awareness about problems due to over population.
4. To understand the role of “leaders” in community development.

**Unit I: Adult Education:**

- a) Adult learning process, difference between child learning and adult learning.  
Stimulus –response theory of adult learning. Factors affecting adult motivation.  
Requisite conditions for adult learning.
- b) Adult Education- back ground and meaning  
Defining adult education and aims of adult education.
- c) Adult education and National Development  
Adult Education Programmes in India.

**Unit II : Welfare Programmes for Rural Women in India**

- a) Development of women and children in Rural areas (DWCRA)  
Objectives' and Administrative structure of DWCRA  
Training for DWCRA, integration of DWCRA with other departments.
- b) ICDS- Objectives , Programmes.

- c) Some other Specific Welfare Programmes for Rural Women.  
 TRYSEM ,  
 Jawahar Rojgar Yojna  
 Self help Programmes.  
 Rajiv Gandhi Scheme for Empowerment of Adolescent Girls.

### **Unit III: Population Education**

- a) Definition, Importance and need of Population Education, Objectives- National objectives, objectives of Population Education at School Level. Causes and effect of population growth.
- b) Scope of Family planning services, health aspect of family planning.
- c) National Family Welfare Programmes, Family Planning Programme.  
 Hindrance in Implementation of Family Planning Programme.

### **Unit IV: Leadership in Extension**

- a) Definition of Leader, Definition of leadership, need and importance, Characteristics and types of leadership.
- b) Methods of identifying and selecting local leaders in extension work, Role and Qualities of local leaders. Role of leadership in Development.
- c) Leadership training.

**Sessional:** **20 Marks**

- |   |                 |
|---|-----------------|
| 1. Field work/survey, report writing        | <b>15Marks</b>  |
| 2. Assignment on curriculum related topics. | <b>05 Marks</b> |

### **References:-**

1. C.L. Adivi Reddy – Extension – Education
2. Robin Shaw Pushp – Prasar Shiksha. (Hindi)
3. Dr. Harpalani – Prasar Shiksha (Hindi)

# **M.A. Home Economics**

## **Semester IV**

### **Core Elective Course II**

#### **Paper –III**

#### **Optional Elective (1b)**

#### **Housing and Interior**

**Subject Code - 4T3**

**Total Marks : 100**

**Theory : 80**

**Sessional : 20**

#### **Objectives:**

**To enable the students -**

1. To understand the different components of interiors.
2. To understand ecosystem and importance of environment management.

#### **Unit I**

**a) Furniture**

Furniture – an important component of interiors.

Modern trends-wrought iron, nu-wood, syntax, press-wood, cane and molded furniture.

Care of different types of furniture.

**b) Home Furnishing**

Window Treatment – 1) draperies, 2) curtains, 3) roller shades, 4) valences, 5) Venetian blinds.

Selection of upholstery fabrics.

Care of upholstery fabrics

**c) Wall Treatment**

Wall paper- Types and care.

Paints- Types and car

Tiles- Types and care.

## **Unit II**

**a) Ecosystem- Earth, Man and Environment**

Ecosystems of India.  
Pathways of ecosystem.  
Problems of sustainability of ecosystem.

**b) Environment Management**

Fundamental principles of environment and natural resource management.  
Basic concept of ecology and its application in daily life.  
Environmental management strategies for industries.

**c) Pollution- Causes, Effects and Remedies**

Air pollution and Water Pollution.  
Soil Pollution and Solid Waste Pollution.  
Noise Pollution and Radiation Pollution.

## **Unit – III**

**a) Garbage Disposal**

Types of garbage and importance of garbage disposal.  
Vermi Composting.  
Garbage disposal for multi-storied buildings.

**b) Study of various types of Fixtures and Fittings used in Home, their use, selection, care merits and demerits**

False ceiling.  
Kitchen platform.  
Paneling and cladding of walls.

**c) Water Drainage System**

Importance and types of drainage system.  
Garden kitchen, soak pit.  
Rain water harvesting from terrace.

## **Unit – IV**

**a) Prevention and Control Strategies for Pollution**

At local, national and international level.  
Role of companies and industries.  
Role of scientists and researchers.

**b) Environmental standards**

ISO 14000.  
EMS.  
Environment auditing.

**c) Role of Different Organizations in Environment Management**

Role of National and International organizations in environment management.

Public policy toward environment management.

Environment protection enactments.

**Sessional:**

**20 Marks**

1. Seminar/Assignments based on curriculum
2. Project work, survey based on subject curriculum and Report writing.

**References:**

1. Agan. T.C.- 'The House', Oxford and I.B.H. publishing co.
2. Deshpande, R.S. – 'Modern India Homes in India', United Book Corporation, Poona, 2<sup>nd</sup> edition.
3. Rutt, A. – 'Home Furnishing', Wiley Eastern Pvt. Ltd., New Delhi, 2<sup>nd</sup> edition.
4. Pak-Fin and Helen Yeap – 'Feng-Shui, Health Harmony', B. Jain Publishers Pvt. Ltd., New Delhi, 1998.
5. Goptlied, L.D., 'Environment and Design in Housing'
6. Paryavarnshastra - Erak Bharucha
7. Gruha Vyavastha aevam Gruha Kala- Dr G.P. Shiery
8. dkSVqafcd lalk/kukaps O:oLFkkiu vkf.k x`g ltkoV & f=os.kh QjdkMs vkf.k lqyHkk xksaxs-

# **M.A. Home Economics**

## **Semester IV**

### **Core Course II (Optional)**

#### **Paper –IV**

## **Consumer and The Market**

**Subject code - 4T4**

**Total Marks: 100**

**Theory: 80**

**Sessional: 20**

**Objectives :-** 1. To understand consumer protection tools.

2. Consumer protection acts.
3. To know channels of distribution.
4. Advertising and salesmanship.

#### **Unit - I**

- a) Consumer Protection: Right and responsibilities of consumers, Needs for protection of consumer, Guarantee regarding weights measure and quantity of goods.
- b) Remedies – Standardization, development of quality control and BIS, Agmark, Informative labeling, Types and function of labels.
- c) Consumer Education and knowledge regarding Consumer Laws. Need for Consumer's education, Consumer education and consumer forums.

#### **Unit -II**

- a) Consumer Protection Acts - Food Adulteration Act, 1954
  - Essential Commodity Act, - 1955
  - Standard Weight and Measures Act, 1956
  - Consumer Protection Act, 1986
  - Right to Information Act, 2005
- b) Consumer Organization and Co-operation :-  
Consumer Organization and their objectives and functions. Progress and scope of consumer's movement in India and Abroad – England, America and Europe.  
Role of women in consumer movement.
- c) Consumer Co-operatives in India, Advantage and disadvantages of consumer co-operatives.

### **Unit –III**

- a) Market – Meaning and types of market, Organization, functions and control of market, channels of distribution – Retail shop, wholesale marketing, Departmental stores, Co-operative stores, shopping Malls, Role and utility of middleman in the market.
- b) Packing and delivery, Return facility, Facility for inspection and selection  
Guarantee, use of phone and internet in purchasing.
- c) Methods of payment, Cash, Credit, Credit Card and Debit Card, Hire purchase and installment payments.

### **Unit –IV**

- a) Advertising and Salesmanship - Meaning and objectives of Advertisement, Modes of Advertisement.
- b) Responsibility of women as consumer. Deteriorating image of women in advertisement.
- c) Need for control over advertising –By Government, Traders, Associations and Consumers.

#### **Sessional:**

**20 Marks**

- ii) Survey and report writing on (Sample size 20)  
  - Awareness about consumer protection Acts  
OR
  - Methods of payment.

- ii) Assignment on curriculum related topics. **05 Marks**

#### **Reference Books:**

- 1) Consumer Economics – Principles and Problems – Wilhelms and Heamer.
- 2) The Family as Consumers – Oppenheim
- 3) Economics for Consumers – L.J. Gordon
- 4) Consumer Economics J.N. Morgan
- 5) Consumer Economics Problems – E.B. Phil
- 6) Consumer Problems and Personal Finance – A.W. Troelstrup.

# **M.A. Home Economics**

## **Semester IV**

### **Paper - IV**

## **Foundation Course in Home Economics II (Optional)**

### **Subject Code - 4T4**

**Total Marks:**      **100**

**Theory:**                **80**

**Sessional:**            **20**

#### **Objective :**

1. To assist the students to understand the significance of management in changing environment.
2. To understand the changes, characteristics and problems of Puberty and Adolescence and adulthood.
3. To Plan and prepare diet for different age groups/stages of life cycle.
  
4. To develop the skills of techniques used in clothing construction and suitable clothing Selection and to gain practical knowledge of clothing construction.

#### **UNIT: I**

##### **a. Time Management and Energy Management**

Nature, Meaning and Definitions of time and Energy, Process of Managing Time and Energy, Fatigue – (i) Physiological (ii) Psychological.

##### **b. Family life cycle**

Concept and stages of family life cycle.  
Management of Resources during various stages of family life cycle.

##### **Money Management**

Income – Concept and Definition. Budget - Definition, Importance of Budget.  
Steps in making budget.

##### **c. Stress and Stress Management:**

Meaning , Definitions, and importance of stress and stress management.  
Causes and effects of stress.  
Stress management techniques / Coping techniques.

#### **Unit II:**

##### **a. Puberty and Adolescence:**

Characteristics , Developmental tasks and Primary and Secondary Sex Characteristics during

Puberty.

Characteristics and Physical Changes during Adolescence.

Vocational interest, Self discipline and Family Relationship. Sex interest and sex Behavior and Identity formation. Problems during puberty and Adolescence.

- b. **Young Adulthood (19-40 years):** Adjustments to new family, Readiness for marriage and Parenthood , Factors affecting Marital success, Need of Marital Counselling .  
Middle Adulthood (41-60 years): Menopause, stresses in middle age, coping with stress at work place and family, job satisfaction, preparation for pre-retirement.
- c. **Personality Development-** Definitions, Concept, Meaning, Importance.  
Determinants of Personality- Self-Concept, Factors affecting Self Concept, Components of Self Concept- Self Identity, Self Evaluation, Self Ideal, Heredity & environment, Learning & maturation .  
Personality and I.Q. ,E.Q. and S.Q. (Intelligent Quotient, Emotional Quotient and Social Quotient).

### **Unit III**

- a) **Balanced Diet** –Definitions, Factors influencing Balanced Diet,  
Meal Planning, Principles of Meal Planning and Use of Balanced Diet in meal Planning.  
Nutritional requirements during different stages of Life Cycle:

Infancy	Pregnancy
Preschool	Lactation
Adolescence	Adulthood
- b) **Malnutrition**- Definitions, Causes, Effects and Prevention of Malnutrition in India.  
Assessment of Nutritional Status: Anthropometry, Diet Survey, Clinical Assessment, Radiological & biophysical Assessment and Vital Statistics.  
Nutrition Education-, Importance, Methods of Nutrition Education.
- c) **Food Preservation** –Definitions ,Principles and Importance.  
Methods of Food Preservation.  
Adulteration in Food –Definitions, Identification of adulterants in food, Types and Effects on Health.

### **Unit IV**

- a) Body measurements and preparation of measurement chart.  
Methods of pattern making-Drafting, Draping and Flat Patterns.  
Principles of garment making, preparation of fabric, placing, marking and cutting patterns
- b) Seams-Definitions, Types, and Function.  
Shaping Devices.-Darts, Tucks, Gathers, Pleates, Shearing, Ruffles, and Yoke.
- c) Fitting problems and their remedies.  
Factors affecting selection of clothing, Wardrobe planning.  
Fashion –Definitions, Origin, Fashion cycle. Factors influencing Fashion.

**Sessional:** **20 Marks**

**Project Work-**

A. Textile Printing: Making one article using techniques- Tie and Dye ; Block Printing ( Scarf, Cushion Covers, Table Mats, Dupatta, Table Cloth etc) **10 Marks**

B. Meal planning for various groups: Planning and Calculation of a day's meal for: **10 Marks**

- Preschooler (2-6 years)
- School child (6-10 years)
- Adolescent girl/boy (16-18 years)
- Adult Woman / Man
- Pregnant women
- Lactating woman

**References:**

1. Parivarik Sansadhhah Vyavastha –Dr. Vrunda Singh
2. Gruha Vyavastha aevam Gruha Kala- Dr G.P. Shiery
3. Child Development by Elizabeth Hurlock
4. Developmental psychology by Elizabeth Hurlock
5. Adolescent Development by Elizabeth Hurlock
6. The Psychology of Adolescent by A.T, Jerslid,
7. Advanced Educational Psychology by S. Dandapau
8. Counseling Psychology by Narayan Rao
9. Vaikasik manasshastra by Kumthekar, Borude, Desai.
10. Vivah ani Kautumbik Sambandh by Triveni Pharkade
11. Human Nutrition and Dietetics, Davidson and Passmore.
12. Applied Nutrition, R. Raj Laxmi.
13. Preventive and Social medicine, K. Park.
14. Nutritional Problems of India. Prentice Hall of India (1982) P.K. Shukla
15. Nutritive Value of Indian Foods: Gopalan C, Rama Sastri and Balasubramanian S.C. National Institute of Nutrition , 1993
16. Doongaji S & Deshpande R - Basic Process of Clothing Construction.
17. Zarapkar K.R. Systems of Cutting, Bombay Zarapkar Tailoring College.
18. Dr. Vimal Adhau.- Vastrashastra
19. Dr.Pramila Verma.Vastra-Vidyan aevam Paridhan .
20. Dr Vrunda Singh.- Vastra-Vidyan aevam Paridhan

**M. A. Home Economics**  
**Semester IV**  
**Foods and Nutrition Practical**  
**Subject Code - 4P1**

**Total Marks: 100**  
**External: 80 Marks**  
**Internal: 20 Marks**

**A. Experimental Cookery and It's Evaluation - 20 Marks ( Internal)**

**1. Sugar Cookery-**

- Fudge- Khajoor fudge, Cocco Fudge
- Chikki-Any Two (Using Sugar or Jaggery)
- Chirote-Two Variations (Using- 1. Maida, 2. Maida+ Rawa)

**2. Cereal Cookery –**

- Bhature- Two Variations (Using-1. Maida, 2. Maida+ Wheat Flour)
- Shankarpale – Two Variations ( Using- 1. Maida, 2. Maida+ Rawa)
- Aappe- Two Variations

**3. Pulse Cookery-**

- Dhokla- Two Variations ( Instant and Fermented , Using Besan)
- Shev- Two Variations (Using Soda and Without Soda)
- Dahi Wada – Two Variations (Using 1. Black Gram Dal, 2. Green Gram Dal )

**B. Conducting Survey on related topic such as Food Sanitation, Food Handling, etc , Preparation of Report and Presentation of the Report—30 Marks.**

**Practical Examination              50 Marks              (Time– Three Hours)**

**Sugar/ Cereal/ Pulse Cookery - 20 Marks**

**Evaluation and Presentation - 15 Marks**

**Viva Voce              15 Marks**



**M. COM. SEMESTER-I**  
**C-11: Paper-I: Advanced Financial Accounting**

**Marks: 80**

**Unit- I**

**Accounting standards:** Indian Accounting standards, International Accounting standards  
**Valuations of Goodwill and shares** – Including preference and Bonus shares.

Accounts of Holding companies (Including rights issue and Bonus Issue of Shares, Inter owing)

**Unit- II**

**Computer Software Accounting.**

Company Statutory Records, Statutory Books of Accounts & Registers.

Statutory Reports Corporate Governance.

**Fire insurance Claims** – (Poor Selling Live Goods ) Including Loss of Profit Policies

**Unit- III**

**New Trends in Accounting:-**

Inflation Accounting, Human Resources Accounting, Social Accounting, Lease Financing.

Internal and External reconstruction, Amalgamation and Absorption of the companies.

**Unit- IV**

**Hire Purchase Accounting :**

Re-possession ; Partial Re-possession and Complete Re-possession

Hire Purchase stock and Debtors Method

**Books Recommended:-**

- 1) Gupta R. L. – Advanced Financial Accounting – S. Chand & Sons
- 2) Kumar, Anil S. – Advanced Financial Accounting – Himalaya Publication House
- 3) Shukla and Grewal : Advanced Accounts (S. Chand & Ltd. New Delhi)
- 4) Jain and Narang : Advanced Accounts (Kalyani Publishers, Ludhiana)
- 5) Sr. K. Paul : Accountancy, Volume –I and II (New Central Book Agency, Kolkata)
- 6) R. K..Lele and Jawaharlal : Accounting Theory (Himalaya Publishers)
- 7) Dr. L. S. Porwal : Accounting Theory (Tata McGraw Hill)
- 8) Robert Anthony, D. F. Hawkins & K. A. Merchant : Accounting Text & Cases (Tata McGraw Hill)
- 9) Dr. S. N. Maheshwari : Corporate Accounting (Vikas Publishing House Pvt. Lit. New Delhi)
- 10) Dr. Ashok Sehgal& Dr. Deepak Sehgal : Advanced Accounting (Taxmann, New Delhi)

# Paper Pattern

## Advanced Financial Accounting

**Time: 3 Hours**      **Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1</b>	<b>Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08marks</b>
		<b>c. Problem</b>	<b>16 marks</b>
<b>2</b>	<b>Unit –II</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08 marks</b>
		<b>c. Problem</b>	<b>16marks</b>
<b>3</b>	<b>Unit –III</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08 marks</b>
		<b>c. Problem</b>	<b>16marks</b>
<b>4</b>	<b>Unit –IV</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08 marks</b>
		<b>c. Problem</b>	<b>16marks</b>
<b>5</b>	<b>Unit-I</b>	<b>a Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-II</b>	<b>b Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d Theory / Problem</b>	<b>04 marks</b>

## C-12 :PAPER II: Indian Financial System

**Unit I: Components of formal financial system-** Structure & Functions of Financial system, Nature and role of financial institutions and financial markets, financial system and economic growth. **Money Markets** - Overview of money markets, functions & operations, instruments, Treasury Bills and types, Commercial papers, Commercial bills, Call money market, Money market intermediaries, Money markets and monitory policies in India.

**Unit II: Banking** - Definition, creation of money, Present structure of commercial banking system in India, Brief history; functions, Forms of banking Managerial functions in banks. Management of deposits and Advances, Lending practices, types of advances, principles of sound bank lending, preparation of reports, Limits of credit, bank investments, Liquidity and profitability, government securities, Management of Bank Finance - Bank Accounts, Records, Reports, Statement of advances, Evaluation of loan applications, ALM and NPA Management. Fee based Vs. Fund based services, Types of fee based services offered, merchant banking services. Role of Technology in Banking services Innovation.

**Unit III: Insurance:** Insurance Basics, Insurance Vs. other savings and investment options, tax benefits , life cycle need solutions, customer needs and available products. Life Insurance Products - Traditional and Unit linked policies, individual and group policies, with profit and without profit policies, Different type of insurance products, Medi-Claim and health insurance products - Salient features, procedures involved in claim settlement. General Insurance Products - Different types of products available in the market, Salient features. LIC – Constitution, objectives and functions. Role of IRDA in regulating the industry. Product Portability.

**Unit IV:Capital Markets** - History of Indian capital markets, Reforms in capital markets, Primary Markets – functions, free pricing, book building, Secondary Markets – Organization, membership, Functions and management of stock exchanges, functioning of BSE, NSE, OTCEI, ICSEI. Internet trading. **Mutual fund**, objectives, functions, salient features.

**Regulatory Bodies & services:** **SEBI** – Organization, powers and functions, Investor protection measures, achievements, **RBI** – objectives, organization, role, fiscal & monetary policy, **Pension fund authority**, **CRISIL**, **SHCIL**- objectives & functions. EXIM bank, Foreign Exchange Markets, Currency transactions; Foreign Exchange Risk. Types of risks.Risk management.

### BOOKS RECOMMENDED

1. Principles of Bank Management by Vasant Desai, Himalaya Publishing house,
2. Insurance & Risk Management , Dr. P. K. Gupta, Himalaya Publishing House
3. Indian Financial System by Bharti V. Pathak, Pearson education
4. Financial Markets & Services, E. Gordon &K.Natarajan, Himalaya Publishing
5. Indian financial system , M Y Khan, Tata McGraw hill
6. Indian financial system, P Bezborah, R Singh, Kalyani pub
7. Indian financial system, K Gupta, N Aggarwal, Kalyani publication
8. Bhartiya Vitteeya Vyavastha,Dr.Arvind Shende, Dr.Devendra Mohture, Anuradha Prakashan, Nagpur

**Paper Pattern**  
**Indian Financial System**

**Time: 3 Hours**

**Marks: 80**

- N.B.** 1) All questions are compulsory.  
2) All questions carry equal marks.

<b>Q.1.</b>	<b>A)</b>	-	<b>Unit I</b>	<b>8Marks.</b>
	<b>B)</b>	-	<b>Unit I</b>	<b>8Marks.</b>
<b>OR</b>				
	<b>C)</b>	-	<b>Unit I</b>	<b>16Marks.</b>
<b>Q.2.</b>	<b>A)</b>	-	<b>Unit II</b>	<b>8Marks.</b>
	<b>B)</b>	-	<b>Unit II</b>	<b>8Marks.</b>
<b>OR</b>				
	<b>C)</b>	-	<b>Unit II</b>	<b>16Marks.</b>
<b>Q.3.</b>	<b>A)</b>	-	<b>Unit III</b>	<b>8Marks.</b>
	<b>B)</b>	-	<b>Unit III</b>	<b>8Marks.</b>
<b>OR</b>				
	<b>C)</b>	-	<b>Unit III</b>	<b>16Marks.</b>
<b>Q.4.</b>	<b>A)</b>	-	<b>Unit IV</b>	<b>8Marks.</b>
	<b>B)</b>	-	<b>Unit IV</b>	<b>8Marks.</b>
<b>OR</b>				
	<b>C)</b>	-	<b>Unit IV</b>	<b>16Marks.</b>
<b>Q.5.</b>	<b>A)</b>	-	<b>Unit I</b>	<b>4Marks.</b>
	<b>B)</b>	-	<b>Unit II</b>	<b>4Marks.</b>
	<b>C)</b>	-	<b>Unit III</b>	<b>4Marks.</b>
	<b>D)</b>		<b>Unit IV</b>	<b>4Marks.</b>

## **C-13 :PAPER-III: MANAGERIAL ECONOMICS**

**Unit – I** Meaning, Definition, Nature, Scope and significance of Managerial Economics Economic factors influencing decisions, Functions Role and Responsibilities of Managerial Economist. Principles in Managerial decision analysis. Micro-Macro Economics – Definition, scope, merits-demerits, importance and uses, limitations, Paradox of Micro Economics, Distinction between Micro and Macro Economics.

### **Unit – II**

**Demand Analysis** – Theories in Demand, Derivation of demand, types, Environment influencing demand. Elasticity of Demand – Concept, meaning, types, measurement, influencing factors importance. Advertising or promotional Elasticity.

**Demand forecasting** – Meaning, definition, types, Determinants, Methods, importance, criteria, Advantages, Limitations. Demand fore-casting for new products, Demand Estimation for consumable durables and non-consumable durables.

**Unit III– Production** – Concept, meaning, definition features, functions of production Functions Law of variable proportions, Production with two variable inputs. **Cost Analysis** – concept, importance, types – Real opportunity, Money, Fixed, variable, Direct, indirect, Explicit, implicit, past, feature, contrallable and uncontrollable, Escapable, unescapable, urgent, postable cost, Replacement and Histrorial cost, Total Average and Marginal cost in short Run – and Long Run curve. **Revenue** - Concepts, definition, types-Total, Average, Marginal and relationship with AR and MR

**Unit IV – Market Structure** – Concept, meaning classification of Market. Perfect competition-features and price determination. Monopoly – definition features, types and price determination. Monopolistic competition-meaning, concept, types, price determination, and defects. Price discrimination – Definition, Concept, meaning, types, conditions, Dumping, and socio – economic consideration in pricing.

**Business Cycle**– Concept, Definition, features, types, phases of Business cycle – cobweb, Hick's Samuelson Theories of Trade cycle. Controls of Business cycle. **Inflation – Deflation**, - Concept, Meaning causes, economic effects on production distribution and employment, remedies demand full v/s cost push Inflation., Concept of sustainable development, consumption and its inclusive growth.

### **Books Recommended**

1. Managerial Economics – D.M. Mithani Himalaya Publicity House
2. Managerial Economics – Dominich Salvatore – oxford , 2007
3. Managerial Economics – Atmanand Excel Book 2007
4. Managerial Economics – Dwivedi S. N. V. Vikas Publication House
5. Managerial Economics – Cauvery R. sultan chand , New Delhi
6. Managerial Economics – Baya Michael R.
7. Science Sustainability & National Resurgence – M.M. Joshi centre for policy studies Chennai
8. Economic Theory - Bauamol M. J.
9. Micro Economics - Eaton B. Curtis : Prentice Hall of India
10. Managerial Economics – Dean joek prentice hall of India

**Paper Pattern**  
**Managerial Economics**

**Time: 3 Hours**

**Marks: 80**

- N.B.** 1) All questions are compulsory.  
2) All questions carry equal marks.

1	Unit -I	a. Theory b. Theory	08 marks 08marks
2	Unit -II	Theory a. Theory b. Theory	16 marks 08 marks 08marks
3	Unit -III	C. Theory a. Theory b. Theory	16 marks 08 marks 08marks
4	Unit -IV	C. Theory a. Theory b. Theory	16 marks 08 marks 08marks
5	Unit-I Unit-II Unit-III Unit-IV	C Theory a Theory b Theory c Theory d Theory	16 marks 04 marks 04 marks 04 marks 04 marks

**OR**

**OR**

**OR**

## **C-14 :Paper -IV : Marketing Management**

### **Unit-I**

**Nature and Scope of Marketing** : marketing tasks, Corporate Orientations towards Scanning. Different philosophies of marketing, various demand states and the market place. The Marketing Environment and Environment

### **Unit-II**

**Marketing Information System and Marketing Research** : Understanding consumer and industrial markets, Market segmentation, Targeting and positioning.

### **Unit-III**

**Product Decisions** : Product mix, product life cycle, new product development , branding and packaging, decisions, Pricing methods and strategies.

**Promotion Decisions** : Promotion mix, advertising, sales promotion, public relation personal selling; Channel management – selection, emergence of new channels.

### **Unit-IV**

**Vertical Marketing Implementation and Systems** : Organizing and implementing marketing in the organization; Evaluation and control of marketing efforts; New issues in marketing – Globalization, Consumerism, Green marketing.

### **Books Recommended**

1. Marketing Management – Planning, Implementation and Control – V. S. Ramaswamy and S. Namakumari - McMillan
2. Marketing Management - P. Kotler - Prentice Hall Inc
3. Marketing Management – RajanSaxena - Tata McGraw-Hill
4. Introduction to Marketing Management by Adrian Palmer – Oxford University Press.
5. Basic Marketing 15<sup>th</sup> edition by William D Perreault R, - Tata McGraw-Hill

**Paper Pattern**  
**Marketing Management**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.**  
**2) All questions carry equal marks.**

<b>1</b>	<b>Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
<b>2</b>	<b>Unit –II</b>	<b>Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
			<b>OR</b>
<b>3</b>	<b>Unit –III</b>	<b>C. Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
			<b>OR</b>
<b>4</b>	<b>Unit –IV</b>	<b>C. Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
			<b>OR</b>
<b>5</b>	<b>Unit-I</b>	<b>a Theory</b>	<b>16 marks</b>
	<b>Unit-II</b>	<b>b Theory</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c Theory</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d Theory</b>	<b>04 marks</b>

## M.COM SEMESTER II

### C-21 :Paper –I : Research Methodology

**Unit I: Introduction** - Meaning, Objectives and Types of research, Research Approach, Motivation of research, Research Process, research plan & design, Relevance & scope of research in commerce. Significance of Research, Features of good research, Use of advanced technology in Research, Major problems in Research process.

**Unit II: Research Design** –Research problem selection, problem definition techniques, Components of research design, features of good design, Steps in sample Design, Characteristics of a good sample Design, Probability & Non Probability sampling, Measurement & scaling techniques. Scaling and scale construction techniques.

**Unit III: Collection and Processing data** - Methods of data collection-Primary data-questionnaire, interviews, observation; Collection of secondary data; Use of computer and Information technology in data collection, Field work, Survey plan, survey Errors, Data coding; Editing and Tabulation. Analysis of data, Tools of Analysis.

**Testing of hypothesis** –Concept of hypothesis, Characteristics of hypothesis, Hypotheses formulation, Procedure for hypothesis testing; Use of statistical techniques for testing of hypothesis. Interpretation of data - Techniques of Interpretation.

**Unit IV: Report writing:-** Qualities of good report, Layout of a project report, preparing research reports. Contents of report, Format orders, Steps in report writing, Precautions in research report writing, Research in Commerce - General management, Small business innovation research (SBIR), Research in functional areas – marketing, finance, HR and Production. Software packages SPSS.

### BOOKS RECOMMENDED:

1. Zikmund : Business Research Methods, (Thomson Learning Books)
2. Marketing Research, G C Beri third edition (McGraw Hill)
3. Dwivedi – Research Methods in Behavioural Science (Macmillan)
4. Bennet, Roger : Management Research, ILO, 1993
5. Salkind, Neil J. : Exploring Research, (Prentice – Hall, 1997)
6. P. Madan , Paliwal: Research Methodology, Global vision pub
7. B Kothari, Research Methodology, ADB pub
8. V.Upadade,A.Shende,Research Methodology, S.Chand & Co.

**Paper Pattern**  
**Research Methodology**

**Time: 3 Hours**

**Marks: 80**

- N.B.** 1) All questions are compulsory.  
2) All questions carry equal marks.

<b>1</b>	<b>Unit -I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
<b>2</b>	<b>Unit -II</b>	<b>Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
			<b>OR</b>
<b>3</b>	<b>Unit -III</b>	<b>C. Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
			<b>OR</b>
<b>4</b>	<b>Unit -IV</b>	<b>C. Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
			<b>OR</b>
<b>5</b>	<b>Unit-I</b>	<b>C Theory</b>	<b>16 marks</b>
	<b>Unit-II</b>	<b>a Theory</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>b Theory</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>c Theory</b>	<b>04 marks</b>
		<b>d Theory</b>	<b>04 marks</b>

## **C-22 :Paper-II: Advanced Cost Accounting Marks : 80**

### **Unit - I**

#### **Methods of Cost**

Meaning importance, object scope and limitations of cost accounting. Elements of Cost account. Difference between Cost and Financial account and difference between cost and management accounting.

**Cost Control, Cost Reduction, Control System and Reporting :-** Role of Cost Accountant Value analysis, Cost reduction, Control System and Control report.  
Machine Hour Rate and Labour Hour Rate.

### **Unit – II**

**Cost Audit :** - Statutory Cost Audit, Types, Advantages, Cost Audit in India, Cost Audit Rules, Role of Cost Auditor. **Process Accounts ,** Abnormal loss and Abnormal gain, Joint Product, equivalent Unit production and inter process profit.

### **Unit - III**

Variance analysis :- Material, Labour and Overhead Variances . Contract Costing : Profit on Complete and incomplete contract, contract running for more than one year, two to three contracts running simultaneously, contract near to completion.

### **Unit - IV**

Operating Costing: Meaning, Objectives , Advantages , Scope, Methods of Operating Costing. Problems on Transports, Hospitals, Powerhouse costing & Hotel costing.

### **Books Recommended**

1. M.N.Arora:-Cost Accounting Principles and practice– Vikas Publishing House Pvt.Ltd.New Delhi
2. S.N Maheshwari:Cost Accounting Theory and problems– Shri Mahavir Book Depot, New Delhi
3. V.K.Saxena:Cost Accounting Text Book-Sultan Chand and Sons New Delhi
4. S.P.Iyenger:Cost Accounting Principles and Practice– Sultan Chand and Sons, New Delhi
5. M.C.Shukla–T.S.–Grewal,M.P.Gupta–Cost Accounting–S.Chand,New Delhi
6. R.S.N.Pallai,V.Bhagavathi–Cost Accounting–S.Chand,New Delhi
7. B.S.Khanna,I.M.Pandey,G.K.Ahuja,Batra: -Cost Accounting– S.Chand,New Delhi
8. S.M.Shukla :-Cost Accounts(Hindi)
9. I.G.Gupta and Trivedi: -Cost Accounts(Hindi)
10. Nigam R.S.–Advanced Cost Accounting,S.Chand & Company 11.Jain S.P.–  
Advanced Cost Accounting–Kalyani Publication
11. Gawada,J.Made–Advanced Cost Accounting–Himalaya Publication House

**Paper Pattern  
Advanced Cost Accounting**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1 Unit -I</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08marks</b>
		<b>OR</b>
	<b>c. Problem</b>	<b>16 marks</b>
<b>2 Unit -II</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08 marks</b>
		<b>OR</b>
	<b>c. Problem</b>	<b>16marks</b>
<b>3 Unit -III</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08 marks</b>
		<b>OR</b>
	<b>c. Problem</b>	<b>16marks</b>
<b>4 Unit -IV</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08 marks</b>
		<b>OR</b>
	<b>c. Problem</b>	<b>16marks</b>
<b>5 Unit-I</b>	<b>a Theory / Problem</b>	<b>04 marks</b>
<b>Unit-II</b>	<b>b Theory / Problem</b>	<b>04 marks</b>
<b>Unit-III</b>	<b>c Theory / Problem</b>	<b>04 marks</b>
<b>Unit-IV</b>	<b>d Theory / Problem</b>	<b>04 marks</b>

## C-23: Paper –III: Cooperation

Marks -80

### **Unit I: Introduction**

1. Meaning, Definition, Characteristics, Objectives, Scope, Importance of Cooperation.
2. Principles of Cooperation.
3. Cooperative Movement in India: Origin, Development & Progress. Role of Cooperative Movement in Social Economic Development
4. Maharashtra Co-operative Societies Act, 1960

### **Unit II- Cooperative Credit Institution in India**

1. Rural Cooperative Credit Institutions-Short & Long Term Credit Structure
2. Urban Cooperative Banks
3. Nabard & Cooperative Banks
4. Audit of Cooperative Banks

### **Unit III- Cooperatives & Rural Economy**

1. Rural Artisans & Cooperatives
2. Cooperative Agricultural Production & Marketing in India
3. Peoples Participation in Rural Development
4. Community Development Programme in India

### **Unit IV- Globalization & Cooperation**

1. Effects of Globalization on Cooperative movement
2. Challenges & Opportunities before Cooperatives under Globalization
3. Reengineer of Cooperatives to meet Challenges of Globalization
4. Problems and Prospects of the Cooperative Movement in India under Globalization

### **Recommended Books:**

1. Cooperation and Competition in the Global Economy: Issues and Strategies, By Antonio Furino, Harper Businesss (1 August 1988)
2. Cooperation Principles, problems and Practice, By Hajela, Ane Books Pvt. Ltd.; Student Edition edition (2015)
3. Co-Operative Banking (CAIIB 2010), By IIBF (Indian Institute of Banking and Finance), Macmillian India Ltd (1 January 2010)
4. The Maharashtra Co-operative Societies Act, 1960 and Rules, 1961, Current Publication,; (2015)
5. Co-Operative Banks in India: Functioning & Reforms , By Amit Basak,New Century Publications (1 January 2010)
6. Cooperative Banking In India, By R.Thirunarayanan, Mittal Publication, New Delhi
7. Cooperative Management : Principles And Techniques , By S.Nakkiran, Deep & Deep Publication (2006)
8. Co-Operative Banks in India & Select Countries , By S.Nakkiran, New Century Publications; 1 edition (1 January 2014)
9. Credit Cooperatives in India Past, Present and Future, By Biswa Swarup Misra, Routledge

**Paper Pattern  
Co-Operation**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1)** All questions are compulsory.  
**2)** All questions carry equal marks.

<b>1</b>	<b>Unit -I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
<b>2</b>	<b>Unit -II</b>	<b>Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Theory</b>	<b>08marks</b>
		<b>C. Theory</b>	<b>OR</b>
<b>3</b>	<b>Unit -III</b>	<b>a. Theory</b>	<b>16 marks</b>
		<b>b. Theory</b>	<b>08 marks</b>
		<b>C. Theory</b>	<b>08marks</b>
<b>4</b>	<b>Unit -IV</b>	<b>a. Theory</b>	<b>OR</b>
		<b>b. Theory</b>	<b>16 marks</b>
		<b>C. Theory</b>	<b>08 marks</b>
		<b>a. Theory</b>	<b>08marks</b>
<b>5</b>	<b>Unit-I</b>	<b>a Theory</b>	<b>16 marks</b>
	<b>Unit-II</b>	<b>b Theory</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c Theory</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d Theory</b>	<b>04 marks</b>
		<b>C Theory</b>	<b>04 marks</b>

## **C-24 :Paper-IV : Human Resource Management**

### **Unit-I**

**Human Factor in Organization:** Nature Concept and Significance of Human Resource in the organization. Meaning scope and role of human resource management.image and qualities of HRM Manager. Indian approach Human Resource Management.

### **Unit-II**

**Recruitment and selection:** Source of recruitment , Recruitment and selection process; methods of recruitment and ; types of tests- principles of testing. interviewing methods and types counseling for selection, placement, promotions and exit. induction and placement : concept of placement – concept and objectives of induction, orientation. induction in Indian industries. Inputs of Induction and orientation programmes.how to make induction effective. Advantages of formal induction and orientation.

**Promotions and Transfers :** Concept, objectives of promotions and transfers. Distinguishing features of promotions, transfers & up gradation. advantages& significance to organization & employees, promotions & transfers vis-à-vis productivity & efficiency. job operator & process policies & case studies.

### **Unit-III**

**Job Evaluation and Job Design :** concept, importance and objectives; methods and procedures. job specifications and job descriptions, job design, approaches and methods. merit rating and performance appraisal: concept of scientific merit rating, methods performance standers and its evaluation. training and development : concept, assessment of training needs, importance , objectives. effectiveness evaluation.

### **Unit-IV**

**Employee Remuneration and Wage Legislation:** Principles and objectives of wage and salary administration employee compensation, rewards, incentives and fringe benefits. Wage level and wage structure. Concept and significance of employee welfare and social security measures. Statutory and voluntary welfare measures in the organization.

## **Suggested Readings**

1. A Text book of Human Resource Management – C. B. Mamoria& S. V. Gankar, Publication - Himalaya Publishing House
2. Personnel and human Resource management - Text & cases, P SubbaRao, Publication - Himalaya Publishing House
3. Human resource Management – P. Jyothi, Publication – Oxford University Press.
4. Human Resource Management , Ninth Edition, R.WayneMondy, Robert M, Noe, Publication- Pearson Education
5. Human Resource and Personnel Management – Text and cases, K. Aswathappa, Publication - McGraw- Hill Publishing co. ltd.

### **Paper Pattern Human Resource Management**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1 Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Theory</b>	<b>08marks</b>
<b>2 Unit –II</b>	<b>Theory</b>	<b>16 marks</b>
	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Theory</b>	<b>08marks</b>
<b>OR</b>		
<b>3 Unit –III</b>	<b>C. Theory</b>	<b>16 marks</b>
	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Theory</b>	<b>08marks</b>
<b>OR</b>		
<b>4 Unit –IV</b>	<b>C. Theory</b>	<b>16 marks</b>
	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Theory</b>	<b>08marks</b>
<b>OR</b>		
<b>5 Unit-I</b>	<b>C Theory</b>	<b>16 marks</b>
<b>Unit-II</b>	<b>a Theory</b>	<b>04 marks</b>
<b>Unit-III</b>	<b>b Theory</b>	<b>04 marks</b>
<b>Unit-IV</b>	<b>c Theory</b>	<b>04 marks</b>
	<b>d Theory</b>	<b>04 marks</b>

## **M.COM. SEMESTER-III**

### **Core Group Paper I C31- Advanced Management Accounting**

**Marks - 80**

Total No. of teaching days allotted to the third semester are 90 (i.e. 15 weeks)

**Objective :** The Objective of the Course is to make the students learn the applications of Management Accounting tools and technique for decision making.

#### **Unit- I**

1. Meaning, objectives, functions importance of management accounting.  
Tools of Management Accounting.  
Role and Responsibilities of Accountant in Management Accounting.
2. Ratio Analysis (including interpretation)- Introduction, Significance of Ratio Techniques, Interpretation of Ratios, Classification of Ratios. (Theory and Numericals)

#### **Unit-II**

1. Preparation, Analysis and interpretation of Financial Statements  
Role of Accountant towards preparation and analysis of Financial Statements.
2. Budgetary Control –Meaning, Advantages and uses.  
Budgets: Preparation of Flexible, Sales and Production Budget.(Theory and Numericals)

#### **Unit-III**

1. Management Information System: Anatomy of MIS, Characteristics, Implementation and Limitation of MIS.
2. Marginal Costing and its Application in Decision-making. Break Even Analysis.  
(Theory and Numericals)

#### **Unit –IV**

1. Fund Flow Analysis: Meaning, uses and limitations of Fund Flow Statement, preparation of statement showing changes in working capital, preparation of fund flow statement.
2. Cash Flow Analysis: Meaning, uses and limitations of Cash Flow Statement, preparation of cash flow statement, methods of construction of cash flow statement. (Theory and Numericals)

#### **List of Books recommended**

1. Pillai R.S.N. - Management Accounting- S.Chand & Co.Pvt.Ltd.
2. Agarwal N.K. – Management Accounting- Galgotia Publications
3. Wilson.M. – Management Accounting – Himalaya Publications.
4. Singh ,Jagwant- Management Accounting- Kitab Mahal

**Paper Pattern**  
**Advanced Management Accounting**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.**  
**2) All questions carry equal marks.**

<b>1</b>	<b>Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08marks</b>
			<b>OR</b>
		<b>c. Problem</b>	<b>16 marks</b>
<b>2</b>	<b>Unit –II</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08 marks</b>
			<b>OR</b>
		<b>c. Problem</b>	<b>16marks</b>
<b>3</b>	<b>Unit –III</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08 marks</b>
			<b>OR</b>
		<b>c. Problem</b>	<b>16marks</b>
<b>4</b>	<b>Unit –IV</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08 marks</b>
			<b>OR</b>
		<b>c. Problem</b>	<b>16marks</b>
<b>5</b>	<b>Unit-I</b>	<b>a Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-II</b>	<b>b Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d Theory / Problem</b>	<b>04 marks</b>

## **C32-Statistical Techniques Paper II**

**Marks - 80**

Total No. of teaching days allotted to the first semester are 90 (i.e. 15 weeks) For the convenience No. of periods and chapters that may be covered are given below as guidelines.

**Objective:** The Objective of the Course is to make the students learn the applications of statistical tools and technique for decision making.

### **Unit I**

1. Statistical decision: - decision environment – Decision Making Under risk and certainty and utility theory.
2. Sampling and test of significance: - Large and small samples, Test of significance : Chi square test ‘T’ test and Z test .

### **Unit-II**

1. Statistical quality control: Causes Variations in quality characteristics types of quality controls charts, production controls acceptance sampling.
2. Association of Attributes consistency of data, Two and three attributes analysis of Variances F test.

### **Unit-III**

1. Analysis of time series, components importance, measurement of trend, the graphical method semi average method and moving average method.
2. Probability : Laws of probability, simple and compound probabilities, permutation and combination

### **Unit -IV**

1. Correlation Analysis and Regression analysis.
2. Interpolation and Extrapolation :- New torsi Method, Binomial method and Langrage's method

### **List of Reference Books:-**

1. Fundamentals of statistics : D. N. Elhance&VeenaElhance
2. Statistices : V. K. Kapoor – S. Chand & Sons
3. Statistics : B. New Gupta – SahityaBhavan Agra

4. Statistics Methods : S.P. Gupta – S. Chand & Sons
5. Fundamental of Statistics : S. C. Gupta – Himalaya Publishing House
6. Business Mathematics & Statistics : NEWK Nag & S.C. Chanda – Kalyani Publishers
7. Problem in statistics : Y. R. Mahajan - Pimpalapure Published Nagpur
8. Introduction of Business and Economics Statistics  
Staunton and clerk – D. B. Taraporewala& Sons Bombay.

**Paper Pattern  
Statistical Techniques**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

**1 Unit –I    a. Theory  
                 b. Problem**

**08 marks  
08marks**

**OR**

**C. Problem**

**16 marks**

**2 Unit –II    a. Theory  
                 b. Problem**

**08 marks  
08 marks**

**OR**

**c. Problem**

**16marks**

**3 Unit –III    a. Theory  
                 b. Problem**

**08 marks  
08 marks**

**OR**

	<b>c. Problem</b>	<b>16marks</b>
<b>4 Unit –IV</b>	<b>a. Theory b. Problem</b>	<b>08 marks 08 marks</b>
	<b>OR</b>	
	<b>c. Problem</b>	<b>16 marks</b>
<b>5 Unit-I</b>	<b>a Theory / Problem</b>	<b>04 marks</b>
<b>Unit-II</b>	<b>b Theory / Problem</b>	<b>04 marks</b>
<b>Unit-III</b>	<b>c Theory / Problem</b>	<b>04 marks</b>
<b>Unit-IV</b>	<b>d Theory / Problem</b>	<b>04 marks</b>

### **Foundation Group – I (Paper III)**

#### **F33-Direct Taxes**

**Objectives :-** To Prepare student enough competent to take up employment in Taxation.  
To Acquire Knowledge about the submission of Income Tax Return Tax deducted at Source.

#### **Contents:**

#### **Unit No. I**

**Income from Business and profession-** Definition & Meaning of Business & profession, Business deduction and allowances, Expenditure on Scientific research theory. Computation of business income.

**Income under the head capital gain-** Definition & Meaning of long term and short term capital gain. Meaning of cost of index session, cost of improvement and valuation of capital assets and its exemptions. Theory and problems.

#### **Unit No. II**

**Chapter VI A Deduction, Clubbing of Income Set-off and carry forward of losses-**  
Deductions under section 80 C ,80 CCC, 80CCD, 80D, 80DD, 80DDB, 80G, 80GG, 80GGA,

80QQB, 80RRB, 80TTA, and 80 U. Definition & Meaning of clubbing of income and how dependents income is clubbed in individuals income. Meaning of set-off of losses, inter source adjustments, inter head adjustment and carry forward of losses and how to take set-off. (theory)

### **Unit No. III**

**Computation of tax liability for individual & company, - Slab rates of individual, firm and company. Advance Payment of Tax , Return Filling and assessment procedure.**

Problems & Theory

### **Unit No. IV**

**Wealth Tax :-** Definitions, Charge of wealth Tax, Deemed wealth, Exemptions, Computation of Net Wealth, Assessment and penalties and Valuation of Assets.

**Gift Tax :-** Meaning, Definitions & its applicability.

**Direct Tax Code:** Introduction of DTC, Advantages & Disadvantages.

#### **Books Recommended**

1. Ahuja Girish & Gupta Ravi : Practical Approach to Income Tax, Wealth Tax and Central Sales Tax Act.
2. Direct Taxes : V.S.Datey (Taxmann)
3. Direct Taxes, Law and practice:- Dr.H.C.Mehrotra & Dr.S.P.Goyal, Sahitya Bhavan Publication,Agra
4. Tax Planning and Management - Dr.S.P.Goyal, Sahitya Bhavan Publication,Agra
5. Vinod Singhania : Direct Taxes (Taxmann)
6. Direct Taxes:- Income tax Wealth tax & tax Planning : BB Lal & N Vashisht
7. Income Tax,Dr.Upagade,Dr.Ar vind Shende, Annuradha Prakashan, Nagpur

#### **Question Paper Pattern:**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1 Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08marks</b>

**OR**

<b>C. Problem</b>	<b>16 marks</b>
<b>2 Unit –II</b>	<b>a. Theory</b>

	<b>b. Problem</b>	<b>08 marks</b>
<b>OR</b>		
	<b>c. Problem</b>	<b>16marks</b>
<b>3 Unit -III</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08 marks</b>
<b>OR</b>		
	<b>c. Problem</b>	<b>16marks</b>
<b>4 Unit -IV</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08 marks</b>
<b>OR</b>		
	<b>c. Problem</b>	<b>16marks</b>
<b>5 Unit-I</b>	<b>a Theory / Problem</b>	<b>04 marks</b>
<b>Unit-II</b>	<b>b Theory / Problem</b>	<b>04 marks</b>
<b>Unit-III</b>	<b>c Theory / Problem</b>	<b>04 marks</b>
<b>Unit-IV</b>	<b>d Theory / Problem</b>	<b>04 marks</b>

### **Foundation Group I(Paper III)**

#### **F33-Computer Application in Commerce**

##### **Unit-I**

**Networking:**– Network topology, Local Area Networks (LAN) and Wide Area Networks(WAN); E-mail; internet technologies, access devices, concept of a world wide web and internet browser; search engines.

Internet Services and Applications, Web Services, E-Learning, Web Information Systems. Web Based Software, Agent-Oriented Computing, E-Business, E-Governance, M-Commerce.

## **Unit-II**

**Introduction to word Processing**, Word processing concepts, Use of Templates, Working with word document: Editing text, Find and replace text, Formatting, spell check, Autocorrect, Autotext; Bullets and numbering, Tabs, Paragraph Formatting, Indent, Page Formatting, Header and footer, Tables: Inserting, filling and formatting a table; Inserting Pictures and Video; Mail Merge: including linking with Database; Printing documents

## **Unit-III**

### **Spread Sheets& its Business Application**

Spreadsheet concepts, Managing worksheets; Formatting, Entering data, Editing, and Printing a worksheet; Handling operators in formula, Project involving multiple spreadsheets, Organizing Charts and graphs Generally used Spreadsheet functions: Mathematical, Statistical, Financial, Logical, Date and Time, Lookup and reference, Database, and Text functions, MS Excel

**Power-Point** – Basics of presentations: Slides, Fonts, Drawing, Editing; Inserting: Tables, Images, texts, Symbols, Media; Design; Transition; Animation; and Slideshow.

## **Unit-IV**

### **Computerized Accounting with Tally**

Basics of accounting, getting started with Tally.ERP 9 and fundamental features, creating masters (accounting and inventory), voucher entry and invoicing, bill-wise details, voucher class, simple interest calculation, credit limits, cost centres, cost categories, multi-currency activation and creation of currencies, basics of banking, and general reports.

Essentials of Taxation Getting Started with VAT, Getting Started with Service Tax, Getting Started with TDS, Getting Started with Excise (Dealers), Getting Started with Excise (Manufacturers), and Advanced Features

### **Books Recommended**

1. I.T. today (encyclopedia) -S. Jaiswal (test book)
2. Computer Today - DonaldSenders
3. Computer Fundamentals - P. K. Sinha
4. Office Automation - K.K.Bajaj (Macmillan)
5. Business on The Net an Introduction to The Whats And Hows of E-Commerce - K. N. Agarwala& Others (Macmillan)
6. Computer Applications in Management – UshaDahiya,SapnaNagpal(Taxmann's Pub)
7. Fundamentals of Computers – ITL Education Solutions Ltd. (Pearson)
8. Tally.ERP 9 Fundamentals, [www.tallysolutions.com](http://www.tallysolutions.com)
9. Mastering Tally ERP 9: Basic Accounts, Invoice, Inventory- Asok K. Nadhani,(BPB)
10. Tally. Erp 9 Training Guide - Asok K. Nadhani(BPB)

### **Paper Pattern Computer Application in Business**

## **Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1</b>	<b>Unit -I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b. Problem</b>	<b>08marks</b>

OR

2   Unit -II	<b>C. Problem</b> a. Theory b. Problem	<b>16 marks</b> <b>08 marks</b> <b>08marks</b>
--------------	--	--

OR

<b>3 Unit -III</b>	<b>C. Problem</b>	<b>16 marks</b>
	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08marks</b>

OR

<b>C. Problem</b>	<b>16 marks</b>
<b>4 Unit -IV a. Theory</b>	<b>08 marks</b>
<b>b. Problem</b>	<b>08marks</b>

OR

C. Problem			16 marks
5	Unit-I	a Theory	04 marks
	Unit-II	b Theory	04 marks
	Unit-III	c Theory	04 marks
	Unit-IV	d Theory	04 marks

## **Elective Group-I (Paper IV)**

### **E34-Entrepreneurship Development**

#### **Unit-I**

Entrepreneurship - Creativity and Innovation, Relationship with the Economic Development, Barriers to Entrepreneurship (Factors affecting Growth of Entrepreneurship), , Women Entrepreneurship, social Entrepreneurship, Entrepreneurship in India - Entrepreneurship Development in India: Issues and Opportunities, Small-Scale Sector in India, The NGO Factor in EDP-INDIA Corporate Social Responsibility (CSR): NGO's in India, Social Responsibility of Entrepreneurs, CSR. Entrepreneurial behaviour-, Socio- psychological factors influencing entrepreneurship development.

#### **Unit-II**

Entrepreneurship Trends - Types of Entrepreneurship, Career Planning, Choice of Entrepreneurship as a Career.

Opportunity scouting and idea generation: role of creativity & innovation and business research. Sources of business ideas. Entrepreneurial opportunities in contemporary business environment. Developing Entrepreneurial Potential, Business Ideas Generation Process, Evaluation of Business Idea. Business Plan - The ED Cycle, Building the Business Plan, Venturing an Enterprise, Financial Considerations (Cash Flow Management, Financial Plan, Business Plan). Cases from Indian Industries

#### **Unit-III**

The concept and issues in small business marketing.. The idea of consortiummarketing, competitive bidding/tender marketing, negotiation with principal customers. The Industry and Ancillaryization Entrepreneurship & Industry, Ancillaryization, Ancillaryization in India, Ancillaries & Industrial Development, Ancillary Opportunities in different Economic Sectors: Agro Industries, Logistics, BPO, Banking and Finance, Sub-contracting System, Supplier Organization Network Global Aspect of Entrepreneurship.

#### **Unit-IV**

Financial incentives - Backward area benefits, Schemes for educated unemployed, Fiscal incentives, Procurement of industrial equipment, marketing support. Government Policy packages, MSME, SIDO, NSIC, Government Financial Institutions, Business incubators and facilitators. Various forms of business organization- sole proprietary, partnership, private and public Ltd. Companies.

#### **Books Recommended**

- Entrepreneurship 6 th edition. Robert D Hisrich , Tata McGraw-Hill.
- Kuratko- Entrepreneurship – A Contemporary Approach, (Thomson Learning Books) Chary – Business Gurus speaks ( Macmillan)
- Kuratko- Entrepreneurship – A Contemporary Approach, (Thomson Learning Books) Chary – Business Gurus speaks ( Macmillan)
- S.S. Khanka – Entrepreneurial Development (S. Chand & Co.)
- Brandt, Steven C., The 10 Commandments for Building a Growth Company, Third Edition, Macmillan Business Books, Delhi, 1977

- Bhide, Amar V., The Origin and Evolution of New Businesses, Oxford University Press, New York, 2000
- Desai, Vasant, Small Scale Enterprises Vols. 1-12, Mumbai, Himalaya Publishing House. (Latest edition).
- Panda, ShibaCharan, Entrepreneurship Development, New Delhi, Anmol Publications.
- Patel, V. G., The Seven Business Crises and How to Beat Them, Tata-McGraw, New Delhi, 1995.
- Taneja, Satish and Gupta, S.L. Entrepreneurship Development-New Venture Creating, Galgotia Publishing House, New Delhi, Latest Edition
- Verma, J.C., and Gurpal Singh, Small Business and Industry-A Handbook for Entrepreneurs, New Delhi, Sage, 2002Vesper, KarlsH, New Venture Strategies, (Revised Edition), New Jersey, Prentice- Hall, 1990.

## **Paper Pattern Entrepreneurship Development**

## **Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.**  
**2) All questions carry equal marks.**

<b>1</b>	<b>Unit -I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b Theory</b>	<b>08marks</b>

OR

<b>C Theory</b>	<b>16 marks</b>
<b>2 Unit -II</b>	<b>a. Theory</b>
	<b>b Theory</b>

OR

<b>C Theory</b>	<b>16 marks</b>
<b>3 Unit –</b>	<b>a. Theory</b>
	<b>b Theory</b>

OR

C Theory	16 marks
4 Unit -IV a. Theory b Theory	08 marks 08marks

**OR**

<b>C Theory</b>		<b>16 marks</b>
<b>5</b>	<b>Unit-I      a   Theory</b>	<b>04 marks</b>
	<b>Unit-II     b   Theory</b>	<b>04 marks</b>
	<b>Unit-III    c   Theory</b>	<b>04 marks</b>
	<b>Unit-IV    d   Theory</b>	<b>04 marks</b>

**Elective Group-I (Paper IV)**

**E34-Service Sector Management**

**Unit-I**

Introduction to Service Sector Management Nature, Scope & Trends; Importance of service sector in current scenario; The concept of service, characteristics of services, classification of services. Forms of Service Sector and Their Management Aviation Industry, Transportation Industry, Hospital Management, Housing and Construction, Hospitality, BPO, KPO Industry and their management and benefits to modern business. Importance of these service sectors in day to day life. Changing face of these service sectors with technological advancements.

**Unit- II**

IT and ITES sector Overview of IT industry and its trends, role and importance of ITES, Innovations in IT. Important contributions of IT sector to services industry. Challenges and opportunity in ITES sector. Future of IT industry in India. Banking and Insurance sector. Importance of Banking and Insurance Industry in services sector, challenges and opportunities in financial sectors like banking, insurance and AMC's. The users of Banking services, the behavioral profiles of users. Challenges faced by Insurance companies after LPG. Users of insurance services and their behavioral profiles, role of IRDA. Journey of financial service sector from PSU's to Private companies.

**Unit- III**

Services Quality Management Development of Quality Management in services sector, Customer Service, Customer focused marketing. The Marketing Concept. Logistics as a Core Strategic

Competency, Customer Service Capability, Availability, Operational Performance, Reliability, Value added services, Customer Focused Services, Promotion-Focused Services, Manufacturing-Focused Services, Time Focused Services. Basic Service Customer Satisfaction, Cost-Effectiveness, Market Access . Market Extension, Market Creation.

#### **Unit- IV**

Distribution, Planning and managing service delivery Challenges in distribution of services, advertising and sales promotion in service industry creating delivery systems in price, cyberspace and time. The physical evidence of the service space. Relationship Marketing. The nature of Service Consumption. Understanding customer's needs and Expectations. Monitoring & measuring customer satisfaction

#### **Books Recommended:**

1. Service Sector Management – Sanjay Patnakar – Himalaya
2. Managing Services – Christopher H. Lovelock
3. Total Quality Management: JE Ross
4. Total Quality Management: DH Besterfield, CB Michna: Prentice Hall
5. Services Marketing; Ravi Shankar
6. Services Marketing; S M Jha; Himalaya Publishing House.
7. Strategic services Management; Boyle.
8. services marketing and Management: Balaji A.H. wheeler.

#### **Paper Pattern Service Sector Management**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

**Qu. 1 Unit -I a. Theory  
b Theory**

**08 marks**

**08marks**

**OR**

**C Theory**

**16 marks**

OR

**C Theory** **16 marks**

<b>Qu. 3 Unit – a. Theory</b>	<b>08 marks</b>
<b>b Theory</b>	<b>08marks</b>

OR

## C Theory 16 marks

OR

## C Theory 16 marks

<b>Qu.5</b>	<b>Unit-I</b>	<b>a</b>	<b>Theory</b>	<b>04 marks</b>
	<b>Unit-II</b>	<b>b</b>	<b>Theory</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c</b>	<b>Theory</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d</b>	<b>Theory</b>	<b>04 marks</b>

**Core Group Paper I**  
**C41-International Business Environment**

Total Marks :- 80

**Objectives:** This Course develops ability to understand and scan business environment in order to analyse opportunities and take decisions under uncertainty.

## **Unit – I**

Theoretical framework of Business Environment: Meaning, Relevance, Nature Dimensions, Types and Importance of International Business. Levels of Environment, internal and external Environment. Economic Environment of Business: Nature Significance and elements of economic

Environment; Economic systems and Business Environment; gap Government policies Industrial policy, fiscal policy, monetary policy, Public Sector and Economic development; Development banks and relevance to Indian business; Economic reforms, liberalisation and structural adjustment programmes.

### **Unit – II**

International economic cooperation and agreements :- Regional economic integration : Types of Integration, theory of customs union, European Union, India-EU trade, the Euro, other regional groupings, economic integration. South –south co-operation SAARC; SAPTA; Indo-Lanka free trade agreement. International commodity agreements, quota agreements buffer stock agreements cartels; bilateral/multilateral contacts. GPS and GSTP. International Economic Institutions:- International monetary fund, World Bank, World Trade Organisation. Objective, Functions, Role guiding principles; lending programmes; international Development association; World Bank assistance to India; an evaluation of IMF-World Bank; international finance corporation. Asian Development Bank; UNCTAD; UNIDO; International Trade Centre.

### **Unit – III**

International Trade and Investment Theories :-comparative cost theory; factor endowment theory; complementary trade theories-Stoper-Samuelson theorem; Theory of Capital Movements; Market Imperfections Theory; Internalization Theory; Appropriability Theory; Location Specific Advantage Theory; Government Influence on Trade :- protectionism: tariff barriers; non-tariff barriers (NTBs); state trading; Exim Policy; regulation of foreign trade; export promotion; EPZs EOU, TPs & SEZs; export houses and trading houses; an evaluation. Trade in Merchandise :- Growth of international trade; distribution of global trade; composition of global trade; global trade and developing countries. Countertrade, Forms of countertrade; growth of countertrade; drawbacks. Trade in Services-Growing importance of services; major service traders; restrictions

### **UNIT - IV**

Globalization And International Investments: - Meaning and dimensions, Features and factors favouring of Globalization, New markets; new actors; new rules and norms; new (faster and cheaper) tools of communication. Stages of Globalization, Essential Conditions for Globalization, Foreign Market Entry Strategies, Exporting; licensing and franchising, pros and cons of Globalization Social issues in International Business, Business ethics; Social Audit, social responsibility of business; environmental issues, Types of Foreign Investment, Significance of Foreign Investment, FDI and production linkages; trade and investment. Factors Affecting International Investment Host Country economic determinants. Growth Dispersion of FDI, Cross-border the new policy; FII investments Euro/ADR issues, mergers and acquisition's Foreign Investment by Indian companies

### **Books Recommended**

1. International Business Environment by Francis Cherunilam – Himalaya Publishing House.
2. The International Business Environment by Anant K. Sundaram/J. Stewart Black-Prentice Hall.
3. International Business K. Aswathappa M cgraw hill education.
4. International Business environments and Operations John D Daniel, Lee H Radebaugh, Daniel P Sullivan-Pearson Education,

5. Dynamics of Successful International Business Negotiations by Robert T. Moran, William G. Stripp – JAICOV
6. The international Environment of Business by Gerald M. Meier – Oxford Press, 2006

## **Paper Pattern**

# **International Business Environment**

**Time: 3 Hours Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

OR

<b>2</b>	<b>Unit -II</b>	<b>C Theory</b>	<b>16 marks</b>
		<b>a. Theory</b>	<b>08 marks</b>
		<b>b Theory</b>	<b>08marks</b>

OR

C Theory	16 marks
3 Unit – a. Theory	08 marks
b Theory	08marks

OR

<b>C Theory</b>	<b>16 marks</b>
<b>4 Unit -IV      a. Theory</b>	<b>08 marks</b>
<b>b Theory</b>	<b>08marks</b>

QR

<b>C Theory</b>	<b>16 marks</b>
<b>5      Unit-I            a    Theory</b>	<b>04 marks</b>
<b>                Unit-II        b    Theory</b>	<b>04 marks</b>
<b>                Unit-III      c    Theory</b>	<b>04 marks</b>
<b>                Unit-IV       d    Theory</b>	<b>04 marks</b>

## 2) C42-PROJECT WORK

## **Foundation Group-II – (Paper-III)**

### **F43-Indirect Taxes**

**Objectives:-** This course aims at imparting basic knowledge about Central Excise, Service Tax, Customs and CST,MVAT & Professional Tax

#### **Unit - I**

**Central Excise Law:** Basis of concept of excise duty, Definition and concept, concept of goods, manufacture and manufacturer, classification of goods, valuation under Excise law, levy, collection and exemption from Excise duty, CENVAT, Records and returns, Assessment under central Excise Law.(Theory and Numericals)

#### **Unit - II**

**Custom Law:** Basic concept of custom duty, Definition and concepts classification of goods, valuation of goods, levy of and exemption of custom duty, Importance Exportation and Transaction of goods, warehousing, Demand of duties and Refunds, Appeals, revision and settlements, penalties and offences, Advance Rulings, practical problems relating to customs duty. (Theory and Numericals)

#### **Unit - III**

**Central Sales Tax Law and MSVAT:** Importance, Definitions concepts of sale and Inter state sales, Liability to central sales Tax, Quantum of sales Tax, Procedures and forms under CST Act, Declared Goods and their Taxation, Introduction to Value Added Tax (VAT) provisions of Maharashtra value added Tax(MSVAT) practical problems on Central Sales tax and MSVAT. (Theory and Numericals)

#### **Unit - IV**

**Service Tax:** Introduction to service Tax law, Definition and Concepts, liability of service Tax, payment and recovery of service tax registration requirement and procedure, records and return, Assessment revision and Appeals, Offence and penalties, Computation of service tax of Legal Courier and Advertising Agency.

Professional Tax, LBT & GST.-Definition, Meaning & Importance of Professional Tax Applicability and Registration procedure. Meaning of LBT its applicability & assessment procedure. Introduction of Goods service tax, advantages & Disadvantages (Theory and Numericals)

## **Books Recommended**

1. V.S. Datey : Indirect Taxes Law & Practice. (Taxmann).
2. Dr. H.C Mehrotra & Dr S P Goyal: Direct & Indirect Taxes.(Sahitya Bhavan)
3. Girish Ahuja & Gupta: Indirect Taxes Law & Practice. (Bharat Publication)
4. V Balchandran : Indirect Taxes.( Sultan Chand & Sons,delhi)

## **Paper Pattern**

### **Indirect Taxes**

**Time: 3 Hours**

**Marks: 80**

- N.B.** 1) All questions are compulsory.  
2) All questions carry equal marks.

**1 Unit –I**    a. Theory  
                    b. Problem

**08 marks**  
**08marks**

**OR**

**c. Problem**

**16 marks**

**2 Unit –II**    a. Theory  
                    b. Problem

**08 marks**  
**08 marks**

**OR**

**c. Problem**

**16marks**

**3 Unit –III**    a. Theory  
                    b. Problem

**08 marks**  
**08 marks**

**OR**

**c. Problem**

**16marks**

**4 Unit –IV**    a. Theory  
                    b. Problem

**08 marks**  
**08 marks**

**OR**

		<b>c. Problem</b>	<b>16marks</b>
<b>5</b>	<b>Unit-I</b>	<b>a Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-II</b>	<b>b Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c Theory / Problem</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d Theory / Problem</b>	<b>04 marks</b>

### **Foundation Group-II – (Paper-III)**

### **F43-OPERATIONS RESEARCH**

#### **Unit- I**

**Linear Programming:** Introduction to Linear Programming Problems, Graphical Method - Assumptions, Formulation and Solution by Graphical Method: Feasibility Region ( maximization, minimization and with mixed constraints).

#### **Unit -II**

**Transportation & Assignment** – Transportation: Formulation and Solution by North West Corner Rule (NWC), Least Cost Method (LCM) and Vogel’s Approximation Method (VAM); Optimization by Modified Distribution Method (MODI). Assignment: Formulation and Solution.

#### **Unit -III**

**Replacement & Inventory models** - Replacement Policies: Equipment Deteriorate Gradually, Time Value of Money Considered. Equipment Fail Suddenly (Group Replacement), Staff Replacement. Inventory Models with Probabilistic & Deterministic Demand. Classic EOQ, EOQ with bulk purchasing, EOQ with storage limitations, Simulation on Inventory System.

#### **Unit- IV**

**PERT/CPM** -. CPM and PERT: construction of network diagrams; network calculation; concept of float; probability consideration in PERT; calculation of float under PERT, Game Theory-Terminology, Game Models, Two Person Zero Sum Games and their Solutions, Graphical Method

## **Books Recommended**

1. Introduction to Operations Research- Hillier & Liberman – McGraw Hill
2. Quantitative Techniques in Management by N. D. Vohra – Tata McGraw Hill
3. Operations Research - Panneersevam – Prentice Hall of India
4. Operations Research – J. K. Sharma - McMillan
5. Operations Research – Hira and Gupta – S. Chand & Co.
6. Operations Research – V.K. Kapoor – Sultan Chand & Sons, New Delhi.

## **Paper Pattern**

### **Operation Research**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1 Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08marks</b>
	<b>c. Problem</b>	<b>16 marks</b>
<b>2 Unit –II</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b. Problem</b>	<b>08 marks</b>

**OR**

	<b>c. Problem</b>	<b>16marks</b>
<b>3 Unit -III</b>	<b>a. Theory b. Problem</b>	<b>08 marks 08 marks</b>
	<b>OR</b>	
	<b>c. Problem</b>	<b>16marks</b>
<b>4 Unit -IV</b>	<b>a. Theory b. Problem</b>	<b>08 marks 08 marks</b>
	<b>OR</b>	
	<b>c. Problem</b>	<b>16marks</b>
<b>5</b>	<b>Unit-I      a    Theory / Problem Unit-II     b    Theory / Problem Unit-III    c    Theory / Problem Unit-IV    d    Theory / Problem</b>	<b>04 marks 04 marks 04 marks 04 marks</b>

### **ELECTIVE GROUP – II ( PAPER-IV )**

#### **E-44 E-Commerce**

##### **Unit –I**

**E-Commerce:** Introduction, Definition, Benefits of E-Commerce, Impact of E-Commerce on business models, Traditional Commerce Vs E-Commerce, Advantages and Disadvantages of E-Commerce, Electronic Commerce and the Trade Cycle.

Types of E-Commerce, Technology used in E-commerce; Designing, building and launching e-commerce website (Introduction to HTML; tags and attributes: Text Formatting, Fonts, Hypertext Links, Tables, Images, Lists, Forms, Frames, Cascading Style Sheets.)

## **Unit -II**

### **IT Act 2000 and Cyber Crimes**

IT Act 2000: Definitions, Digital signature, Electronic governance, Attribution, acknowledgement and dispatch of electronic records, Regulation of certifying authorities, Digital signatures certificates, Duties of subscribers, Penalties and adjudication, Appellate Tribunal, Offences and Cyber-crimes

## **Unit- III**

**E-payment System:** Models and methods of e-payments (Debit Card, Credit Card, Smart Cards, e-money), digital signatures (procedure, working and legal position), payment gateways, online banking (meaning, concepts, importance, electronic fund transfer, automated clearing house, automated ledger posting), risks involved in e-payments.

## **Unit IV**

**E-commerce applications in various industries** like {banking, insurance, payment of utility bills, online marketing, e-tailing (popularity, benefits, problems and features), online services (financial, travel and career), auctions, online portal, online learning, publishing and entertainment} Online shopping (amazon, snapdeal, alibaba, flipkart, etc.)

### **Books Recommended**

1. Electronic Commerce, Greenstein and Feinman (TMH)
2. E-Commerce, Bhushan Dean – S. Chand
3. Web Publishing, MonicD'souza and J D'souza
4. Complete HTML, BPB
5. Cyber law , E-commerce & M-Commerce – Ahmand Tabrez
6. Handbook of Cyber and E-commerce laws – Bakshi P M & Suri R K
7. <http://www.tkdl.res.in>
8. [www.wipo.int](http://www.wipo.int)
9. eSecurity and You - Sandeep Oberoi (Tata McGraw-Hill)
10. Vishwanathan Suresh T., "The Indian Cyber Law" Second Edition 2001:- Bharat Law House.
11. Prasad T.V.R. Satya, : "Law Relating to Information Technology (Cyber Laws)" 1st edition 2001:- Asia Law House.

### **Paper Pattern E-Commerce**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1</b>	<b>Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b Theory</b>	<b>08marks</b>
<b>OR</b>			
		<b>C Theory</b>	<b>16 marks</b>
<b>OR</b>			
<b>2</b>	<b>Unit –II</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b Theory</b>	<b>08marks</b>
<b>OR</b>			
		<b>C Theory</b>	<b>16 marks</b>
<b>3</b>	<b>Unit – a.</b>	<b>Theory</b>	<b>08 marks</b>
		<b>b Theory</b>	<b>08marks</b>
<b>OR</b>			
		<b>C Theory</b>	<b>16 marks</b>
<b>4</b>	<b>Unit –IV</b>	<b>a. Theory</b>	<b>08 marks</b>
		<b>b Theory</b>	<b>08marks</b>
<b>OR</b>			
		<b>C Theory</b>	<b>16 marks</b>
<b>5</b>	<b>Unit-I</b>	<b>a Theory</b>	<b>04 marks</b>
	<b>Unit-II</b>	<b>b Theory</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c Theory</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d Theory</b>	<b>04 marks</b>

## **ELECTIVE GROUP – II ( PAPER-IV )**

### **E44-Company Law**

#### **Unit -I**

- Introduction to Companies Act 2013.
- Formation of Companies, Public, Private and One Person Companies, Procedure for formation of company
- Memorandum of Association, Articles of Association, Alteration of MOA and AOA, Conversion of companies already registered.
- Prospectus, Public offer and Private Placement, Shelf Prospectus and Red Hearing prospectus. Allotment of securities by the Company.  
Private Placement- Offer and invitation

#### **Unit -II**

- Kinds of Share Capital
- Issue of Sweat Equity shares.
- Issue and redemption of preference shares, Transfer and transmission of securities.
- Further issue of share capital, Rights Issue, Issue of Bonus Shares
- Provisions relating acceptance to deposits from Public
- Registration of Charges including punishment for contravention.

#### **Unit -III**

- Register of members, annual return.
- Meetings of shareholders : Annual General Meeting and Extra Ordinary General Meetings. Notice of meetings and explanatory statement. Quorum for the meetings, Ordinary and special resolutions.
- Meetings of Board: quorum for Board meetings, Minutes of meetings, Notice, Agenda, Passing of resolution by circulation, Audit Committee, Powers of Board.
- Loan to Directors, Loans and Investment by the Company, Related party Transaction.

#### **Unit -IV**

- Appointment, Resignation and Removal of Auditors, Qualifications and Disqualification of auditors.
- Appointment, Resignation and Removal of Directors, Qualifications and Disqualification of Directors, vacation of Office, Number of Directorships, Directors Report, Provisions relating to Additional Directors, Alternate Directors, Nominee Directors, Independent Directors.
- Appointment of Managing Director, Whole Time Director,
- Key Managerial Person, secretarial Audit, Functions of Company Secretary

#### **Reference Books**

- Students Guide to Company Law, A. K. Mujumdar, Taxman Allied Services Ltd. New Delhi.
- A Text Book of Company Law, P.P.S. Gogna
- Company Law & Practice, A. K. Mujumdar & G. K. Kapoor, Taxman Publication
- Principles of Company Law, M. C. Shukla, S. Chand & Compant Ltd.
- Company Law , N. D. Kapoor,Sultan Chand & Sons,New Delhi,
- Company Law,Avatar Singh, Eastern Book Company.
- Company Law(A Comprehensive Text Book on Companies Act, 2013, Dr. G.K.Kapoor, Taxmann
- Company Law, J Santhi, Margham Publications (2015)

**Paper Pattern  
Company Law**

**Time: 3 Hours**

**Marks: 80**

- N.B. 1) All questions are compulsory.  
2) All questions carry equal marks.**

<b>1 Unit –I</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b Theory</b>	<b>08marks</b>

**OR**

<b>C Theory</b>	<b>16 marks</b>
-----------------	-----------------

<b>2 Unit –II</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b Theory</b>	<b>08marks</b>

**OR**

<b>C Theory</b>	<b>16 marks</b>
-----------------	-----------------

<b>3 Unit – a. Theory</b>	<b>08 marks</b>
<b>b Theory</b>	<b>08marks</b>

**OR**

<b>C Theory</b>	<b>16 marks</b>
-----------------	-----------------

<b>4 Unit -IV</b>	<b>a. Theory</b>	<b>08 marks</b>
	<b>b Theory</b>	<b>08marks</b>

OR

## **C Theory** **16 marks**

<b>5</b>	<b>Unit-I</b>	<b>a</b>	<b>Theory</b>	<b>04 marks</b>
	<b>Unit-II</b>	<b>b</b>	<b>Theory</b>	<b>04 marks</b>
	<b>Unit-III</b>	<b>c</b>	<b>Theory</b>	<b>04 marks</b>
	<b>Unit-IV</b>	<b>d</b>	<b>Theory</b>	<b>04 marks</b>

**SYLLABUS for M. Sc. BIOTECHNOLOGY**  
**Choice Based Credit System (Semester Pattern)**  
**Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur**  
**Effective from 2018-2019**

Candidates opting for this course are advised to go through the direction relating to the course “DIRECTION RELATING TO THE EXAMINATION LEADING TO THE DEGREE OF MASTER OF SCIENCE, SEMESTER PATTERN (CHOICE BASED CREDIT SYSTEM) AND DEGREE OF MASTER OF SCIENCE AND TECHNOLOGY (APPLIED GEOLOGY). SEMESTER PATTERN, (CHOICE BASED CREDIT SYSTEM) (FACULTY OF SCIENCE & TECHNOLOGY)” which is available on R. T. M. Nagpur University website.

The direction will provide details on admission criteria, rules for ATKT, scheme of examination, absorption scheme for CBS students into CBCS pattern, elective papers, foundation course papers, subject centric papers, coding pattern, pattern of question papers, practicals, distribution of marks, seminars, project work, internal assessment, calculation of SGPA and CGPA, etc.

**Scheme of teaching and examination under semester pattern Choice Based Credit System (CBCS) for M.Sc. Program in Biotechnology**

<b>M. Sc. Biotechnology Semester I</b>												
Code	Theory / Practical	Teaching scheme (Hours / Week)				Credits	Examination Scheme					
		Th	Pract	Total			Duration in hrs.	Max. Marks	Total Marks	External Marks	Internal Ass	
										Th	Pract	
Core 1 <b>(1T1)</b>	Paper 1: <b>Cell Biology and Enzymology</b>	4	-	4	4	3	80	20	100	40		
Core 2 <b>(1T2)</b>	Paper 2: <b>Molecular Biology</b>	4	-	4	4	3	80	20	100	40		
Core 3 <b>(1T3)</b>	Paper 3: <b>Biomolecules</b>	4	-	4	4	3	80	20	100	40		
Core 4 <b>(1T4)</b>	Paper 4: <b>Biophysical Techniques</b>	4	-	4	4	3	80	20	100	40		
Pract. Core 1 & 2 <b>(1P1)</b>	Practical 1: <b>Cell Biology and Enzymology</b>	-	8	8	4	3-8*	100* *	-	100		40	
Pract. Core 3 & 4 <b>(1P2)</b>	Practical 2: <b>Macromolecules &amp; Analytical Techniques</b>	-	8	8	4	3-8*	100* *	-	100		40	
Seminar 1 <b>(1S1)</b>	Seminar 1	2	-	2	1			25	25	10		
	<b>TOTAL</b>	<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>			<b>520</b>	<b>105</b>	<b>625</b>	<b>170</b>	<b>80</b>

<b>M. Sc. Biotechnology Semester II</b>												
Code	Theory / Practical	Teaching scheme (Hours / Week)			Credits	Duration in hrs.	Examination Scheme				Total Marks	Minimum Passing Marks
		Th	Pract	Total			Max. Marks	External Marks	Internal Ass	Th		
Core 5 <b>(2T1)</b>	Paper 5: <b>Microbiology</b>	4	-	4	4	3	80	20	100	40		
Core 6 <b>(2T2)</b>	Paper 6: <b>Immunology</b>	4	-	4	4	3	80	20	100	40		
Core 7 <b>(2T3)</b>	Paper 7: <b>Fundamentals of Genetic Engineering</b>	4	-	4	4	3	80	20	100	40		
Core 8 <b>(2T4)</b>	Paper 8: <b>Applied Molecular Biology</b>	4	-	4	4	3	80	20	100	40		
Pract. Core 5 & 6 <b>(2P1)</b>	Practical 3: <b>Microbiology &amp; Immunology</b>	-	8	8	4	3-8*	100* *	-	100		40	
Pract. Core 7 & 8 <b>(2P2)</b>	Practical 4: <b>Genetic Engineering &amp; Applied Molecular Biology</b>	-	8	8	4	3-8*	100* *	-	100		40	
Seminar 2 <b>(2S1)</b>	Seminar 2	2	-	2	1			25	25	10		
	<b>TOTAL</b>	<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>		<b>520</b>	<b>105</b>	<b>625</b>	<b>170</b>	<b>80</b>	

<b>M. Sc. Biotechnology Semester III</b>												
Code	Theory / Practical	Teaching scheme (Hours / Week)			Credits	Duration in hrs.	Examination Scheme					
		Th	Pract	Total			Max. Marks	Internal Ass	Total Marks	Minimum Passing Marks		
Core 9 <b>(3T1)</b>	Paper 9: <b>Genetic Engineering &amp; its Applications</b>	4	-	4	4	3	80	20	100	40		
Core 10 <b>(3T2)</b>	Paper 10: <b>Plant Biotechnology</b>	4	-	4	4	3	80	20	100	40		
Core Elective 1 <b>(3T3)</b>	Paper 11: A) <b>Industrial Biotechnology I (3T3A)</b> OR B) <b>Environmental Biotechnology I (3T3B)</b>	4	-	4	4	3	80	20	100	40		
Foundation Course 1 / Core Subject Centric 1 <b>(3T4)</b>	Paper 12: <b>Introductory Biotechnology (3T4A) / Diagnostic Medical Biotechnology (3T4B)</b>	4	-	4	4	3	80	20	100	40		
Pract. Core 9 & 10 <b>(3P1)</b>	Practical 5: <b>Genetic Engineering &amp; Plant Biotechnology</b>	-	8	8	4	3-8*	100* *	-	100		40	
Pract. Core Elective 1 <b>(3P2)</b>	Practical 6: A) <b>Industrial Biotechnology</b> OR B) <b>Environmental Biotechnology</b>	-	8	8	4	3-8*	100* *	-	100		40	
Seminar 3 <b>(3S1)</b>	Seminar 3	2	-	2	1				25	25	10	
	<b>TOTAL</b>	<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>		<b>520</b>	<b>105</b>	<b>625</b>	<b>170</b>	<b>80</b>	

<b>M. Sc. Biotechnology Semester IV</b>												
Code	Theory / Practical	Teaching scheme (Hours / Week)			Credits	Duration in hrs.	Examination Scheme					
		Th	Pract	Total			External Marks	Max. Marks	Total Marks	Internal Ass	Minimum Passing Marks	Th
Core 11 <b>(4T1)</b>	Paper 13: <b>Animal Biotechnology</b>	4	-	4	4	3	80	20	100	40		
Core 12 <b>(4T2)</b>	Paper 14: <b>Biostatistics, Bioinformatics, Ethics &amp; Patenting</b>	4	-	4	4	3	80	20	100	40		
Core Elective 2 <b>(4T3)</b>	Paper 15: A) <b>Industrial Biotechnology II (4T3A)</b> OR B) <b>Environmental Biotechnology II (4T3B)</b>	4	-	4	4	3	80	20	100	40		
Foundation Course 2 / Core Subject Centric 2 <b>(4T4)</b>	Paper 16: <b>Basic rDNA Technology (4T4A)/ Therapeutic Medical Biotechnology (4T4B)</b>	4	-	4	4	3	80	20	100	40		
Pract. Core 11, 12 & Elective 2 <b>(4P1)</b>	Practical 7: Animal Biotechnology, Biostatistics, Bioinformatics, Ethics & Patenting And A) Industrial Biotechnology II OR B) Environmental Biotechnology	-	8	8	4	3-8*	100* *	-	100		40	
Project <b>(4PROJ 1)</b>	Project	-	8	8	4	3-8*	100* *	-	100		40	
Seminar 4 <b>(4S1)</b>	Seminar 4	2	-	2	1			25	25	10		
<b>TOTAL</b>		<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>		<b>520</b>	<b>105</b>	<b>625</b>	<b>170</b>	<b>80</b>	

Note: Th = Theory; Pr = Practical/lab, \* = If required, for two days.

\*\* = The Practical and Project shall be evaluated by both the External and Internal Examiner in the respective Department / Center / Affiliated College.

**SYLLABUS for M. Sc. BIOTECHNOLOGY**  
**Choice Based Credit System (Semester Pattern)**  
**Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur**  
**Effective from 2018-2019**

**M. Sc. BIOTECHNOLOGY**  
**Semester I**  
**Paper – I (Code: 1T1)**  
**Cell Biology and Enzymology**

**UNIT I:**

Structure and function of cell organelles:  
 Plasma membrane: transport of nutrients, ions and macromolecules.  
 Cell walls: Archaea, Bacteria, plant cells.  
 Mitochondria: Electron Transport Chain and Oxidative Phosphorylation.  
 Chloroplasts: Chlorophyll, carotenoids and photosynthesis.  
 Golgi complex: Endoplasmic reticulum, lysosomes, peroxisomes (functions).

**UNIT II:**

Cell cycle: Molecular events in *S. cerevisiae*.  
 Cell signaling: Signal transduction in animal and plant cells (tyrosine kinase, light induced signaling)

**UNIT III:**

Basic Enzymology  
 Basics: Enzyme nomenclature, classification and specificity. Concept of coenzymes.  
 Mechanism of enzyme action: Models, catalysis by proximity effect, acid-base catalysis, electrostatic interaction, metal ion catalysis, nucleophilic and electrophilic catalysis,  
 Concept of multienzyme complexes: fatty acid synthase and pyruvate dehydrogenase complexes.  
 Concept of enzyme regulation: Allosteric (example ATCase), chemical modification and calmodulin mediated regulation.

**UNIT IV:**

Basic aspects of enzyme kinetics: Michaelis-Menten equation (derivation, significance and transformation).  
 Two substrate kinetics. Modifying factors of enzyme kinetics, enzyme inhibition and types of inhibitors.  
 Enzyme Engineering  
 Immobilization of Enzymes

**M. Sc. BIOTECHNOLOGY**  
**Semester I**  
**Paper – II (Code: 1T2)**  
**Molecular Biology**

**UNIT I:**

DNA Replication: Prokaryotic and Eukaryotic DNA replication, mechanisms of DNA replication, fidelity of replication, enzymes and accessory proteins involved in DNA replication.  
 Gene mutations: Types of mutations. Suppression. Ames' test.  
 DNA Repair: Direct repair, Ada protein, NER, BER, MMR, SOS repair, Transcription-repair coupling, repair of double-strand breaks.

**UNIT II:**

Prokaryotic Transcription: RNA Polymerase holoenzyme and apoenzyme, different sigma factors, details of initiation, elongation, termination.  
 Eukaryotic Transcription: Three types of RNA polymerases. Promoter of RNA polymerase II. Enhancers. General and inducible transcription factors.  
 Modifications of RNA: 5' cap formation, polyadenylation, splicing of nuclear pre-mRNA, mRNA stability.

**UNIT III**

Genetic code: characteristics, deciphering the code.

Protein biosynthesis: Prokaryotic and eukaryotic translation, the translational machinery, mechanism of initiation, elongation and termination.

#### **UNIT IV**

Regulation of expression in prokaryotes: lac operon, ara operon, trp operon, negative autogenous control.

Regulation of expression in eukaryotes: Britten-Davidson model. DNA binding and activation domains of transcription factors. Packaging of chromosomes and its relation to transcription regulation. Regulation of translation by 3' and 5' UTR motifs.

#### **M. Sc. BIOTECHNOLOGY**

**Semester I**

**Paper – III (Code: 1T3)**

**Biomolecules**

#### **UNIT I:**

Chemistry of Carbohydrates: Energy storage molecules – starch, glycogen. Building blocks – cellulose, hemicellulose, and chitin. Cell surface molecules – glycolipids, proteoglycans.

#### **UNIT II:**

Chemistry of Lipids: Triglycerides, phospholipids, glycolipids, sphingolipids, sterols, terpenes, lipoproteins (LDL, VLDL, HDL, IDL). Lipid micelles, Liposomes.

#### **UNIT III:**

Proteins: Amino acids and peptides. Primary, secondary, and tertiary structures. Protein sequencing, protease mapping. Ramachandran plot. Collagen structure. Domain structure, models of protein folding, methods of study of protein folding, roles of chaperones and chaperonins.

#### **UNIT IV:**

Nucleic acids: Structure of DNA and RNA: A, B, and Z forms of DNA. Novel structures. DNA bending and bendability. Denaturation and renaturation studies and their applications, nucleic acid hybridization. Topological structure of DNA.

#### **M. Sc. BIOTECHNOLOGY**

**Semester I**

**Paper – IV (Code: 1T4)**

**Biophysical Techniques**

#### **UNIT I:**

Spectrophotometry: UV-Visible spectrophotometry, fluorescence spectrophotometry, absorption and emission spectrophotometry, IR, NMR, Lumionometry.

Basic introduction to Raman and Mass spectrophotometry.

#### **UNIT II:**

Chromatography: Basic principles and techniques of partition, adsorption, gel filtration, affinity, and ion exchange chromatography. Concept of GLC and HPLC.

#### **UNIT III:**

Electrophoresis: Gel electrophoresis (Agarose, PAGE, SDS PAGE), Disc gel electrophoresis, Gradient electrophoresis, Pulsed field gel electrophoresis, capillary electrophoresis.

Viscosity: Determination of conformational changes through viscosity.

#### **UNIT IV:**

Centrifugation

Basic principles, Mathematics & theory (RCF, Sedimentation coefficient etc)

Types of centrifuge: microcentrifuge, high speed & ultracentrifuges.

Differential & density gradient centrifugation, Isolation of cell components using centrifugation technique.  
 Radioactivity  
 Radioactive & stable isotopes, Pattern and rate of radioactive decay, Units of radioactivity.  
 Measurement of radioactivity: Geiger-Muller counter, Solid & Liquid scintillation counters (Basic principle, instrumentation & technique),  
 Applications of isotopes in Biotechnology: Principles of tracer techniques, Its advantages and limitations, Distribution studies, Isotope dilution technique, Metabolic studies, Clinical application. Radioimmunoassay.

---

**M. Sc. BIOTECHNOLOGY**  
**Semester I**  
**LAB I (Code: 1P1)**  
**Cell Biology and Enzymology**

1. Determination of activity of calcium ATPase of plasma membrane.
  2. Subcellular fractionation and assay of marker enzymes.
  3. Assay of activity of LDH.
  4. Cell motility and flagellar staining.
  5. Cell types of plants- maceration of various tissue explant and identification of xylem, trachied, stomata, root hair, etc.
  6. Determination of activity of sodium/potassium ATPase of plasma membrane.
  7. Isolation of neutrophils and demonstration of phagocytosis.
  8. Determination of osmotic fragility of RBC membrane.
  9. Assay of activity of beta-galactosidase
  10. Assay of activity of acid phosphatase,
  11. Enzyme purification by crystallization - urease.
  12. Immobilization of enzymes (Invertase/ Protease/ Amylase.) by Na alginate method.
  13. Whole cell immobilization (Yeast) by Na Alginate and the estimation of alcohol produced.
  14. Effect of NaCl on amylase activity
  15. Inhibition of alkaline phosphatase activity by EDTA
  16. Estimation of lipase activity by titrimetric method
  17. Effect of Temperature on activity of Amylase / Alkaline phosphatase and determination of optimum temperature.
  18. Effect of Substrate concentration on activity of Amylase / Alkaline phosphatase and determination of optimum substrate concentration.
  19. Effect of pH on activity of Amylase / Alkaline phosphatase and determination of optimum pH
  20. Isolation of chlorophyll and xanthophyll from spinach leaves.
  21. Effect of inhibitors on respiratory chain.
  22. Study of Mitosis and Meiosis
  23. Study of mutations by Ames Test.
  24. Assay of Activity of SGOT & SGPT.
  25. Isolation, Purity determination and quantitation of DNA by UV method.
- Note: Candidates must perform at least 6 practicals in the semester.**
- 

**M. Sc. BIOTECHNOLOGY**  
**Semester I**  
**LAB II (Code: 1P2)**  
**Macromolecules & Analytical Techniques**

1. Separation of proteins / lipids by ion exchange chromatography
2. Separation of lipids / amino acids by thin layer chromatography
3. Polyacrylamide gel electrophoresis: a) native enzyme preparation, b) SDS-PAGE of proteins.
4. Introduction to measurements: balance and pipetting, preparation of solutions of given molarity and normality.
5. Measurement of pH: buffering capacity, to determine pKa value and hence the dissociation constant of a given acid using pH meter.

6. Colorimetry: To determine the dissociation constant of a given indicator colorimetrically and to prepare buffer solutions in the pH range 2.2 to 8.0
7. Colorimetry: Assay of DNA by diphenylamine method.
8. Colorimetry: Assay of RNA by orcinol method.
9. Potentiometry: To determine redox potential of Fe++ and Fe+++.
10. Conductometry: to determine cell constant of 0.1 M KCl.
11. Conductometry: Titration of strong acid vs strong base, to find out equivalent conductance of salt formed.
12. Viscometry: Effect of temperature on the viscosity of DNA using Ostwald's viscometer.
13. Viscometry: To determine molecular weight of protein and DNA.
14. Viscometry: To determine changes in the conformation of bovine serum albumin by viscosity measurements, effect of pH on conformation of BSA.
15. Spectrophotometry: To study the absorption spectrum of hemoglobin and NADH
16. Determination of Tm of nucleic acid
17. The validity of beers law for colorimetric estimation of creatinine.
18. The ultraviolet absorption of proteins and amino acids.
19. Estimation of proteins by Lowry's and Bradford method.
20. Estimation of protein by E280/E260 method.
21. Fractionation of proteins: Salt precipitation, solvent precipitation, isoelectric precipitation, dialysis, centrifugation.

**Note: Candidates must perform at least 6 practicals in the semester.**

---

---

**M. Sc. Sem I  
Seminar (Code: 1S1)**

---

---

**M. Sc. BIOTECHNOLOGY**  
**Semester II**  
**Paper – I (Code: 2T1)**  
**Microbiology**

**UNIT I:**

Eukarya and Viruses

- Algae: General characteristics, Applications in biotechnology.
- Fungi and slime moulds: General characteristics, applications in biotechnology.
- Viruses: Nature, symmetry, capsid structure, nucleic acid.
- Quantification of viruses
- Life cycles: T4 and lambda.
- Viroids and prions.

**UNIT II:**

General Microbiology and Taxonomy

- Prokaryotes: bacterial structure and morphology, endospore forming bacteria, pseudomonas, mycobacteria, archaebacteria.
- Microbial classification: 16s rRNA sequence and bacterial phylogeny.
- Bacterial genetic system: recombination (transformation, conjugation, transduction and transposition) Plasmids, salient features of the E. coli genetic map.

**UNIT III:**

Microbial Physiology

- Nutrition: nutritional classification, behavior, cultivation, isolation, media and their types, maintenance of culture.
- Growth: Measurement of growth, growth curve, continuous and synchronous culture, factors affecting microbial growth.

**UNIT IV:**

Microbial Control

- Microbial control: methods and dynamics of sterilization, mechanisms of control, biocontrol and preservation.
  - Concept of chemotherapy, chemotherapeutic agents, mechanisms of action.
  - Drug resistance, MDR, assessment and management of drug resistance.
- 

**M. Sc. BIOTECHNOLOGY**  
**Semester II**  
**Paper – II (Code: 2T2)**  
**Immunology**

**UNIT I:**

**Immunology- fundamental concepts and anatomy of the immune system**

Components of innate and acquired immunity; Organs and cells of the immune system- primary and secondary lymphoid organs; Lymphatic system;; Mucosal and Cutaneous associated Lymphoid tissue.(MALT&CALT); Mucosal Immunity; Antigens - immunogens, haptens; Major Histocompatibility Complex - MHC genes, HLA typing, flow cytometry, Microarrays.

**UNIT II:**

**Immune responses generated by B and T lymphocytes**

Immunoglobulins-basic structure, classes & subclasses of immunoglobulins, antigenic determinants; Basis of self —non-self discrimination; B cell maturation, activation and differentiation; Generation of antibody diversity; T-cell maturation, activation and differentiation and T-cell receptors; Cell-mediated immune responses, ADCC; Cytokines-properties, receptors and therapeutic uses, Hapten-carrier system

**UNIT III:**

**Vaccinology**

Active and passive immunization; Live, killed, attenuated, sub unit vaccines; Vaccine technology- Role and properties of adjuvants, recombinant DNA and protein based vaccines, plant-based vaccines, reverse vaccinology; Peptide vaccines, conjugate vaccines; Antibody genes and antibody engineering- chimeric and hybrid monoclonal antibodies; Catalytic antibodies and generation of immunoglobulin gene libraries.

#### **UNIT IV:**

##### **Clinical Immunology**

Hypersensitivity — Type I-IV; Autoimmunity; Types of autoimmune diseases; Mechanism and role of CD4+ T cells; MHC and TCR in autoimmunity; Treatment of autoimmune diseases; immunosuppressive therapy; Cancer immunotherapy. Apoptosis, transgenic mice, Gene knock outs.

---

**M. Sc. BIOTECHNOLOGY**  
**Semester II**  
**Paper – III (Code: 2T3)**  
**Fundamentals of Genetic Engineering**

#### **UNIT I:**

- Restriction endonucleases and modification methylases
- Other enzymes needed in genetic engineering: exonucleases and endonucleases, ligases, polymerases, DNA modification enzymes and topoisomerases.
- Gene isolation and purification: general methods (shotgun method for producing gene library, cloning specific genes by hybridization and reverse transcriptase methods, direct selection of a gene)

#### **UNIT II:**

- Insertion of DNA and ligation: Berg's terminal transferase method (dA:dT joints); Boyer-Cohen-Chang experiment (cohesive ends), Butt joints (T4 DNA ligase); current ligation techniques (blunt-end ligation, complementary end ligation, linkers, adaptors, homopolymer tailing).

#### **UNIT III:**

Construction of Genomic DNA library and its applications

- Construction of cDNA Library: Method, problems to be addressed, advantages and disadvantages compared to the genomic DNA library, uses
- Screening of recombinants: Screening by complementation, southern hybridization, northern hybridization, colony lift, western blotting, immunoprecipitation, south-western screening. Synthesis and labeling of probes.
- DNA sequencing: Sanger-Coulson dideoxynucleotide method, Maxam-Gilbert chemical cleavage method, multiplex DNA sequencing, automated DNA sequencing. Basic idea of oligonucleotide synthesis.

#### **UNIT IV:**

Cloning vectors

- Plasmids as vectors, general characteristics of plasmids, bacterial vector plasmids, yeast vector plasmids,
  - yeast artificial chromosomes
  - Phage Vectors (lambda, M13).
  - Cosmid vectors.
  - Animal virus derived vectors – SV 40 and retroviral vectors
- 

**M. Sc. BIOTECHNOLOGY**  
**Semester II**  
**Paper – IV (Code: 2T4)**  
**Applied Molecular Biology**

#### **UNIT I:**

Recombination and Genome Mapping,

- Homologous recombination: Holiday junction, gene targeting, gene disruption, FLP/FRT and Cre/Lox recombination, RecA and other recombinases.
- Molecular mapping of genome: Genetic and physical maps, choice of mapping population, southern and fluorescence in situ hybridization for genome analysis, RFLP, RAPD, and AFLP analysis, molecular

markers linked to disease resistance genes, application of molecular markers in forensic, disease prognosis, genetic counseling, pedigree etc.

### **UNIT II:**

#### **Antisense, Ribozymes and Epigenetics**

- Antisense and ribozyme technology: Molecular mechanism of antisense molecule, biochemistry of ribozyme, hammerhead ribozymes, applications of antisense and ribozyme technologies.
- Epigenetics: chromatin marking systems, Direct chemical modification of DNA, Basic concepts of RNAi.

### **UNIT III:**

#### **Cancer Biology**

- Methods to study cancer: Animal models. Role of tissue culture in study of cancer. Combination of tissue culture and animal models.
- DNA Viruses and cancer: Polyoma virus, SV40, adenovirus
- Genetics of Cancer: Oncogenes (ras, myc), suppressor genes (p53, Rb).

### **UNIT IV:**

- Angiogenesis: Brief idea of healthy vasculature, definition of angiogenesis, basic process of tumor induced angiogenesis, Hypoxia induced factor (HIF), basics of pro- and anti- angiogenic factors, positive and negative factors affecting angiogenesis.
  - Metastasis: Stages of metastatic progression, prerequisites for metastasis (properties a cell must acquire for metastasis), epithelial-mesenchymal transition, biochemical parameters acquired by metastatic cells.
  - Basic idea of Cancer stem cells.
- 

### **M. Sc. BIOTECHNOLOGY**

#### **Semester II**

#### **LAB I (Code: 2P1)**

#### **Microbiology & Immunology**

1. Production of microbial products in bioreactors/fermentors.
2. Immobilization of cells/enzymes.
3. Cleanliness, media preparation, sterilization, culturing methods, dilution techniques.
4. Staining techniques in microbiology; simple staining, gram staining, spore staining capsule staining, flagella staining.
5. Isolation of pure culture by different techniques.
6. Replica plating technique.
7. Propagation of viruses.
8. Assay of viruses.
9. Purification of immunoglobulins, qualitative assessment.
10. Demonstration of immunochemical reactions (blood group, Widal, VDRL, pregnancy, ELISA)
11. Blood film preparation and identification of cells.
12. Ouchterlony immunodiffusion,
13. Determination of albumin by radial immunodiffusion.
14. Biochemical tests for identification of Bacteria – Oxidase, catalase, IMViC test, etc.
15. Isolation of antibiotic resistant bacteria from waste / sewage water.
16. Motility of bacteria by hanging drop method.
17. Assay of antibiotics by disc diffusion method.

**Note: Candidates must perform at least 6 practicals in the semester.**

---

### **M. Sc. BIOTECHNOLOGY**

#### **Semester II**

#### **LAB II (Code: 2P2)**

#### **Genetic Engineering & Applied Molecular Biology**

1. Induction of  $\beta$ -galactosidase in strains of E. coli (I+ and I-).
2. Southern blotting.
3. Isolation of genomic DNA.
4. Western blotting.
5. Endonuclease digestion of DNA and analysis of DNA fragments by agarose electrophoresis.
6. Isolation of RNA.
7. Restriction fragment length polymorphism.
8. Ames test.
9. Isolation of plasmid DNA (miniprep and alkaline bulk method)
10. Isolation of RNA
11. Isolation of polyA RNA using oligodT columns
12. Estimation of RNA by Orcinol method
13. Estimation of DNA by diphenylamine method
14. Estimation of DNA by E260 method
15. Isolation of Lambda phage DNA.

**Note: Candidates must perform at least 6 practicals in the semester.**

---

**M. Sc. Sem II  
Seminar (Code: 2S1)**

---

---

**M. Sc. BIOTECHNOLOGY**  
**Semester III**  
**Paper – I (Code: 3T1)**  
**Genetic Engineering & its Applications**

**UNIT I:**

- Transformation: DNA uptake by bacterial cells.
- Transfection: Chemical and physical methods, Viral vectors. Polyethylene glycol, DEAE-dextran, calcium phosphate coprecipitation, dimethyl sulfoxide, liposomes, microinjection, macroinjection, electroporation, biolistics, somatic cell fusion, gene transfer by pronuclear microinjection
- Amplification of DNA: Polymerase chain reaction.

**UNIT II:**

Plant transformation technology: Basis of tumor formation, hairy root, features of Ti and Ri plasmids, mechanism of DNA transfer, role of virulence genes, use of Ti and Ri as vectors, binary vectors, use of 35S and other promoters, genetic markers, use of reporter genes, use of scaffold attachment regions, methods of nuclear transformation, viral vectors and their application, Biological and physical transformation methods. Chloroplast transformation.

**UNIT III:**

- Expression of heterologous genes: expression of eukaryotic genes in bacteria, expression of heterologous genes in yeast, insect and mammalian cells.
- Salient features of expression vectors.
- Processing of recombinant proteins: Refolding and stabilization.
- Industrial Products of Protein engineering

**UNIT IV:**

- Phage Display: Production of monoclonal bodies by phage display technique using filamentous phage vectors.
  - Gene Therapy: somatic and germline, gene replacement, in vivo and ex vivo gene delivery, retrovirus gene transfer system, advantages and disadvantages of adenovirus, adeno-associated virus, herpes virus vectors, gene correction, replacement/augmentation, editing, regulation and silencing. Gene therapy of human diseases
- 

**M. Sc. BIOTECHNOLOGY**  
**Semester III**  
**Paper – II (Code: 3T2)**  
**Plant Biotechnology**

**UNIT I:**

- Conventional plant breeding (introductory).
- Introduction to cell and Tissue culture. Tissue culture as a technique to produce novel plants and hybrids.
- Tissue culture media (composition and preparation)
- Callus and suspension cultures: initiation and maintenance of callus and suspension cultures; single cell clones.
- Organogenesis. Embryogenesis; transfer and establishment of whole plants in soil.

**UNIT II:**

- Shoot tip culture: rapid clonal propagation and production of virus free plants.
- Embryo culture and embryo rescue.
- Hybrid plants: protoplast isolation, culture and fusion, selection of hybrid cells and regeneration of hybrid plants, symmetric and asymmetric hybrid, cybrid.
- Production of haploid plants: anther, pollen and ovary cultures for production of haploid plants and homozygous lines.

- Germplasm conservation: cryopreservation, slow growth cultures and DNA banking for germplasm conservation.

### **UNIT III:**

- Applications of plant transformation for productivity and performance
- Herbicide resistance, phosphoinothricine glyphosate, sulfonyl urea, atrazin, insect resistance, Bt genes, non-Bt-like protease inhibitor, virus resistance, coat protein mediated nucleocapsid gene, disease resistance, chitinase, 1-3 beta glucanase, RIP,
- antifungal proteins, thionins, PR proteins, nematode resistance, abiotic stress, post harvest losses, long shelf life of fruits and flowers, use of ACC synthase, polygalacturanase, ACC oxidase, male sterile lines, bar and barnase systems, carbohydrate composition and storage, ADP glucose pyrophosphatase.

### **UNIT IV:**

- Plant metabolic engineering and industrial products: plant secondary metabolites, control mechanisms and manipulation of phenylpropanoid pathway, shikimate pathway, alkaloids, industrial enzymes, biodegradable plastics, polyhydroxybutyrate, therapeutic proteins, lysosomal enzymes, antibodies, edible vaccines, purification strategies, oleosin partitioning technology.
- Molecular marker aided breeding: RFLP maps, linkage analysis, RAPD markers, STS, microsatellite, SCAR (sequence characterized amplified regions), SSCP (single strand conformational polymorphism), QTL, map based cloning, molecular marker assisted selection.
- Green House Technology

**M. Sc. BIOTECHNOLOGY**  
**Semester III**

**(NOTE: Candidates can choose any one elective paper from Core elective A or B)**

**Paper – III (Core Elective A) (Code: 3T3A)**  
**Industrial Biotechnology I**

### **UNIT I:**

#### **Bioreactors:**

- Bioreactor function, utility, types of bioreactor. Modes of bioreactor operations. Main components of the bioreactor and their functions.
- Bioreactors
  - a) Design/configuration of a basic fermentor; individual parts and probes for on-line monitoring of process.
  - b) Concept of Batch and Continuous process, fed-batch semi-continuous systems; aerobic and anaerobic fermentors
  - c) Submerged/liquid state and solid state fermentations

### **UNIT II**

#### **Types of Bioreactors:**

- Continuous stirred tank and plug flow reactors
- Packed bed and fluidized bed reactors
- Trickle bed, immobilized bed, air lift, rotary disc reactors. Reactors with cell recycle.

### **UNIT III:**

#### **Immobilized reactor systems:**

- Immobilization techniques for cells (physical adsorption, ionic binding, covalent binding, lattice entrapment, membrane entrapment, micro encapsulation) and enzymes (covalent binding, entrapment, micro encapsulation, cross-linking, adsorption, ionic binding, affinity binding, chelation, disulfide bonds)
- Immobilized enzyme kinetics
- Types of immobilized reactors

### **UNIT IV:**

#### **Scope of Downstream Processing:**

- Importance of Down Stream Processing (DSP) in biotechnology, characteristics of products, criteria for selection of bio-separation techniques. Role of DSP methods in bioprocess economics. Cell Disruption

Methods: Various cell disruption methods, need for cell disruption for (Homogenizer, French press & Dynamill) intracellular products, cell disruption equipment. Applications in bio-processing.  
 Flocculation: Principles of flocculation various flocculating agents, applications in bio-processing.  
 Coagulation: Principles of coagulations and its applications in bio-processing

---

**M. Sc. BIOTECHNOLOGY**  
**Semester III**

**(NOTE: Candidates can choose any one elective paper from Core elective A or B)**

**Paper – III (Core Elective B) (Code: 3T3B)**  
**Environmental Biotechnology I**  
**Environmental Science & Bioresources**

**UNIT I:**

Introduction to environmental Science: Environmental ethics: Environmentalism, Environment & Religion, Environmental education, Need for environmental education. Environmental Pollution: Classification of pollutants, Air pollution and their properties, Gaseous pollutants, water pollutants and their properties. Noise pollution, Soil pollution, thermal pollution, marine pollution, solid water pollution.

**UNIT II:**

Ecosystem structure and functions, abiotic and biotic component, Energy flow, food chain, food web, Ecological Pyramids-types, biogeochemical cycles, ecological succession, Ecdas and ecotypes. Biotechnological processes: Bioconversion, Bioaccumulation, Bioconcentration, Biomagnification, Biodegradation.

**UNIT III:**

Energy & Biofuels: Non conventional or renewable sources of energy, Energy from Biomass, Biofertilizers, Biosensors and biochips, Biofilters, Biofuel cells,

**UNIT IV:**

Biofertilizers, Biopestisides and Integrated pest management: Bacterial biofertilizers, algal biofertilizers, Aquatic ferns as biofertilizers, Fungi as biofertilizers, earthworm as biofertilizers, biopestisides, Integrated pest management.

---

**M. Sc. BIOTECHNOLOGY**  
**Semester III**

**(NOTE: Candidates of other M. Sc. Subjects can choose this paper from Biotechnology subject)**

**Paper – IV (Foundation Paper I) (Code: 3T4A)**  
**Introductory Biotechnology**

**UNIT I:**

**Basics of Proteins**

- Amino acids: Structures of amino acids found in proteins, classification, peptide bond structure; Protein Structure:
- Primary (basic idea of sequencing and amino acid composition), secondary (alpha and beta structures), tertiary and quaternary structures

**UNIT II:**

**Nucleic acids**

- Nucleoside, Nucleotides, Bases; Basic Structure of DNA (Watson Crick structure) and RNA.

**UNIT III:**

**Genes and chromosomes**

- Gene definition, prokaryotic and eukaryotic gene structure; Structure of chromatin (nucleosome, 30 nm fiber, solenoid structure); basic understanding of chromosome structure; centromeres, telomeres, Unique genes and gene families

#### **UNIT IV:**

##### **Enzymes**

- Overview, Enzyme classification with specific examples. Characteristics of enzymes, Concept of active centre, binding sites, stereospecificity and ES complex formation. Effect of temperature, pH and substrate concentration on reaction rate. Enzyme activity, international units, specific activity
  - Introduction to Enzymes used in biotechnology: Restriction enzymes, exonucleases and endonucleases, ligases, polymerases, DNA modification enzymes and topoisomerases
- 

**M.Sc. Biotechnology (CBCS)**  
**Semester-III**

**(Candidate can opt for this paper in their main subject of postgraduation ONLY).**

**Paper-IV: (Core Subject Centric I) (Code: 3T4B)**

**Diagnostic Medical Biotechnology**

#### **Molecular and Nanomolecular Diagnostics**

##### **Unit I**

Host pathogen interactions in disease process (Bacterial: Tuberculosis and Staphylococcal Diseases & Viral: Influenza and HIV/AIDS); Disease pathology and clinical spectrum; Clinical diagnosis of diseases; Molecular Genetics of the host and the pathogen. Molecular techniques for analysis of these disorders; Assays for the Diagnosis of inherited diseases; Bioinformatic tools for molecular diagnosis.

##### **Unit II**

Concept of Genomics, Human disease genes; DNA polymorphism including those involved in disease (Ex: Hemoglobin and the anemias); Phenylketonuria (monogenic) and diabetes (multigenic) genetic disorders; ‘disease’ gene vs. ‘susceptibility’ gene; SNP detection: hybridization based assays (allele specific probes); Polymerization based assays (allele specific nucleotide incorporation, allele-specific PCR); Ligation based assays (allele specific oligonucleotide ligation); Polymorphism detection without sequence information: SSCP. Single nucleotide polymorphism and disease association; High throughput DNA sequencing and diagnosis; and Array based techniques in diagnosis.

##### **Unit III**

Outline of a typical proteomics experiment, clinical proteomics and disease biomarkers. Isolation of proteins and other molecules associated with disease; 2D analysis of such proteins by sequencing individual spots by Mass Spectrometry; Protein Microarray; Present methods for diagnosis of Specific diseases like Tuberculosis and AIDS; Ethics in Molecular Diagnosis

##### **Unit IV**

Nanomolecular diagnostics and Biosensor: Introduction to Nanodiagnostics, Nanoarrays for diagnostics, detection of single DNA, self-assembled protein nanoarrays, protein nanobiochip nanoparticles for molecular diagnostics, DNA nanomachines, Nanobiosensor, CNT biosensor, DNA nanosensor, Nanowire biosensor, application of nanodiagnostics.

#### **Texts/References**

1. George Patrinos and Wilhelm Ansorage, Molecular Diagnostics, 1st Edition, Academic Press, 2005.
  2. Willey J. Prescott, Harley, and Klein's Microbiology-7th international ed./Joanne M. Willey, Linda M. Sherwood, Christopher J. Woolverton. New York: McGraw-Hill Higher Education; 2008.
  3. Lela Buchingham and Maribeth L Flaws, Molecular Diagnostics: Fundamentals, Methods and Clinical Applications, 1st Edition, F A Davis Company, Philadelphia, USA, 2007.
  4. Campbell, M.A and Heyer L.J., Discovering Genomics, Proteomics and Bioinformatics, 2nd Edition, CSHL Press, Pearson/Benzamin Cummings San Francisco, USA, 2007.
  5. Andrew Read and Dian Donnai, New Clinical Genetics, Scion Publishing Ltd, Oxfordshire, UK, 2007.
  6. Challa S.S.R. Kumar, Nanomaterials for medical diagnosis and therapy, Viley-VCH, 2007.
  7. Dr.Parag Diwan and Ashish Bharadwaj (Eds), Nano Medicines, Pentagon Press, 2006.
-

**M. Sc. BIOTECHNOLOGY**  
**Semester III**  
**LAB I (Code: 3P1)**  
**Genetic Engineering & Plant Biotechnology**

1. Recombinant DNA technology: in vitro DNA ligation and transformation of E. coli.
2. Recombinant DNA technology: characterization of transformants.
3. Northern blotting
4. Agarose gel electrophoresis and restriction mapping of DNA.
5. Construction of restriction map of plasmid DNA
6. Cloning in plasmid/phagemid vectors.
7. DNA sequencing.
8. Gene expression in E. coli and analysis of gene product
9. Demonstration of technique of PCR
10. Demonstration of technique of RT-PCR
11. Replica plating technique.
12. Propagation of viruses.
13. Endonuclease digestion of DNA and analysis of DNA fragments by agarose electrophoresis.
14. Restriction fragment length polymorphism.
15. Ames test.
16. Quantitation of DNA by various methods.
17. Preparation of plant tissue culture media.
18. Surface sterilization.
19. Organ culture.
20. Callus propagation, organogenesis, transfer of plants to soil.
21. Protoplast isolation and culture.
22. Anther culture: production of haploids.
23. Cytological examination of regenerated plants.
24. Micropropagation of banana, citrus, Papaya, Sugarcane etc.
25. Effect of various growth hormones on cell divisions and cell proliferation
26. Isolation, purification and culture of protoplast
27. Artificial seed preparation
28. Cytological examination of regenerated plants
29. Agrobacterium culture and selection of transformants.
30. Hardening of tissue culture raised plants.
31. Transfer of plants to soil.

**Note: Candidates must perform at least 6 practicals in the semester.**

---

**M. Sc. BIOTECHNOLOGY**  
**Semester III**  
**LAB II (Core Elective A) (Code: 3P2)**  
**Industrial Biotechnology**

1. Immobilization of cells/enzymes
2. Determination of rheological constant.
3. Determination of oxygen transfer rate, volumetric transfer coefficient.
4. Microbial production of Alcohol
5. Microbial production of antibiotics
6. Production of microbial products in fermentors / bioreactors
7. Preparation and formulation of microbial biopesticides / biofertilizers.
8. Study of patenting procedure
9. Preparation of proposal for patenting.

**Note: Candidates must perform at least 6 practicals in the semester.**

---

**M. Sc. BIOTECHNOLOGY  
Semester III  
LAB II (Core Elective B) (Code: 3P2)  
Environmental Biotechnology**

1. Detection of coliforms for determination of the purity of potable water.
2. Determination of total dissolved solids of water
3. Determination of Hardness and alkalinity of water sample.
4. Determination of dissolved oxygen concentration of water sample
5. Determination of biological oxygen demand of sewage sample
6. Determination of chemical oxygen demand (COD) of sewage sample.
7. Analysis of oligodynamic action.
8. Determine the efficiency of removal of air pollutant using fibrous air filter.
9. Preparation and formulation of microbial biopesticide (bacteria, fungi and viruses
10. Production of microbial fertilizers (Rhizobium, Azotobacter and AMF).

**Note: Candidates must perform at least 6 practicals in the semester.**

---

**M. Sc. Sem III  
Seminar (Code: 3S1)**

---

=====

**M. Sc. BIOTECHNOLOGY**  
**Semester IV**  
**Paper – I (Code: 4T1)**  
**Animal Biotechnology**

**UNIT I:**

- Animal Cell Culture: Equipments and materials for animal cell culture technology. Various systems of tissue culture, their distinguishing features, advantages and limitations.
- Culture medium: natural media, synthetic media, sera. Introduction to balanced salt solutions and simple growth medium. Brief discussion on the chemical, physical and metabolic functions of different constituents of culture medium, role of carbon di oxide, serum and supplements.
- Characteristics of cells in culture: Contact inhibition, anchorage dependence, cell-cell communication etc.; Cell senescence; cell and tissue response to trophic factors.

**UNIT II:**

- Primary Culture: Behavior of cells, properties, utility. Explant culture; suspension culture.
- Established cell line cultures: Definition of cell lines, maintenance and management; cell adaptation.
- Measurement of viability and cytotoxicity. Cell cloning, cell synchronization and cell manipulation. Various methods of separation of cell types, advantages and limitations; flow cytometry.

**UNIT III:**

- Scaling up of animal cell culture. Cell transformation.
- Stem cell cultures, embryonic stem cells and their applications. Somatic cell genetics.
- Apoptosis: Measurement of cell death. Apoptosis (death domain, role of cytochrome C)

**UNIT IV:**

- Commercial applications of cell culture: Tissue culture as a screening system; cytotoxicity and diagnostic tests. Mass production of biologically important compounds (e.g. Vaccines). Harvesting of products, purification, and assays.
  - Three dimensional cultures and tissue engineering.
- 

**M. Sc. BIOTECHNOLOGY**  
**Semester IV**  
**Paper – II (Code: 4T2)**  
**Biostatistics, Bioinformatics, Ethics & Patenting**

**UNIT I:****Biostatistics**

- Measures of central tendency: mean, mode, and median.
- Measures of dispersion: range, mean deviation, standard deviation.
- Methods of sampling, sampling error, non-sampling errors, standard error.
- Chi-square test, meaning of correlation and regression.
- Cluster analysis: phylogenetic clustering by simple matching coefficients.
- Presentation of statistical data: tabulation (simple tables, frequency distribution table); charts and diagrams (bar charts, histograms, pie charts, dendrogram).
- Research designs with basic principles and field layout.

**UNIT II:****Bioinformatics**

- Computer concept: computer organization, hardware, software, operating system (windows, unix, brief list of computer languages).
- Concept of networking: internet, internet concepts, web browsing, public domain resources in biology.
- Concept of database management: brief idea of data types, data structures, searching, sorting, designing a database, genomic, proteomic, and metabolic pathways databases.

- Computer analysis of genetic sequences: general concepts of sequence analysis, identification of functional sequences, homology, brief idea of BLAST, ENTREZ, and PubMed.
- Proteomics: basic issues and concepts, protein sequences and alignment, protein structure prediction.
- Bioinformatics tools in drug design.

### **UNIT III:**

#### **Ethics:**

- Benefits of biotechnology, ELSI of biotechnology, recombinant therapeutic products for human health care, genetic modifications and food consumption, release of genetically engineered organisms, applications of human genetic rDNA research, human embryonic stem cell research.

### **UNIT IV:**

#### **Patenting**

- Patent and Trademark, Biotechnology products and processes, Intellectual property rights, Plant breeders rights, biotechnology in developing countries. Biosafety and its implementation, Quality control in Biotechnology.

### **M. Sc. BIOTECHNOLOGY** **Semester IV**

**(NOTE: Depending on the Core elective subject chosen in Semester III, Candidates shall pursue the same core elective subject in semester IV)**

**Paper – III (Core Elective A) (Code: 4T3A)**  
**Industrial Biotechnology II**

### **UNIT I:**

#### **Bioprocess Engineering Concepts:**

- Mass transfer, heat transfer, mixing, rheology of fermentation fluids, residence time distribution, substrate utilization and yield-coefficients, oxygen transfer and oxygen sag.

### **UNIT II:**

#### **Process Optimization and Control:**

- Optimization parameters, medium formulation, process optimization techniques: classical, Plackett-Burman design, ANOVA, central; composite design, response surface methodology with example.; medium formulation: classical, experimental design technique, fractional factorial design with egs.
- Concept of control: turbidostatic and chemostatic control, open loop and feedback control
- Advanced control policies: model predictive control, cascade control, PID control, programmed control

### **UNIT III:**

#### **Scale up & Biosensor Technology:**

- basic principles of scale-up
- bases of scale up, scale down
- Biosensors

### **UNIT VI:**

#### **Production of Primary & Secondary Metabolite:**

##### **1. Primary Metabolites:**

- A brief outline of processes for the production of some commercially important organic acids (e.g. citric acid, lactic acid, acetic acid etc); amino acids (glutamic acid, phenylalanine, aspartic acid etc.) and alcohols (ethanol, butanol etc.)

##### **2. Secondary Metabolites:**

- Brief Study of production processes for various classes of secondary metabolites: antibiotics: beta-lactams (penicillin), aminoglycosides (streptomycin) macrolides (erythromycin), vitamins and steroids.

### **M. Sc. BIOTECHNOLOGY** **Semester IV**

**(NOTE: Depending on the Core elective subject chosen in Semester III, Candidates shall pursue the same core elective subject in semester IV)**

**Paper – III (Core Elective B) (Code: 4T3B)**

## **Environmental Biotechnology II Applied Environmental Biotechnology**

### **UNIT I:**

Bioremediation & Phytoremediation: Biofeasibility, applications of bioremediation, Bioreduction, Phytoremediation.

Solid waste pollution and its management: Current practice of solid waste management, composting systems, vermicomposting, sewage treatment.

### **UNIT II:**

Bioabsorption and Bioleaching of heavy metals: Cadmium, Lead, Mercury, Metal binding targets and organisms, Bioabsorption, Metal microbial interaction, Biomethylation of elements (Methylation of mercury and arsenic), Commercial biosorbants, bioleaching, metal precipitation, advantages and disadvantages of bioleaching.

### **UNIT III:**

Waste water Treatment: Biological treatment system (Oxidative ponds, aerobic and anaerobic ponds, facultative ponds, aerated ponds), Biological waste treatment, activated sludge treatment, microbial pollution in activated sludge, percolating filters, waste water treatment by biofilms. Treatment scheme of Dairy, Distillery, Tannery, Sugar, Fertilizers, Refinery, Chemical and Antibiotic waste.

### **UNIT IV:**

Xenobiotics in environment: Biodegradation of Hydrocarbons, Substituted hydrocarbons, Surfactant, Pesticides, Lignin, Tannin, Synthetic dyes, Biotransformation: Oxidation reactions: Cytochrome P450 monooxygenase system, Alcohol and aldehyde dehydrogenases, Peroxidases. Reduction reactions: Cytochrome P450 and flavin dependent reactions. Hydrolysis reactions: Carboxyl esterases. Conjugation reactions: Gluthione S transferases. Regulation of biotransformation.

---

## **M. Sc. BIOTECHNOLOGY Semester IV**

**(NOTE: Candidates of other M. Sc. Subjects can choose this paper from Biotechnology subject)  
Paper – IV (Foundation Paper II) (Code: 4T4A)  
Basic rDNA Technology**

### **UNIT I:**

#### **History of Gene cloning**

- Boyer-Cohen-Chang experiment. Patenting of the recombinant DNA technique; Berg's role in gene cloning history, Change in medicinal science after discovery of recombinant DNA technology (brief mention of how we produce human insulin today, somatostatin and other therapeutic products, very brief overview of how we may treat diseases through gene therapy)
- Why do we clone genes? (amplification and/or heterologous gene expression). Basic steps of gene cloning:
- Agarose gel electrophoresis; 2D Electrophoresis; Pulsed field gel electrophoresis; SDS PAGE; 16S rDNA sequencing for bacterial identification; ITS region sequencing for fungal identification; RFLP; RAPD

### **Unit II:**

#### **Basic process of recombinant DNA technology**

- Cutting and joining of DNA. Vectors: concept, types of vectors (plasmids, phage, virus), Essential qualities that a vector must possess
- Types of vectors: pBR322, cosmids, lambda phage

### **Unit III:**

#### **Basic process of recombinant DNA technology**

- Transformation and Transfection – basic techniques. Selectable markers (antibiotic resistance, lacZ), Selection process, Screening.

**Unit IV:****Applications of gene cloning**

- Insulin, Somatostatin, BT Cotton, production of human proteins and drugs, recombinant vaccines, agricultural applications, production of transgenic animals, human gene therapy
- 

**M.Sc. Biotechnology (CBCS)**  
**Semester-IV**

**(Candidate can opt for this paper in their main subject of postgraduation ONLY).**

**Paper-IV: (Core Subject Centric II) (Code: 4T4B)**  
**Therapeutic Medical Biotechnology**

**Molecular Therapeutics and Drug Discovery****Unit I**

Gene therapy; Intracellular barriers to gene delivery; Overview of inherited and acquired diseases for gene therapy; Retro and adeno virus mediated gene transfer; Liposome and nanoparticles mediated gene delivery. Gene silencing technology; siRNA- Concept, delivery and therapeutic applications in treatment of influenza and HIV/AIDS; Tissue and organ transplantation; Transgenics and their uses; Cloning; Ethical issues

**Unit II**

Proteomics and drug discovery: High throughput screening for drug discovery; Identification of drug targets; Pharmacogenomics and pharmacogenetics and drug development; Toxicogenomics; Metagenomics.

**Unit III**

Nanobiotechnology for drug discovery, protein and peptide based compounds for cancer and diabetes, drug delivery - nanoparticle based drug delivery, lipid nanoparticles, vaccination, cell therapy, Gene therapy. Ethical, safety and regulatory issues of nanomedicine. Physicochemical characteristics of nanomaterials, Nanoparticle interaction with biological membrane, Neurotoxicology.

**Unit IV****Drug Discovery & Clinical research**

Introduction and importance of clinical research, Drug Development and phases of Clinical trials, Designing clinical Trials, Protocol designing, Ethical issues in clinical research, ICH-GCP Guidelines, Informed consent process, Role of CRC and CRA in clinical trials, Pharmacovigilance, Standard operating procedures, Guidelines to undertake clinical trials in India schedule Y.

**Texts/References:**

1. Bernhard Palsson and Sangeeta N Bhatia, Tissue Engineering, 2nd Edition, Prentice Hall, 2004.
  2. Pamela Greenwell, Michelle McCulley, Molecular Therapeutics: 21st century medicine, 1st Edition, Springer, 2008.
  3. Primrose S & Twyman R, Principles of Gene Manipulation and Genomics, 7th Edition, Blackwell, 2006.
  4. H. Rehm, Protein Biochemistry and Proteomics, 4th Edition, Academic Press, 2006.
  5. Robert A. Freitas Jr., Nanomedicine, Volume I: Basic Capabilities, Landes Bioscience, Georgetown, TX, 1999.
  6. Robert A. Freitas Jr., Nanomedicine, Volume IIA: Biocompatibility, Landes Bioscience, Georgetown, TX, 2003.
  7. Kewal K. Jain, The Hand book of Nanomedicine, Humana Press, Springer 2008.
  8. Nancy A. Monteiro – Riviere and C. Lang Tran, Nanotoxicology: Characterization, Dosing and Health Effects, Informa Healthcare. 2007.
  9. Kumar, Challa S. S. R. (ed.) Nanomaterials - Toxicity, Health and Environmental Issues, Wiley-VCH, Weinheim, 2006.
  10. Norris, Deborrah. Clinical Research Coordinator Handbook. Plexus Pub, 2009.
  11. Portney, Leslie Gross, and Mary P. Watkins. Foundations of clinical research: applications to practice. Vol. 2. Upper Saddle River, NJ: Prentice Hall, 2000.
  12. Stone, Judy. Conducting clinical research: A practical guide for physicians, nurses, study coordinators, and investigators. Mountainside MD Press, 2006.
  13. Glasser, Stephen P., and P. Glasser. Essentials of clinical research. Springer, 2008.
-

**Semester IV**  
**LAB I (Code: 4P1)**  
**Animal Biotechnology, Biostastics, Bioinformatics, Ethics & Patenting**  
**And Industrial Biotechnology II or Environmental Biotechnology**

**Section I: Animal Biotechnology, Biostastics, Bioinformatics, Ethics & Patenting**

1. Development of primary cell lines/maintenance of established cell lines
2. Preparation of animal cell culture media.
3. Filter sterilization and sterility test.
4. Media storage, serum inactivation.
5. Cell fusion.
6. Cell transformation by viruses.
7. Lyophilization of local germplasma.
8. Calculation of mean, mode, and median
9. Calculation of standard deviation and standard error
10. Using computer in single user and multiple user environment
11. Designing and management of databases
12. Computer aided statistical analysis
13. Computer presentation of statistical data, charts and diagrams
14. Computer aided visualization of amino acid sequence of protein and its 3D structure.
15. Retrieving metabolic pathway using internet
16. Homology searching using BLAST
17. Base sequence analysis of gene / protein sequence
18. Computer aided survey of scientific literature
19. Field layout based on statistical research designs
20. Determination of rheological constant

**Section II: Section A) Industrial Biotechnology OR Section B) Environmental Biotechnology**

**A) Industrial Biotechnology**

1. Demonstration of various bioreactor configuration, parts and integrated process control system.
2. Demonstration of addition of inoculation and sampling in CSTR
3. Determination fo volumetric mass transfer coefficient (KLa) by dynamic method and sulphite oxidation method
4. Preparation of wine from grapes.
5. Preparation and characterization of immobilized cells system
6. To perform cell disruption by ultrasonication
7. To study the settling velocity of solid particles under batch sedimentation

**OR**

**B) Environmental Biotechnology**

1. Test for the degradation of a aromatic hydrocarbons by bacteria
2. Survey of degradative plasmids in microbes growing in polluted environment
3. Effect of Sulphur dioxide on crop plants
4. Estimation of heavy metals in water/soil by Atomic absorption spectrophotometry,
5. Estimation of nitrate in drinking water.
6. Role of microorganisms in elevation of heavy metal induced stress in plants.
7. Isolation of xenobiotic degrading bacteria by selective enrichment technique
8. In vitro evaluation of medicinal plants against pathogenic microbes.
9. Effect of mycorrhizal fungi on growth promotion of plants.
10. Study of patenting procedure
11. Preparation of proposal for patenting.
12. Study of RFLP, VNTRs, SNPs

**Note: At least 6 practical must be conducted within the semester.**

---

**M. Sc. Part II, Sem IV**  
**Seminar (Code: 4S1)**

---



## RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR

(Established by Government of Central Provinces Education Department by Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University governed by Maharashtra Universities Act, 1994)

---

### FACULTY OF HOME SCIENCE

#### DIRECTION NO. 78 OF 2016

#### **DIRECTION GOVERNING THE EXAMINATION LEADING TO THE DEGREE OF M.SC. HOME SCIENCE SEMESTER PATTERN (CHOICE BASED CREDIT SYSTEM)**

(Issued by the Vice-Chancellor under Section 14(8) of the M.U. Act, 1994)

**Whereas**, Maharashtra Universities Act, 1994 (hereinafter referred to as Act) has come into force from 22<sup>nd</sup> July, 1994 was amended from time to time.

**AND**

**Whereas**, the University Grants Commission, New Delhi vide letter No.D.O.No.F-1-1/2015 (CM) dated 8<sup>th</sup> January 2015 regarding reforms pertaining to the introduction of Choice Based Credit System at the earliest from the academic session 2015-16 to provide option to students and also seamless mobility across the institutions.

**AND**

**Whereas**, the Board of Studies / Special Task Force in all the Home Science subjects in their meeting held on dated 25.8.2016 prepared the syllabi and scheme of examination for the M.Sc. Home Science course and recommended for starting of the Choice Based Credit System in Faculty of Home Science from the academic session 2016-17,

**AND**

**Whereas**, the Faculty Coordinator, Faculty of Home Science in its meeting held on 25-8-2016 vide item No. 1, has considered, accepted and recommended to Academic Council, the policy decision regarding introduction of Choice Based Credit System and the draft syllabi of M.Sc. Home Science Semester I – IV with draft direction and other details.

**AND**

**Whereas**, the new draft direction and scheme of semester pattern examination as per Choice based credit system is to be implemented from the Academic Session 2016-17 for M.Sc. Home Science semester I and onwards which is to be regulated by this direction and as such there is no existence and framing of an Ordinance for the above examination is a time consuming process.

**AND**

**Whereas**, the admission of students in the Choice Based Credit System at M.Sc. Home Science Semester I and onwards are to be made in the Academic Session 2016-17.

**AND**

**Whereas** the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Academic Council on 7-10-2016 under section 14(7) of Maharashtra University Act 1994.

**AND**

**Whereas** the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Management Council under section 14(7) of Maharashtra University Act 1994.

**AND**

**Whereas**, ordinance making is a time consuming process, therefore, I, Dr. S. P. Kane, Vice Chancellor Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers vested under Section 14(8) of the Act do hereby issue the following Direction.

This Direction may be called “Direction relating to examinations leading to the Degree of – M.Sc. Home Science in the Faculty of Home Science (Choice based Credit System).

1. The direction shall come into force from the date of its issue by Hon'ble Vice Chancellor and shall remain in force till the relevant ordinance comes into being in accordance with the provisions of the Act.
2. The duration of the M.Sc. Home Science course shall be of two academic years consisting of four semester with University examinations at the end of each semester namely:
  - a. M.Sc. Home Science Semester I Exam.
  - b. M.Sc. Home Science Semester II Exam.
  - c. M.Sc. Home Science Semester III Exam.
  - d. M.Sc. Home Science Semester IV Exam.
3. Theory examination of Semester-I, II, III and IV shall be conducted by the University and shall be held separately at the end of each semester at such places and dates as may be decided and notified by the University and shall be held as per the schedule given in Table below.

Sr. No.	Name of the examination	Main Examination	Supplementary Examination
1	Semester I & III	Winter	Summer
2	Semester II & IV	Summer	Winter

4. The examinations shall be held at such places and dates which are notified by the university.
5. **ELIGIBILITY TO THE COURSE:**

Subject to their compliance with the provisions of this direction and of other ordinances in force from time to time, the following applicant candidates shall be eligible for the admission to M.Sc. Home Science and examinations their of

**a) For [M.Sc. Home Science (Food Science and Nutrition) Semester-I]**

For admission to the M.Sc. Home Science (**Food Science and Nutrition**) Semester I a candidate shall have B.Sc. (Home Science), B.Sc. with Postgraduate Diploma in Dietetics, M.B.B.S, B.Sc. with Nutrition of this university or of any other statutory university recognized equivalent thereto.

**b) For [M.Sc. Home Science (Resource Management) Semester-I]**

For Admission to the M.Sc. Home Science (Resource Management) Semester I, a candidate shall have offered B.Sc. (Home Science), M.A. (Home Economics) of the university or of any other statutory university recognized equivalent thereto.

**c) For [M.Sc. Home Science (Human Development) Semester –I]**

For admission to the M.Sc. Home Science (Human Development) Semester I, a candidate shall have B.Sc. (Home Science), B. A./ M.A. (Home Economics / Psychology), M.S.W., M.B.B.S., of the University or of any other statutory university recognized equivalent thereto.

**d) For [M.Sc. Home Science (Textiles and Clothing) Semester-I]**

For admission to the M.Sc. Home Science (Textile and Clothing) Semester I, B.Sc. (Home Science), Bachelor of Fashion Design, Bachelor of Textile Design of the university, B.Sc. in fashion Technology from Annamalai University or of any other statutory university recognized equivalent thereto.

**e) For [M.Sc. Home Science ( Extension Education ) Semester-I]**

For Admission to the M.Sc. Home Science (Extension Education) Semester I , a candidate shall have offered B.Sc.(Home science), M.A. (Home Economics), B.S.W, B.V.Sc, B.A. (Rural Services), Postgraduate diploma in Mass Communications. B.Sc. (Agriculture) of the university or of any other statutory university recognized equivalent thereto.

Candidates shall have passed any one of the above examinations from Rashtrasant Tukadoji Maharaj Nagpur University or any other statutory University of India or abroad, recognized by the UGC or any other concerned apex regulatory apex regulatory authority/ body of India.

**6. Choice Based Credit System Semester Pattern**

**a) M.Sc. Home Science Semester I Examination**

Students who have fulfilled the eligibility criteria as mentioned in Section 5 and have been admitted to this course in Semester I.

**b) M.Sc. Home Science Semester-II Examination**

Students who have been admitted to this course in semester -II.

**c) M.Sc. Home Science Semester-III Examination**

Students who have been admitted to this course in semester III.

**c) M.Sc. Home Science Semester-IV Examination**

Students who have been admitted to this course in semester IV.

**7** The ATKT rules for admission for the M.Sc. Home Science (Food Science and Nutrition/ Resource management / Human Development/Textile and Clothing/ Home Science Extension) (Theory and Practical as separate passing head) shall be as given in the following table.

Admission to semester	Candidate should have passed in all the subjects of the following examination of R.T. M Nagpur University	Candidate should have passed at least two third of the passing heads of the following examinations
Semester I	As provided in the para 6 of the direction	-----
Semester II	-----	-----
Semester III	-----	Semester I and II taken together
Semester IV	-----	-----

- 8. Without prejudice to other provisions of Ordinance no. 6 relating to the examination in general, provisions of Para 5, 8, 9, 10, 26, 31 and 32 of the said ordinance shall apply to every student admitted to this course.
- 9. The fees for the tuition, examination, laboratory and other fees shall be as prescribed by the university from time to time.
- 10. (a) The scope of the subjects shall be as prescribed in the syllabus.  
 (b) The medium of instruction and examination shall be English.
- 11. The number of papers and maximum marks assigned to each paper and minimum marks/grade, an examinee must obtain in order to pass and the Scheme of the M.Sc. Home Science examination shall be as prescribed in **APPENDIX-I** as appended with this direction respectively as follows :

Appendix-I-a- for M.Sc. Home Science (Food Science & Nutrition),  
 Appendix-I-b- for M.Sc. Home Science (Resource Management),  
 Appendix-I-c-for M.Sc. Home Science (Human Development),  
 Appendix-I-d-for M.Sc. Home Science (Textiles & Clothing) and  
 Appendix I-e- for M.Sc. Home Scienc (Extension Education)

- 12. The examinee at each of the examination shall have option of not being declared successful at the examination in case he/she does not secure a minimum of grade equivalent to 55% marks at the examination. This option will have to be exercised every time the application is submitted to any of the examinations. Once this option is exercised, the option shall be binding on the examinee and it shall not be evoked in under any circumstances.
- 13. The classification of the examinee successful at the semester and examination at the end of fourth semester examination shall be as per the rules and regulations of credit based semester pattern as prescribed in appendix, appended with this direction.
- 14. The provisions of Direction no. 3 of 2007 for the award of grace marks for passing an examination, securing higher grade in subject(s) as updated from time to time shall apply to the examination under this direction.
- 15. The names of the successful examinee passing the examination as a whole in the minimum prescribed period and obtaining prescribed number of places securing the grades equivalent to first and second division shall be arranged in order of merit as provided in ordinance 6 relating to examination in general.
- 16. Every student shall submit three copies of the project report (typed and properly bound) for the Fourth Semester to the University at least one month prior to the commencement of the final examination through the Head of the Department/Centre/the Principal of the college concerned along with the certificate signed by the supervisor and declaration by the candidate towards original work which is not submitted to any university or organization for award of the degree. The

scheme/guidelines for the students and supervisors regarding Project Work Report are given in **APPENDIX -II.**

17. Successful examinees will be given **Grade Point Average (GPA) and Course Grade Point Average (CGPA)** at the end of M.Sc.(Home Science) Semester-IV Examination as per the **APPENDIX-III**
18. No candidate shall be admitted to an examination under this direction, if he/she has already passed the same examination of this university or of any other university.
19. Successful examinees at the M. Sc.(Home Science) Semester I, II, III, & IV Examinations shall be entitled to receive a Certificate signed by the Controller of Examination of University (COE) and successful examinees at the end of M. Sc. Semester IV examination shall, on payment of prescribed fees, receive a Degree in the prescribed format, signed by the Vice-Chancellor.
20. This semester pattern course is based on Choice Based Credit System and therefore, it will be also regulated by guidelines and regulation given in **APPENDICES** which are part of this direction.

With the issuance of this Direction, the Direction No. 20 of 2016 shall stand repealed.

I further direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant ordinance comes into being, in accordance with the provisions of the Maharashtra Universities Act, 1994.

Sd/-

**Date : 7-10-2016**  
**Nagpur**

**Dr. S.P.Kane**  
**Hon'ble Vice-Chancellor**

## **APPENDIX -I**

### **Schemes of Five Specializations of Home Science**

#### **Appendix-I-a**

#### **Faculty of Home Science**

#### **M.Sc. Home Science (Food Science and Nutrition) (FSN)**

Scheme of Teaching and Examination under Semester Pattern

Choice Based Credit System (CBCS) for

M.Sc. Home Science (Food Science and Nutrition) Programme

#### **Semester-I**

Code	Paper/Code	Theory/Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
								External Marks	Internal Marks		
Core 1	Paper 1 (1T1)	Advanced Nutritional Biochemistry-I	4	--	4	4	3	80	20	100	50
Core 2	Paper 2 (1T2)	Advanced Food Science-I	4	--	4	4	3	80	20	100	50
Core 3	Paper 3 (1T3)	Institutional Food Administration-I	4	--	4	4	3	80	20	100	50
Core 4	Paper 4 (1T4)	Research Methods and Statistics-I	4	--	4	4	3	80	20	100	50
Practical Core 1	Practical 1 (1P1)	Advanced Nutritional Biochemistry-I	--	8	8	4	3	80	20	100	50
Practical Core 2	Practical 2 (1P2)	Advanced Food Science-I	--	8	8	4	3	80	20	100	50
Seminar 1	Seminar (1S1)	Current Trends and Issues in Food Science & Nutrition-I	2	--	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

**Note:**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 4/Paper 4 (1T4) is common for all specializations of Home Science.

Semester-II

Code	Paper/Code	Theory/Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
								External Marks	Internal Marks		
Core 5	Paper 5 (2T1)	Advanced Nutritional Biochemistry-II	4	--	4	4	3	80	20	100	50
Core 6	Paper 6 (2T2)	Advanced Food Science-II	4	--	4	4	3	80	20	100	50
Core 7	Paper 7 (2T3)	Institutional Food Administration-II	4	--	4	4	3	80	20	100	50
Core 8	Paper 8 (2T4)	Research Methods and Statistics-II	4	--	4	4	3	80	20	100	50
Practical Core 5	Practical 3 (2P1)	Advanced Nutritional Biochemistry-II	--	8	8	4	3	80	20	100	50
Practical Core 6	Practical 4 (2P2)	Advanced Food Science-II	--	8	8	4	3	80	20	100	50
Seminar 2	Seminar (2S1)	Current Trends and Issues in Food Science & Nutrition-II	2	--	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

**Note:**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 8/Paper 8 (2T4) is common for all specializations of Home Science.
3. Four weeks internship in Food Industry is compulsory after Semester II.

**Semester-III**

Code	Paper/Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
			External Marks	Internal Marks							
Core 9	Paper 9 (3T1)	Clinical and Therapeutic Nutrition-I	4	--	4	4	3	80	20	100	50
Core 10	(3RP)	Research Project (Design)	5	--	5	5	--	75	50	125	63
Elective 1	Paper 10  3T2a OR 3T2b	Advanced Nutrition-I OR Nutrition and Weight Management	4	--	4	4	3	80	20	100	50
Foundation 1* OR Core 11	Paper 11  3T3a OR 3T3b	Foundation1 OR Community Nutrition and Public Health-I	4	--	4	4	3	80	20	100	50
Practical Core 9	Practical 5 (3P1)	Clinical and Therapeutic Nutrition-I	--	8	8	4	3	80	20	100	50
Sessional Elective 1	Sessional 1  3Ses1a OR 3Ses1b	Advanced Nutrition-I OR Nutrition and Weight Management	--	4	4	2	--	--	50	50	25
Seminar 3	Seminar (3SI)/ Sessional	Seminar/Sessional	--	4	4	2	--	--	50	50	25
<b>TOTAL</b>			<b>17</b>	<b>16</b>	<b>33</b>	<b>25</b>	<b>--</b>	<b>395</b>	<b>230</b>	<b>625</b>	<b>313</b>

**Note :**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal], Sessional, Project Design and Research Project) will be 50 %.
2. The Research Project (Design) (Semester III) will be continued as Research Project in Semester IV.
3. For Semester III & IV, from Elective group, students will opt for only one paper.
4. \*List of foundation courses is provided by University, out of them students will have to select one subject each as a foundation course for semester III & IV.

OR

Instead of foundation courses, students can opt for the optional core paper from the given scheme during III<sup>rd</sup> & IV<sup>th</sup> Semester.

**Semester-IV**

**Semester-IV M.Sc. Home Science (Food Science and Nutrition)**

Code	Paper/Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
External Marks	Internal Marks							External Marks	Internal Marks		
Core 12	Paper 12 (4T1)	Clinical and Therapeutic Nutrition-II	4	--	4	4	3	80	20	100	50
Core 13	(4RP)	Research Project (Viva-Voce)	5	--	5	5	--	75	50	125	63
Elective 2	Paper 13	4T2a OR 4T2b	Advanced Nutrition-II/ Sports Nutrition	4	--	4	4	3	80	20	100
Foundation 2*/ Core14	Paper 14	4T3a OR 4T3b	Foundation 2 OR Community Nutrition and Public Health-II	4	--	4	4	3	80	20	100
Practical Core 12	Practical 6 (4P1)	Clinical and Therapeutic Nutrition-II	--	8	8	4	3	80	20	100	50
Sessional Elective 2	Sessional 3	4Ses1a / 4Ses1b	Advanced Nutrition-II/ Sports Nutrition	--	4	4	2	--	--	50	50
Seminar 4	Seminar (4SI)/ Sessional	Seminar /Sessional	--	4	4	2	--	--	50	50	25
<b>TOTAL</b>			<b>17</b>	<b>16</b>	<b>33</b>	<b>25</b>	<b>--</b>	<b>395</b>	<b>230</b>	<b>625</b>	<b>313</b>

**Note :**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal], Sessional, Project Design and Research Project) will be 50%.
2. Six weeks internship in Hospitals with Food Service under a Registered Dietitian is compulsory after IV Semester.
3. For Semester III & IV, from Elective group, students will opt for only one paper.
4. \*List of foundation courses is provided by University, out of them students will have to select one subject each as a foundation course for semester III & IV.

OR

Instead of foundation courses, students can opt for the optional core paper from the given scheme during III<sup>rd</sup> & IV<sup>th</sup> semester.

## **Appendix-I-b**

### **Faculty of Home Science**

### **M.Sc. Home Science (RESOURCE MANAGEMENT) (RM)**

Scheme of Teaching and Examination under Semester Pattern  
 Choice Based Credit System (CBCS) for  
 M.Sc. Home Science (RESOURCE MANAGEMENT) Programme

#### **Semester-I**

<b>Semester-I</b>		<b>M.Sc. Home Science (Resource Management)</b>										
Code	Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/Week)			Credits	Examination Scheme				Total Marks	Min. Passing Marks
			Theory	Practical	Total		Duration (Hrs)	Max. Marks	External marks	Internal Marks		
Core 1	Paper 1 (1T1)	Theory of Management I	4	-	4	4	3	80	20	100	50	
Core 2	Paper 2 (1T2)	Housing & Interior I	4	-	4	4	3	80	20	100	50	
Core 3	Paper 3 (1T3)	Hospitality Administration & Services I	4	-	4	4	3	80	20	100	50	
Core 4	Paper 4 (1T4)	Research Methods & Statistics I	4	-	4	4	3	80	20	100	50	
Practical Core 1	Practical 1 (1P1)	Theory of Management I	-	8	8	4	3	80	20	100	50	
Practical Core 2	Practical 2 (1P2)	Housing & Interior I	-	8	8	4	3	80	20	100	50	
Seminar 1	Seminar (1S1)	Current Trends & Issues In Resource Management I	2	-	2	1	-	-	25	25	13	
Total			18	16	34	25	-	480	145	625	313	

**Note:**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 4/Paper 4 (1T4) is common for all specializations of Home Science.

**Semester-II**

<b>Semester-II</b>		<b>M.Sc. Home Science (Resource Management)</b>									
<b>Code</b>	<b>Paper/ Code</b>	<b>Theory/ Practical</b>	<b>Teaching Scheme (Hrs/Week)</b>			<b>Credits</b>	<b>Examination Scheme</b>				
			<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>		<b>Total Marks</b>	<b>Min. Passing Marks</b>
Core 5	Paper 5 (2T1)	Theory of Management II	4	-	4	4	3	80	20	100	50
Core 6	Paper 6 (2T2)	Housing & Interior II	4	-	4	4	3	80	20	100	50
Core 7	Paper 7 (2T3)	Hospitality Administration & Services II	4	-	4	4	3	80	20	100	50
Core 8	Paper 8 (2T4)	Research Methods & Statistics II	4	-	4	4	3	80	20	100	50
Practical Core 5	Practical 3 (2P1)	Theory of Management II	-	8	8	4	3	80	20	100	50
Practical Core 6	Practical 4 (2P2)	Housing & Interior II	-	8	8	4	3	80	20	100	50
Seminar 2	Seminar (2S1)	Current Trends & Issues In Resource Management II	2	-	2	1	-	-	25	25	13
Total			18	16	34	25	-	480	145	625	313

**Note :**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 8/Paper 8 (2T4) is common for all specializations of Home Science.
3. Four weeks internship in Interior Decoration/Architect /Hotel is compulsory after semester II.

**Semester-III**

<b>Semester-III</b>		<b>M.Sc. Home Science (Resource Management)</b>									
Code	Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/Week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks	Total Marks	Min. Passing Marks	
Core 9	Paper 9 (3T1)	Ergonomics I	4	-	4	4	3	80	20	100	50
Core 10	(3RP)	Research Project (Design)	5	-	5	5	-	75	50	125	63
Elective1	Paper 10 3T2a OR 3T2b	Landscape Design I OR Environment Management	4	-	4	4	3	80	20	100	50
Foundation 1* OR Core 11	Paper 11 3 T3a OR 3T3b	Foundation1 OR Entrepreneurship Management	4	-	4	4	3	80	20	100	50
Practical Core 9	Practical 5 (3P1)	Ergonomics I	-	8	8	4	3	80	20	100	50
Sessional Elective 1	Sessional 1 3Ses 1a OR 3Ses 1b	Landscape design 1 OR Environment Management	-	4	4	2	-	-	50	50	25
Seminar 3	Seminar (3SI)/ Sessional	Seminar/ Sessional	-	4	4	2	-	-	50	50	25
Total			17	16	33	25	-	395	230	625	313

Note:

1. Minimum Passing marks in each head (Theory [External +Internal], Practical [External +Internal] and Sessional, Project Design and Research Project) will be 50%.
2. The Research Project of III Semester will be continued as Research Project in Semester IV.
3. For Semester III & IV from Elective group students will opt for only one paper
4. List of \*Foundation courses is provided by university, out of them students will opt to select one subject each as a foundation course for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

**Semester-IV**

**Semester-IV**

**M.Sc. Home Science (Resource Management)**

Code	Paper/ Code	Theory/ Practical	Teaching Scheme (Hrs/Week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
External marks	Internal marks										
Core 12	Paper 12 (4T1)	Ergonomics II	4	-	4	4	3	80	20	100	50
Core 13	(4RP)	Research Project (Viva-voce)	5	-	5	5	-	75	50	125	63
Elective 2	Paper 13	4T2a OR 4T2b	Landscape Design II/Sustainable Development & Resource Management	4	-	4	4	3	80	20	100
Foundation 2* OR Core 14	Paper 14	4 T3a OR 4T3b	Foundation 2 OR Entrepreneurship Management II	4	-	4	4	3	80	20	100
Practical Core 12	Practical 6 (4 P1)	Ergonomics II		-	8	8	4	3	80	20	100
Sessional Elective 2	Sessional 3	4Ses 1a OR 4Ses 1b	Landscape design II/ Sustainable Development & Resource Management	-	4	4	2	-	-	50	50
Seminar 4	Seminar (4SI)/ Sessional	Seminar/ Sessional	-	4	4	2	-	-	-	50	50
Total			17	16	33	25	-	395	230	625	313

**Note :**

1. Minimum passing marks in each head (Theory [External +Internal], practical [External +Internal], sessional, project design and Research project) will be 50 %.
2. Six week internship in any Entrepreneurship /Landscape Designer/Event planner is compulsory after IV semester.
3. For semester III &IV from Elective group students will opt for only one paper
4. List of \*Foundation courses is provided by university, out of them students will opt to select one subject each as a foundation course for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

**Appendix-I-c**  
**Faculty of Home Science**  
**M.Sc. Home Science (Human Development) (HD)**

Scheme of Teaching and Examination under Semester Pattern  
 Choice Based Credit System (CBCS) for  
 M.Sc. Home Science (**Human Development**) Programme

**Semester-I**

<b>Semester-I</b>		<b>M.Sc. Home Science (Human Development)</b>									
<b>Code</b>	<b>Paper/ Code</b>	<b>Theory/Practical</b>	<b>Teaching Scheme (Hrs/week)</b>			<b>Credits</b>	<b>Examination Scheme</b>				
			<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>	<b>External Marks</b>	<b>Internal Marks</b>	
Core 1	Paper 1 (1T1)	Management of Programmes for Children & Families	4	--	4	4	3	80	20	100	50
Core 2	Paper 2 (1T2)	Methods & Materials for working with Young Children	4	--	4	4	3	80	20	100	50
Core 3	Paper 3 (1T3)	Overview of Theoretical Perspectives in Human Development	4	--	4	4	3	80	20	100	50
Core 4	Paper 4 (1T4)	Research Methods and Statistics-I	4	--	4	4	3	80	20	100	50
Practical Core 1	Practical 1 (1P1)	Management of Programmes for Children & Family	--	8	8	4	3	80	20	100	50
Practical Core 2	Practical 2 (1P2)	Methods & Materials for Working with Young Children	--	8	8	4	3	80	20	100	50
Seminar 1	Seminar (1S1)	Current Trends and Issues in Human Development-I	-	2	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

Note :

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 4/Paper 4 (1T4) is common for all specializations of Home Science.

**Semester-II**

Code	Paper/ Code	Theory/Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
								External Marks	Internal Marks		
Core 5	Paper 5 (2T1)	Methods of Studying Human Development	4	--	4	4	3	80	20	100	50
Core 6	Paper 6 (2T2)	Early Childhood care and Education	4	--	4	4	3	80	20	100	50
Core 7	Paper 7 (2T3)	Study of Family in Society	4	--	4	4	3	80	20	100	50
Core 8	Paper 8 (2T4)	Research Methods and Statistics-II	4	--	4	4	3	80	20	100	50
Practical Core 5	Practical 3 (2P1)	Methods of Studying Human Development	--	8	8	4	3	80	20	100	50
Practical Core 6	Practical 4 (2P2)	Early Childhood care and Education	--	8	8	4	3	80	20	100	50
Seminar 2	Seminar (2S2)	Current Trends and Issues in Human Development-II	--	2	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

**Note :**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 8/Paper 8 (2T4) is common for all specializations of Home Science.

**Semester-III**

**M.Sc. Home Science (Human Development)**

Code	Paper/Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks	External Marks	Internal Marks	Total Marks
Core 9	Paper 9 (3T1)	The Child with Special Needs	4	--	4	4	3	80	20	100	50
Core 10	Paper 10 (3T2)	Adolescent Needs and Challenges	4	--	4	4	3	80	20	100	50
Elective 1	Paper 11	3T3a OR 3T3b	Care of children with Disabilities OR Parenting During Early Years	4	--	4	3	80	20	100	50
Foundation 1* OR Core 11	Paper 12	3T4a OR 3T4b	Foundation 1 OR Child and Human Rights	4	--	4	3	80	20	100	50
Practical Core 9	Practical 5 (3P1)	The Child with Special Needs	--	8	8	4	4	80	20	100	50
Practical Core 10	Practical 6 (3P2)	Adolescent Needs and Challenges	--	8	8	4	4	80	20	100	50
Research Project (Design)	3RP	Research Project (Design)	--	2	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

Note:

1. Minimum Passing marks in each head (Theory [External +Internal], Practical [External +Internal] and Project Design and Research Project) will be 50%.
2. The Research Project (Design) of III Semester will be continued as Research Project in Semester IV.
3. For Semester III & IV from Elective group students will opt for only one paper.
4. List of \*Foundation courses is provided by University, out of them students will have to opt for any one subject each for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

**Semester-IV**

<b>Code</b>	<b>Paper/Code</b>	<b>Theory/ Practical</b>	<b>Teaching Scheme (Hrs/week)</b>			<b>Credits</b>	<b>Examination Scheme</b>				
			<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>		<b>Total Marks</b>	<b>Min. Passing Marks</b>
								<b>External Marks</b>	<b>Internal Marks</b>		
Core 12	Paper 13 (4T1)	Guidance, Counseling & Psychotherapeutics	4	--	4	4	3	80	20	100	50
Core 13	Paper 14 (4T2)	Mental Health in Developmental Perspective	4	--	4	4	3	80	20	100	50
Elective 2	Paper 15  4T3a OR 4T3b	Media in Human Development OR Curriculum for ECE	4	--	4	4	3	80	20	100	50
Foundation 2* OR Core 14	Paper 16  4T4a OR 4T4b	Foundation 2 OR Care of Elderly	4	--	4	4	3	80	20	100	50
Practical Core 12	Practical 7 (4P1)	Guidance, Counseling & Psychotherapeutics	--	8	8	4	4	80	20	100	50
Research Project	4RP	Research Project (Viva Voce)	--	8	8	4	4	80	20	100	50
Seminar 3	Seminar (4S1)	Research Project Seminar	--	2	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

Note:

1. Minimum Passing marks in each head (Theory [External +Internal], Practical [External +Internal] and Project Design and Research Project) will be 50%.
2. The Research Project (Design) of III Semester will be continued as Research Project in Semester IV.
3. For Semester III & IV from Elective group students will opt for only one paper.
4. List of \*Foundation courses is provided by University, out of them students will have to opt for any one subject each for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

## Appendix-I-d

### Faculty of Home Science

#### **M.Sc. Home Science (TEXTILE AND CLOTHING) (T&C)**

Scheme of Teaching and Examination under Semester Pattern

Choice Based Credit System (CBCS) for

M.Sc. Home Science (TEXTILE AND CLOTHING) Programme

#### Semester-I

<b>Semester-I</b>		<b>M.Sc. Home Science (Textile and Clothing)</b>									
<b>Code</b>	<b>Paper/ Code</b>	<b>Theory/Practical</b>	<b>Teaching Scheme (Hrs/week)</b>			<b>Credits</b>	<b>Examination Scheme</b>				
			<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>		<b>Total Marks</b>	<b>Min. Passing Marks</b>
Core 1	Paper 1 (1T1)	Textile Testing & Quality Control	4	--	4	4	3	80	20	100	50
Core 2	Paper 2 (1T2)	Advance Pattern Making & Construction Techniques	4	--	4	4	3	80	20	100	50
Core 3	Paper 3 (1T3)	Textile Science	4	--	4	4	3	80	20	100	50
Core 4	Paper 4 (1T4)	Research Methods And Statistics-I	4	--	4	4	3	80	20	100	50
Practical Core 1	Practical 1 (1P1)	Textile Testing & Quality Control	--	8	8	4	3	80	20	100	50
Practical Core 2	Practical 2 (1P2)	Advanced Pattern Making & Construction Techniques	--	8	8	4	3	80	20	100	50
Seminar1	Seminar (1S1)	Current Trends & Issues In Textiles And Clothing-I	2	-	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

Note :

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 4/Paper 4 (1T4) is common for all specializations of Home Science.

**Semester-II**

<b>Semester-II</b>		<b>M.Sc. Home Science (Textile and Clothing)</b>									
<b>Code</b>	<b>Paper/Code</b>	<b>Theory/Practical</b>	<b>Teaching Scheme (Hrs/week)</b>			<b>Credits</b>	<b>Examination Scheme</b>				
			<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>		<b>Total Marks</b>	<b>Min. Passing Marks</b>
Core 5	Paper 5 (2T1)	Advanced Draping	4	--	4	4	3	80	20	100	50
Core 6	Paper 6 (2T2)	Advanced Textile Designing	4	--	4	4	3	80	20	100	50
Core 7	Paper 7 (2T3)	Grading	4	--	4	4	3	80	20	100	50
Core 8	Paper 8 (2T4)	Research Methods and Statistics -II	4	--	4	4	3	80	20	100	50
Practical Core 5	Practical 3 (2P1)	Advance Draping	--	8	8	4	3	80	20	100	50
Practical Core 6	Practical 4 (2P2)	Advance Textile Designing	--	8	8	4	3	80	20	100	50
Seminar 2	Seminar (2S1)	Current Trends & Issues in Textiles and Clothing-II	2	-	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>18</b>	<b>16</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

**Note:**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 8/Paper 8 (2T4) is common for all specializations of Home Science.
3. Three weeks internship in Textile Industry or Fashion Industry is compulsory after Semester II.

Semester-III

Semester-III			M.Sc. Home Science (Textile and Clothing)									
Code	Paper/Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme					
			Theory	Practical	Total		Duration (Hrs)	Max. Marks	External Marks	Internal Marks		
Core 9	Paper 9 (3T1)	Fashion Designing	4	--	4	4	3	80	20	100	50	
Core 10	(3RP)	Research Project (Design)	5	--	5	5	--	75	50	125	63	
Elective 1	Paper 10	3T2a OR 3T2b	Programme Design and Evaluation in Textile Clothing OR Textile Chemistry	4	--	4	4	80	20	100	50	
Foundation 1* OR Core 11	Paper 11	3T3a OR 3T3b	Foundation 1 OR Textile And Apparel Merchandising	4	--	4	4	80	20	100	50	
Practical Core 9	Practical 5 (3P1)	Fashion Designing	--	8	8	4	3	80	20	100	50	
Sessional Elective 1	Sessional 1	3Ses1a /	Programme Design and Evaluation in Textile Clothing, OR Textile Chemistry		4	4	2	--	--	50	50	25
Seminar 3	Seminar (3SI)/ Sessional	Seminar/ Sessional	--	4	4	2	--	--	50	50	25	
<b>TOTAL</b>			<b>17</b>	<b>16</b>	<b>33</b>	<b>25</b>	<b>--</b>	<b>395</b>	<b>230</b>	<b>625</b>	<b>313</b>	

Note:

1. Minimum Passing marks in each head (Theory [External +Internal], Practical [External +Internal] and Project Design and Research Project) will be 50%.
2. The Research Project (Design) of III Semester will be continued as Research Project in Semester IV.
3. For Semester III & IV from Elective group students will opt for only one paper.
4. List of \*Foundation courses is provided by University, out of them students will have to opt for any one subject each for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

**Semester-IV**

<b>Semester-IV</b>		<b>M.Sc. Home Science (Textile and Clothing)</b>										
Code	Paper/Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme					
			Theory	Practical	Total		Duration (Hrs)	Max. Marks	External Marks	Internal Marks	Total Marks	Min. Passing Marks
Core 12	Paper 12 (4T1)	Entrepreneurship Development in Textile and Clothing,	4	--	4	4	3	80	20	100	50	
Core 13	(4RP)	Research Project Viva-Voce)	5	--	5	5	3	75	50	125	63	
Elective 2	Paper 13	4T2a OR 4T2b	Care for Textile and Clothing OR Textile at Home	4	--	4	4	3	80	20	100	50
Foundation 2* OR Core 14	Paper 14	4T3a OR 4T3b	Foundation 2 OR Training & Skill Development	4	--	4	4	3	80	20	100	50
Practical Core 12	Practical 6 (4P1)	Entrepreneurship Development in Textile & Clothing	--	8	8	4	3	80	20	100	50	
Sessional Elective 2	Sessional 2	4 Ses1a OR 4Ses 1b	Care for Textile & Clothing OR Textile at Home	-	4	4	2	--	--	50	50	25
<b>Seminar 4</b>	<b>Seminar (4SI)/ Sessional</b>	Seminar/ Sessional	--	4	4	2	--	--	50	50	25	
<b>TOTAL</b>			<b>17</b>	<b>16</b>	<b>33</b>	<b>25</b>	<b>--</b>	<b>395</b>	<b>230</b>	<b>625</b>	<b>313</b>	

Note:

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal], Sessional, Project Design and Research Project) will be 50 %.
2. Three weeks internship in Textile Industry or Fashion Industry is compulsory after IV Semester.
3. The Research Project (Design) (Semester III) will be continued as Research Project in Semester IV.
4. For Semester III & IV, from Elective group, students will opt for only one paper.
5. List of \*Foundation courses is provided by University, out of them students will have to opt for any one subject each for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

**Appendix-I-e**  
**Faculty of Home Science**  
**M.Sc. Home Science (EXTENSION EDUCATION) (EXT)**

Scheme of Teaching and Examination under Semester Pattern  
 Choice Based Credit System (CBCS) for  
 M.Sc. Home Science (EXTENSION EDUCATION) Programme

**Semester-I**

<b>Semester-I</b>		<b>M.Sc. Home Science (Extension Education)</b>									
<b>Code</b>	<b>Paper/Code</b>	<b>Theory/Practical</b>	<b>Teaching Scheme (Hrs/week)</b>			<b>Credits</b>	<b>Examination Scheme</b>				
			<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>		<b>Total Marks</b>	<b>Min. Passing Marks</b>
Core 1	Paper 1 (1T1)	Communication Technology	4	--	4	4	3	80	20	100	50
Core 2	Paper 2 (1T2)	Community Health	4	--	4	4	3	80	20	100	50
Core 3	Paper 3 (1T3)	Socio - Economic Environment	4	--	4	4	3	80	20	100	50
Core 4	Paper 4 (1T4)	Research Methods and Statistics-I	4	--	4	4	3	80	20	100	50
Practical Core 1	Practical 1 (1P1)	Communication Technology	--	8	8	4	3	80	20	100	50
Practical Core 2	Practical 2 (1P2)	Community Health	--	8	8	4	3	80	20	100	50
Seminar 1	Seminar (1S1)	Current Trends & Issues in Extension Education	-	2	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

Note :

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 4/Paper 4 (1T4) is common for all specializations of Home Science.

**Semester-II**

<b>Semester-II</b>		<b>M.Sc. Home Science (Extension Education)</b>									
<b>Code</b>	<b>Paper/Code</b>	<b>Theory/Practical</b>	<b>Teaching Scheme (Hrs/week)</b>			<b>Credits</b>	<b>Examination Scheme</b>				
			<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>		<b>Total Marks</b>	<b>Min. Passing Marks</b>
Core 5	Paper 5 (2T1)	Media Technology for Communication	4	--	4	4	3	80	20	100	50
Core 6	Paper 6 (2T2)	Nutrition Education	4	--	4	4	3	80	20	100	50
Core 7	Paper 7 (2T3)	Women and Development	4	--	4	4	3	80	20	100	50
Core 8	Paper 8 (2T4)	Research Methods and Statistics-II	4	--	4	4	3	80	20	100	50
Practical Core 5	Practical 3 (2P1)	Media Technology for Communication	--	8	8	4	3	80	20	100	50
Practical Core 6	Practical 4 (2P2)	Nutrition Education	--	8	8	4	3	80	20	100	50
Seminar 2	Seminar (2S1)	Current Trends & Issues in Extension Education	-	2	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

**Note :**

1. Minimum passing marks in each head (Theory [External + Internal], Practical [External + Internal] and Seminar) will be 50 %.
2. Core 8/Paper 8 (2T4) is common for all specializations of Home Science.

**Semester-III**

<b>Semester-III</b>			<b>M.Sc. Home Science (Extension Education)</b>									
			Teaching Scheme (Hrs/week)			Credits	Examination Scheme					
<b>Code</b>	<b>Paper/Code</b>	<b>Theory/ Practical</b>	<b>Theory</b>	<b>Practical</b>	<b>Total</b>		<b>Duration (Hrs)</b>	<b>Max. Marks</b>		<b>Total Marks</b>	<b>Min. Passing Marks</b>	
								<b>External Marks</b>	<b>Internal Marks</b>			
Core 9	Paper 9 (3T1)	Non – Formal Education	4	--	4	4	3	80	20	100	50	
Core 10	Paper 10 (3T2)	Diffusion of Innovations	4	--	4	4	3	80	20	100	50	
Elective 1	Paper 11	3T3a OR 3T3b	Programme Planning In Extension OR Rural Development & Extension Services	4	--	4	4	80	20	100	50	
Foundation 1* OR Core 11	Paper 12	3T4a OR 3T4b	Foundation 1 OR Human Rights of Women & Children	4	--	4	4	80	20	100	50	
Practical Core 9	Practical 5 (3P1)		Non - Formal Education	--	8	8	4	4	80	20	100	50
Practical Core 10	Practical 6 (3P2)		Diffusion of Innovation	--	8	8	4	4	80	20	100	50
Research Project (Design)	3RP		Research Project (Design)	--	2	2	1	--	--	25	25	13
<b>TOTAL</b>				<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

Note:

1. Minimum Passing marks in each head (Theory [External +Internal], Practical [External +Internal] and Project Design and Research Project) will be 50%.
2. The Research Project (Design) of III Semester will be continued as Research Project in Semester IV.
3. For Semester III & IV from Elective group students will opt for only one paper.
4. List of \*Foundation courses is provided by University, out of them students will have to opt for any one subject each for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

**Semester-IV**

**M.Sc. Home Science (Extension Education)**

Code	Paper/Code	Theory/ Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme				
			Theory	Practical	Total		Duration (Hrs)	Max. Marks		Total Marks	Min. Passing Marks
								External Marks	Internal Marks		
Core 12	Paper 13 (4T1)	Distance Education	4	--	4	4	3	80	20	100	50
Core 13	Paper 14 (4T2)	Adoption of Innovations	4	--	4	4	3	80	20	100	50
Elective II	Paper 15  4T3a OR 4T3b	Programme Building in Extension OR Media for Distance Education	4	--	4	4	3	80	20	100	50
Foundation 2* OR Core 14	Paper 16  4T4a OR 4T4b	Foundation 2 OR Environmental Education	4	--	4	4	3	80	20	100	50
Practical Core 12	Practical 5 (4P1)	Distance Education	--	8	8	4	4	80	20	100	50
Research Project	(4RP)	Research Project ( Viva – Voce)	--	8	8	4	4	80	20	100	50
Seminar 3	Seminar (4S1)	Research Project Seminar	--	2	2	1	--	--	25	25	13
<b>TOTAL</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>

Note:

1. Minimum Passing marks in each head (Theory [External +Internal], Practical [External +Internal] and Project Design and Research Project) will be 50%.
2. The Research Project (Design) of III Semester will be continued as Research Project in Semester IV.
3. For Semester III & IV from Elective group students will opt for only one paper.
4. List of \*Foundation courses is provided by University, out of them students will have to opt for any one subject each for semester III & IV.

**OR**

Instead of Foundation courses, students can opt the optional core paper from the given scheme during III & IV semester.

## **APPENDIX -II**

### **PROJECT WORK**

#### **TWO YEAR CHOICE BASED CREDIT SYSTEM (FOUR SEMESTERS) DEGREE COURSE**

#### **GUIDELINES FOR THE STUDENTS, SUPERVISORS & EXAMINERS:**

The student will have to carry out the research based project work in lieu of practical from third semester in the department. The student will be attached to any of the national/ regional/ private research institute/ organization, if required. The student in consultation with supervisor will finalize the topic of the project work at the beginning of the third semester.

The Project work will carry marks as shown in the respective schemes for M.Sc. Home Science Programmes. Every student is required to carry out Experimental/ Field based Project works on related research topic of the subject / course. It must be an original work and must submit the project Report (typed and properly bound) in three copies at least one month prior to commencement of the final practical / lab examination of semester IV. The project report shall comprise of introduction, review of literature, methodology, results and discussion, summary, conclusion and references along with the declaration by the candidate that the work is original and not submitted to any university or organization for award of degree and certificate by the supervisor and forwarded through Head/ Course – Coordinator/ Director of the department / centre or the Principal of the college.

The Project Work will be evaluated by the examiners.

The supervisors for the Project Work shall be from the following:

A person selected by the duly constituted Selection Committee in the relevant subject and approved by the University, exclusively for P.G. course.

#### **OR**

A person selected by the duly constituted Selection Committee of the University approved by the University and appointed as a full time regular teacher at U.G. level in the relevant subject and having at least 15 years teaching experience.

#### **OR**

A person selected by the duly constituted Selection Committee of the University approved by the University and appointed as a full time regular teacher at U.G. level having M. Phil degree with 10 years teaching experience at UG level, or a person who has Ph.D. Degree, with 5 years teaching experience in relevant subject.

#### **OR**

Scientists of National Laboratories/ Regional Research Laboratories who are approved by dint of their appointments in such facilities by the Union Government / the State Government / RTM Nagpur University / Other Universities recognized by UGC with at least in the Grade Pay of Rs.8000/-.

Students will be assigned the topic for Project Work by their respective supervisors. Project Work shall be evaluated by both external and /or internal examiner in the respective Department /Center / Affiliated Colleges.

The examiner will evaluate the Project Work taking into account the following considerations:

- 1] Coverage of subject matter
- 2] Arrangement & Presentation
- 3] References

### APPENDIX - III

#### GRADE POINT AVERAGE (GPA) & COURSE GRADE POINT AVERAGE (CGPA)

##### a) Grade point Average (CGA) and Course Grade Point Average (CGPA)

- 1) On clearing a paper, based on the cumulative score (Out of 100) in that paper, a student will be given Grade point Average (GPA) ( Maximum of 10 and minimum of 4) for that paper on the following basis:

Sr. No	Score (Out of 100)	Grade	Grade Point Average (Out of 10)
1	85 to 100	O: Outstanding	10
2	84 to 70	A: Very Good	9
3	69 to 60	B: Good	8
4	59 to 55	C: Average	7
5	54 to 50	D: Satisfactory	6
6	49 to 40	E: Pass	5
7	Below 40	F: Fail.	Fail

- 2) On clearing all the papers in a semester, a student will be allotted a **Semester Grade Point Average, (SGPA)** for that particular semester. As the pattern given above does not have differential weightage for papers, **SGPA** of a student for a particular semester will be the average of the GPA's for all the papers.
- 3) A students will be allotted a **Cumulative Grade Point Average (CGPA)** after clearing all the four semesters. Again as there is no differential weightage system for semesters, the CGPA of a student will be the average of the four SGPA's of that student.

The CGPA can be converted to the usual / conventional divisions in the following way:

Sr. No	CGPA	Grade	Equivalent Class/ Division	%
1	9.00 to 10.00	O	First Class (Outstanding)	85% and above
2	8.00 to 8.99	A	First Class( Excellent)	70-84%
3	7.00 to 7.99	B	First Class with Distinction	60-69%
4	6.00 to 6.99	C	First Class	55-59%
5	5.00 to 5.99	D	Second Class	50-54%
6	4.00 to 4.99	E	Pass Class	40-49%
7	Below 4.00	F	Fail	Below 40%

- a) A student who has failed to score minimum 40% marks in each head of passing and in aggregate shall be given F grade.
- b) Students with F grade in a course would be granted credit for that course but not the grade for that course.
- c) Grade points earned in each paper shall be calculated as Grade points obtained x Credits for the paper.

- d) The formula for GPA will be based on the weighted average. The GPA will not be printed unless a student passes courses equivalent to minimum 100 credits.
4. While declaring the result, the existing relevant ordinance is applicable. For verification and revaluation existing rules will be applicable.
5. The candidate may take all the examinations as per the provision of ATKT simultaneously but his result of final semester shall not be declared unless she is declared successful at lower examination.
6. If the examinee failed to pass the post graduate programme within five successive years (for four semester degree) from the date of her first admission to particular post graduate programme he/ she shall be declared as “Not fit for the Course (NFC)” and she will not be allowed to appear further for any previous examination of the course.
7. The computation of semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of an examinee shall be given below:
- The marks will be given in all the examinations which will include the department/ college assessment marks and the total marks for each theory/practicals/ sessionals shall be converted into grades as per above table. SGPA shall be calculated based on the Grade Points corresponding to grade as given in above table and the credits allotted to respective theory / practical/ sessionals shown in the scheme for respective semester.
  - SGPA shall be computed for every semester and CGPA shall be computed only in IV semester. The CGPA of IV semester shall be calculated based on SGPA of all four semesters.

$$SGPA = \frac{C_1xG_1 + C_2xG_2 + \dots + C_nxG_n}{C_1 + C_2 + \dots + C_n}$$

Where  $C_i$  = Credit of Individual theory/ practical/ sessionals

$G_i$  + Corresponding grade point obtained in the respective theory/practical/sessionals

$$CGPA = \frac{(SGPA)_1 x(Cr)_1 + (SGPA)_2 x(Cr)_2 + \dots + (SGPA)_n x(Cr)_n}{(Cr)_1 + (Cr)_2 + \dots + (Cr)_n}$$

$(SGPA)_1$  = SGPA of semester-I;  $(Cr)_I$  = Total Credit for Semester-I

$(SGPA)_2$  = SGPA of semester-II;  $(Cr)_{II}$  = Total Credit for Semester-II

$(SGPA)_3$  = SGPA of semester-III;  $(Cr)_{III}$  = Total Credit for Semester- III

$(SGPA)_4$  = SGPA of semester-IV;  $(Cr)_{IV}$  = Total Credit for Semester-IV

**APPENDIX- IV**  
**GENERAL INSTRUCTIONS/ DIRECTIONS**

**TEACHING**

1. Syllabus to be implemented with effect from academic session 2016-17.
2. The students shall be required to participate in educational/ Industrial tour during PG course.
3. Each theory paper is supposed to cover minimum 60 clock hours (15 clock hours per unit) of teaching.
4. One credit course of theory will be of one clock hour per week of 25 marks running for 15 weeks and four credit course of theory will be of four clock hours per week of 100 marks running for 15 weeks.
5. One credit course of practical will consist of two clock hours of laboratory exercise of 25 marks running for 15 weeks and four credit course of practical will consist of eight hours of laboratory exercise of 100 marks running for 15 weeks.

**SEMINAR**

In each semester-I & II, student will have to deliver seminar on any topic relevant to the syllabus encompassing the recent trends and development in that field. The topic of the seminar will be decided at the beginning of each semester in consultation with the supervising teachers. The student has to deliver the seminar which will be followed by discussion. The seminar will be open to all the teachers of the department, invitees, and students. In respect of following 3 Specializations Food & Nutrition, Resource Management and Textiles & Clothing, in Semester III & IV, the seminar/ Sesssional would be of 50 marks based on any recent topics.

**INTERNAL ASSESSMENT MARKS**

The internal assessment marks shall be awarded by the concerned teacher.

- a) The internal assessment shall be completed by the College / University at least 15 days prior to the final examination of each semester. The Marks shall be sent to the University immediately after the Assessment in the prescribed format.
- b) For the purpose of internal assessment the University Department / College shall conduct one to three assignments described below. Best two scores of a student in these tests shall be considered to obtain the internal assessment score of that student.
- c) General guidelines for Internal Assessment are:
  - i. The internal assessment marks assigned to each theory paper as mentioned in Appendix-I shall be awarded on the basis of assignments like class test, attendance, home assignments, study tour, industrial visits, visit to educational institutions and research organizations, field work, group discussions or any other innovative practice / activity.
  - ii. There shall be one to three assignments (as described above) per theory paper.
  - iii. There shall be no separate / extra allotment of work load to the teacher concerned. He/ She shall conduct the Internal assessment activity during the regular teaching days / periods as a part of regular teaching activity.
  - iv. The concerned teacher / department / college shall have to keep the record of all the above activities until six months after the declaration of the results of that semester.

- v. At the beginning of each semester, every teacher / department / college shall inform his / her students unambiguously the method he / she propose to adopt and the scheme of marking for internal assessment.
- vi. Teacher shall announce the schedule of activity for internal assessment in advance in consultation with HOD / Principal.
- vii. Final submission of internal marks to the University shall be before the commencement of the University Theory / Practical examinations whichever is later.

### **Theory Examination (Question paper Pattern)**

1. Question paper shall have five questions with equal marks / credits.
2. First two questions will be long questions with internal choice from same unit.
3. Questions 3<sup>rd</sup> and 4<sup>th</sup> will be divided into sub questions with internal choices from same unit.
4. Question 5<sup>th</sup> will comprise of six short questions from all unit, out of which only four questions will be attempted by the candidate.

### **Practical Examination**

1. Practical exam shall be of 3 to 8 hours duration for one or two days, depending on subject and number of students.
2. Each practical carries 100 marks. For the examination, the distribution of the marks shall be as follows:
  - a. Record / Journal / Internal assessment : 20 marks – Evaluated by Internal
  - b. Practical Performance : 60 marks – Evaluated jointly by External & Internal
  - c. Viva-voce : 20 marks - Evaluated by External

NOTE: Practical performance shall be jointly evaluated by the External and Internal Examiner. In case of discrepancy, the External Examiner's decision shall be final.

3. The Practical Record of every student shall carry a certificate as shown below, duly signed by the teacher-in-charge and the Head of the Department.
4. If the student fails to submit his / her certified Practical Record duly signed by the Teacher-In-Charge and the Head of the Department, he / she shall not be allowed to appear for the Practical Examination and no Marks shall be allotted to the student.
5. The certificate template shall be as follows:

## C E R T I F I C A T E

Name of the College / Institution \_\_\_\_\_

Name of the Department: \_\_\_\_\_

This is to certify that this Practical Record contains the bonafide record of the Practical work of Shri /  
Shrimati / Kumari \_\_\_\_\_ of M. Sc. \_\_\_\_\_  
Semester \_\_\_\_\_ during the academic year \_\_\_\_\_. The candidate has satisfactorily completed  
the experiments prescribed by Rashtrasant Tukdoji Maharaj Nagpur University for the subject \_\_\_\_\_  
\_\_\_\_\_

Dated \_\_\_ / \_\_\_ / \_\_\_\_\_

Signature of the teacher who taught the examinee

1. \_\_\_\_\_
2. \_\_\_\_\_

Head of the Department

## APPENDIX- V

### ABSORPTION SCHEME

#### **Absorption scheme for failure students of the Credit Based Semester Pattern:**

- a) While switching over to Choice Based Credit System, the Failure students of credit based semester pattern will be given **Five** chances to clear the examination.
- b) The candidates who have cleared first and second semester of the Credit Based Semester Pattern examination in the concerned subject shall get admission to Third Semester of the Choice Based Credit System directly. However, candidates who are allowed to keep term will not be eligible for admission to Third Semester of the Choice Based Credit System unless they clear all the papers and practical of first and second semester of the Credit Based System Pattern examination as per the clause (a)

#### **Absorption scheme for failure students of Annual Pattern:**

The candidates who have cleared first year of annual pattern shall get admission to Semester III of the Choice Based Credit System directly. However, candidates who are allowed to keep term will not be eligible for admission to Third Semester of the Choice Based Credit System unless they clear all the papers and practical of First year of the Annual Pattern Examination.

**APPENDIX- VI**

**FOUNDATION COURSE (1 and 2)**

**FACULTY OF HOME SCIENCE**

**SCHEME AND SYLLABUS**

**FOR**

**M.Sc. HOME SCIENCE**

**FOOD SCIENCE AND NUTRITION**

**CHOICE BASED CREDIT SYSTEM**

**SEMESTER PATTERN**

**2016-2017**

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**NAGPUR**

**MAHARASHTRA**

**INDIA**

**M.Sc. Home Science (Food Science and Nutrition)**  
 Choice Based Credit System Semester Pattern  
**Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (M. S.), India**

Paper	SubjectCode	Name of Paper	Marks	Credits
<b>Semester - I</b>				
<b>Paper 1 (Core 1)</b>	<b>1T1</b>	Advanced Nutritional Biochemistry – I	<b>100</b>	25
<b>Paper 2 (Core 2)</b>	<b>1T2</b>	Advanced Food Science – I	<b>100</b>	
<b>Paper 3 (Core 3)</b>	<b>1T3</b>	Institutional Food Administration – I	<b>100</b>	
<b>Paper 4 (Core 4)</b>	<b>1T4</b>	Research Methods and Statistics – I	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 1</b>	<b>1P1</b>	Advanced Nutritional Biochemistry – I	<b>100</b>	25
<b>Practical Core 2</b>	<b>1P2</b>	Advanced Food Science – I	<b>100</b>	
<b>Seminar 1</b>	<b>1S1</b>	Current Trends & Issues in Food Science & Nutrition - I	<b>25</b>	
<b>Semester - II</b>				
<b>Paper 5 (Core 5)</b>	<b>2T1</b>	Advanced Nutritional Biochemistry – II	<b>100</b>	25
<b>Paper 6 (Core 6)</b>	<b>2T2</b>	Advanced Food Science – II	<b>100</b>	
<b>Paper 7 (Core 7)</b>	<b>2T3</b>	Institutional Food Administration – II	<b>100</b>	
<b>Paper 8 (Core 8)</b>	<b>2T4</b>	Research Methods and Statistics – II	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 5</b>	<b>2P1</b>	Advanced Nutritional Biochemistry – II	<b>100</b>	25
<b>Practical Core 6</b>	<b>2P2</b>	Advanced Food Science – II	<b>100</b>	
<b>Seminar 2</b>	<b>2S1</b>	Current Trends & Issues in Food Science & Nutrition - II	<b>25</b>	
<b>Semester - III</b>				
<b>Paper 9 (Core 9)</b>	<b>3T1</b>	Clinical & Therapeutic Nutrition – I	<b>100</b>	25
<b>Core 10</b>	<b>3RP</b>	Research Project (Design)	<b>125</b>	
<b>Paper 10 (Elective 1)</b>	<b>3T2a</b>	Advanced Nutrition – I	<b>100</b>	
	<b>3T2b</b>	Nutrition and Weight Management	<b>100</b>	
<b>Paper 11 (Foundation 1/Core 11)</b>	<b>3T3a/ 3T3b</b>	Foundation 1* Community Nutrition and Public Health – I	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 9</b>	<b>3P1</b>	Clinical & Therapeutic Nutrition – I	<b>100</b>	25
<b>Sessional Elective 1</b>	<b>3Ses1a</b>	Advanced Nutrition – I	<b>50</b>	
	<b>3Ses1b</b>	Nutrition and Weight Management	<b>50</b>	
<b>Seminar 3</b>	<b>3S1</b>	Seminar	<b>50</b>	
<b>Semester - IV</b>				
<b>Paper 12 (Core 12)</b>	<b>4T1</b>	Clinical & Therapeutic Nutrition – II	<b>100</b>	25
<b>Core 13</b>	<b>4RP</b>	Research Project (Viva-Voce)	<b>125</b>	
<b>Paper 13 (Elective 2)</b>	<b>4T2a</b>	Advanced Nutrition – II	<b>100</b>	
	<b>4T2b</b>	Sports Nutrition	<b>100</b>	
<b>Paper 14 (Foundation 2/Core 14)</b>	<b>4T3a/ 4T3b</b>	Foundation 2* Community Nutrition and Public Health – II	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 12</b>	<b>4P1</b>	Clinical & Therapeutic Nutrition – II	<b>100</b>	25
<b>Sessional Elective 2</b>	<b>4Ses1a</b>	Advanced Nutrition – II	<b>50</b>	
	<b>4Ses1b</b>	Sports Nutrition	<b>50</b>	
<b>Seminar 4</b>	<b>4S1</b>	Seminar	<b>50</b>	
<b>Total</b>				<b>2500</b>
<b>100</b>				

# **FOOD SCIENCE AND NUTRITION**

**1T1**

## **SEMESTER – I**

### **PAPER 1**

#### **CORE 1**

#### **ADVANCED NUTRITIONAL BIOCHEMISTRY - I**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical: 80**

**Internal Assessment: 20**

#### **Objectives:**

- Augment the biochemistry knowledge acquired at the undergraduate level. Understand the mechanism adopted by the human body for the regulation of metabolic pathway.
- Get an insight to interrelationship between various metabolic pathways. Become proficient for specialization in nutrition.
- Understand integration of cellular level metabolic events to nutritional disorders imbalance

#### **Contents**

##### **Unit I**

- 1 Carbohydrates: Occurrence, classification, structure, properties and biological importance of carbohydrates. Polysaccharides.
- 2 Proteins : Classification, structure and properties of amino acids, classification and properties of proteins, conformation and structure of proteins-primary, secondary, tertiary and quaternary structure.
- 3 Lipids: Structure, distribution and biological importance of fats and fatty acids. Chemical properties and characterization of fats. Waxes, Cerebrosides, Gangliosides, Phospholipids and Proteolipids. Steroids and Bile salts. Prostaglandins.
- 4 Vitamins: Structure and biochemical properties of water soluble and fat soluble vitamins and their coenzyme activity.
- 5 Hormones: Mechanism of hormone action and its regulation.

##### **Unit II**

- 1 Metabolism: Glycogenesis and Glycogenolysis, Interconversion of Hexoses, Glycolysis and Gluconeogenesis. Cori's cycle, Pyruvate Dehydrogenase complex, Krebs-cycle, Pentosephosphate pathway, Regulation of carbohydrate metabolism.
- 2 Lipids : Biosynthesis of fatty acids,  $\beta$ -Oxidation of fatty acid , Ketone bodies. Synthesis

of Phospholipids and glycosphingolipids

### **Unit III**

- 1 Proteins : General reactions of protein metabolism, essential amino acids. Inborn errors of protein metabolism
- 2 Metabolism of amino acids: Decarboxylation, Transamination, Deamination
- 3 Nucleic acids: Biosynthesis and degradation of purines and pyrimidines and their regulation. Inherited disorders of purine and pyrimidine metabolism.

### **Unit IV**

- 1 Concept of Gene, DNA synthesis: The enzymes of DNA replication in prokaryotes and eukaryotes, mechanism of replication in bacteria and viruses, reverse transcriptase.
  - 2 RNA synthesis: The enzymes of transcription in prokaryotes and eukaryotes, mechanism of transcription in bacteria.
  - 3 Protein synthesis : Concept of the genetic code, structure of t-RNA, r-RNA and m-RNA, enzymes of translation in prokaryotes and eukaryotes, mechanism of protein synthesis, post translational processing of proteins.
  - 4 Inhibitors of Protein biosynthesis
  - 5 DNA recombination concept.
- 

<b>1P1</b>	<b>PRACTICAL CORE 1</b>
<b>Marks: 80</b>	
<b>Internal Assessment: 20</b>	

### **PRACTICALS:**

- Determination of Calcium in food and serum
- Determination of Inorganic Phosphorous in food and serum
- Determination of Ascorbic Acid in food
- Determination of Serum Creatinine (Alkaline Picrate Method)
- Determination of Serum Bilirubin by Malloy And Evylin Method
- Determination of Serum Chloride by Schales&Schales Method
- Estimation of Hemoglobin by Packed Cell Volume (PCV)
- Glucose Tolerance by Glucose Tolerance Test

### **REFERENCES:**

1. Conn, E.E., Stumpt. P.K. Bruening, G. and Doi, R.H. (2001) : 5<sup>th</sup> Ed. Outlines of Biochemistry, John Wiley and Sons.
2. Devlin, T.M. (1997) : 4<sup>th</sup> Ed. Text book of Biochemistry with Clinical Correlations, Wiley Liss Inc.

3. King, E.J. and Wootton, I.D.P., (1956) : 3<sup>rd</sup> Ed. Micro-Analysis in Medical Biochemistry, J. and A. Churchill Ltd.
  4. Murray, R.K., Granner, D.K., Mayes, P.A. and Rodwell, VW. (2000) : 25<sup>th</sup> Ed. Harpers Biochemistry, Macmillan Worth Publishers.
  5. Nelson D.L. and Cox, M.M. (2000) : 3<sup>rd</sup> Ed. Lehninger's Principles of Biochemistry, Macmillan Worth Publishers.
  6. Oser, B.L., (1965) : 14<sup>th</sup> Ed. Hawk's Physiological Chemistry, Tata McGraw - Hill Publishing Co. Ltd.
  7. Plummer, D.T., (1987): 3<sup>rd</sup> Ed., An Introduction to Practical Biochemistry, McGraw-Hill Book Co.
  8. Raghuramulu, N., Madhavan Nair and K. Kalyanasundaram, S. (1983) A manual of Laboratory Techniques NIN, ICMR.
  9. Stryer, L. (1998) : 4<sup>th</sup> Ed. Biochemistry, W.H. Freeman and Co.
  10. Tietz, N.W., (1976) : Fundamentals of Clinical Chemistry, W.B. Saunders Co.
  11. Varley, H., Goweklock, A.H. and Bell, M. (1980) : 5<sup>th</sup> Ed. Practical Clinical Biochemistry, Heinemann Medical Books Ltd.
  12. Voet, D. Voet, J..G and Prat, C.W., (1999) : Fundamentals of biochemistry.
  13. Vogel, A.I., (1962) : 3<sup>rd</sup> Ed. A Textbook of Quantitative Inorganic Analysis. The English Language Book Society and Longman.
  14. Winton, A.L., and Winton, K.B., (1999) Techniques of Food Analysis Allied Scientific Publishers.
-

**FOOD SCIENCE AND NUTRITION**  
**SEMESTER – I**  
**PAPER 2**  
**CORE 2**  
**ADVANCED FOOD SCIENCE – I**

1T2

**Marks:** **Theory: 80**

**Internal Assessment: 20**

**Practical: 80**

**Internal Assessment: 20**

**Objectives:**

- To study scientific principles involved in food preparation and evaluation.
- To acquire knowledge regarding processing of foods.
- To understand the principles underlying newer techniques of food preservation and packaging.

**Contents**

**UNIT I**

**1. Evaluation of food:**

**-- Sensory assessment of food quality**

- Appearance of food – size, shape & colour of foods
- Flavour of foods – odour, sensory organ for detecting odour, Odour stimuli
- Taste of foods – sensory organ for detecting taste, Taste stimuli, Taste sensitivity, Taste interaction
- Mouth feel – pain, hot & cold sensations, tactile sensations
- Texture of foods
- Consistency of foods
- Psychological factors in sensory assessment

**2. Sensory testing of foods**

- Difference testing
- Acceptance of consumer testing
- Conducting sensory tests – sampling food for sensory testing, preparing samples & presenting for sensory testing and using reference samples.

**UNIT II**

**1. Objective Assessment of food quality**

- Rheological characteristics of food

- Objective tests for food

## **2. Physical Properties & physiochemical changes in foods.**

- Water – Types of water in foods- bound & free water
- Water activity and food spoilage
- Colloidal systems and its application to food preparation
- Solutions, sols, gels & suspensions
- Emulsions and foams

## **3. Product Development and Standardization of recipes**

### **UNIT III**

#### **1. Functional Role of Sugars in Foods**

- Crystallization of sugar, factors affecting crystallization, Stages of sugar cookery, Caramelization of sugars, Interfering agents & crystal formation, Fudge, Fondant, Caramel & brittles, Sugar Substitutes.

#### **2. Food Additives**

- Types – Preservatives, antioxidants, emulsifying agents, nutrient supplements, non-nutritive sweeteners, anti-caking agents, sequestrants bleaching agents, Salt Substitutes

#### **3. Food Preservation- Low temperature, High temperature.**

### **UNIT IV**

#### **1. Flours & Starches**

- Composition of cereals, kind of wheat, effects of milling, types of flours, formation of dough from flour & baking quality.
- Development of gluten, factors affecting developing of gluten
- Sources of starch & their properties, Gelatinization, Factors affecting gelatinization
- Parboiling of rice and malting of grains, puffed and flake cereals.

#### **2. Leavening Agents**

-Types of leavening agents – steam, air, carbon dioxide

- Baking powder, Types of baking powder, Baking soda & sour milk
  - Batters & dough, Cakes, Biscuits & Breads – ingredients & their functions and method of preparation
-

<b>1P2</b>	<b>PRACTICAL CORE 2</b>
<b>Marks: 80</b>	
<b>Internal Assessment: 20</b>	

### **PRACTICALS:**

- 1. Use of measuring techniques and devices, weight and measures of different foods.**
- 2. Sensory Evaluation** - detection of primary flavour and sensitivity, threshold tests-triangle test, paired comparison, scoring test, ranking test.
- 3. Objective methods** – ink print, percent sag, seed displacement.
- 4. Sugar and Jaggery Cookery** – Relative sweetness, solubility and size of sugar, stages of sugar cookery, caramelization, crystallization, factors affecting crystal formation.
- 5. Starches, Vegetable gums and Cereals** – dextrinization, gelatinization, retrogradation, thickening powder. Factors affecting gels. Gluten formation and factors affecting gluten formation.
- 6. Leavened products:** fermentation - use of micro organisms (lactic acid, yeast), steam as an agent, egg as an agent, chemical agents.

### **REFERENCES:**

1. Acharya, K.T.: A Historical Dictionary Of Indian Foods, Oxford Publishing Co.
2. Belitz, H.D. and Grosch W., (1999) : Food Chemistry, (2<sup>nd</sup> ed), Springer, New York
3. Belle Lowe (1963) : Experimental Cookery, John Wiley And Sons Inc., New York
4. Bennion, Marion And O. Hughes (1986) :Introductory Foods, Edi : MacMilan N. Y.
5. Girdharilal, G.S. Sidappa And G.L. Tandon (1986) : Preservation Of Fruits And Vegetables, (2<sup>nd</sup> Ed), New Delhi: Indian Council Of Agricultural Research.
6. Griswold, R.M. (1979) : The Experimental Study Of Food, Houghton Mifflim Boston.
7. Lee Frank A. (1975) : Basic Food Chemistry. - Westpot Connecticut: AVI Publishers.
8. Mahindru, S.N.: Food Additives, Characteristics, Detection And Estimation, Tata McGraw Hill Publishing Co. Ltd., New Delhi.
9. Manay S. N., (2002) : Foods, Facts And Principles, Wiley Eastern, New Delhi.
10. Meyer L.J. (1989) : Food Chemistry, CBS Publishers And Distributors, New Delhi.
11. Paul P.C. And Palmer H.H. (1972) : Food Theory And Application John Wiley And Sons, London
12. Peckham G. and Freeiand-Graves, G.H. (1979) : Foundation Of Food Preparation, Mac Millian Company
13. Potter, N. and Hotchkiss, J.H. (1996) : Food Science, Fifth ed., CBS Publishers and

Distributors, New Delhi.

14. Srilakshmi B. (2000) : Food Science, New Age International (P) Ltd. Publishers, Wiley Eastern Ltd., New Delhi.
15. Swaminathan A. (2000) : Food Science And Experimental Foods, Ganesh And Company Madras,

**Journals:**

1. Food Technology Abstracts, Central Food Technological Research Institute Mysore.
  2. Food Technology, Journal of the Institute of Food Technology, Illinois, USA.
  3. Food Digest, CFTRI Mysore.
  4. Journal of Agriculture and Food Chemistry.
  5. Cereal Science.
  6. Indian Food Industry AFSTI, CFTRI, Mysore.
  7. Journal of Food Science And Technology CFTRI, Mysore.
  8. Indian Food Packer, All Indian Food Preserves Association, Delhi.
  9. Journal of Dairy Science.
  10. Advances in Food Research.
-

**FOOD SCIENCE AND NUTRITION**  
**SEMESTER - I**  
**PAPER 3**  
**CORE 3**

1T3

**INSTITUTIONAL FOOD ADMINISTRATION - I**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives:**

- To develop a knowledge base in key areas of Institutional Food Administration.
- To provide practical field level experience in Institutional Food Administration.
- To impart necessary expertise to function as a Food Service Manager.
- To equip individuals to start their own food service unit leading to entrepreneurship.
- To develop critical abilities and provide basic grounding in research techniques.

**Contents**

**UNIT I**

**1. Food service systems and their development.**

- History and Development, Factors Affecting Development of Food Service System

**2. Types of Food Service System**

- Commercial and Non- commercial

**3. Management**

- Approaches to the Food Service Management
- Principles, Functions
- Tools of Management

**UNIT II**

**1. Layout and Design**

- Definition of layout and design, Factors affecting layout and design, Determining Work Centers, Principles of Kitchen layout
- Work flow, Work simplification

**2. Equipments**

- Classification of equipments, factors affecting selection of equipments, purchase and installation, General care and Maintenance of equipment, Cleaning systems

**UNIT III**

## **1. Purchasing Receiving and Storage**

- Purchasing Activity, Methods of Buying & Receiving
- Methods of Delivery, Delivery Procedure and Revising Procedure
- Types of Storage, Storekeeping and Store Records, Maintenance of Food Quality in Storage

## **UNIT IV**

### **1. Entrepreneurship in Food Service Management**

- Perspective of Entrepreneurship
- Defining – Entrepreneurship, Entrepreneur
- Characteristics of successful Entrepreneurs

### **2. Approaches to Entrepreneurship Development**

---

## **INTERNAL ASSESSMENT:**

1. Analysis of Equipment used in Quantity Cookery in Food Service Establishment
2. Cost Analysis of Processed Foods used in Food Service Establishment

## **REFERENCES:**

1. Green Erric (1986): Profitable Food And Beverage Management Operations, John Williams Company
  2. JagmohanNegi: Managing Hotels and Restaurants, Authors Press, Delhi.
  3. Peter F. Drucker: The Practice of Management, Allied Publishers limited.
  4. SethiMohini (2007): Catering Management & Integrated Approach, Wiley Publication.
  5. T. Ramaswamy: Principles of Management, Himalaya Publication.
  6. Verghese Brian: Professional Food And Beverage Management, MacMillan India Ltd.
  7. West B.B. & Wood L. (1988): Food Service in Institutions, John Wiley & Sons, New York.
-

**FOOD SCIENCE AND NUTRITION  
SEMESTER - I  
PAPER 4  
CORE 4  
RESEARCH METHODS AND STATISTICS - I**

**1T4**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives:**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents**

**UNITI**

- Definition of research
- Objectives of research
- Scope of research in home science
- Types of research
- Anthropological and epidemiological research
- Research process
- Defining the research problem
- Formulation of research hypotheses
- Research design
  - Meaning
  - Important concepts relating to research design
  - Different research designs
  - Important experimental designs

**UNIT II**

- Literature search
  - Referencing
  - Abstracting
  - Computer search

- Bibliography
- Measurement and scaling
  - Classification of measurement scales
  - Goodness of measurement scales
  - Scaling techniques
- Questionnaire designing
  - Criteria for questionnaire designing
  - Questionnaire design procedure
- Data collection
  - Collection of primary data
  - Collection of secondary data

### **UNIT III**

- Concept of statistics
- Scope of statistics
- Classification and tabulation of data
  - Introduction, meaning and objectives of classification
  - Types of classification
  - Formation of discrete frequency distribution
  - Formation of continuous frequency distribution
  - Tabulation of data
  - Parts of a table
  - General rules for tabulation
  - Types of tables
- Diagrammatic and graphic presentation
  - Significance of diagrams and graphs
  - General rules for constructing diagrams and graphs
  - Types of diagrams
  - Graphs
  - Graphs of frequency distributions
- Measure of central tendency
  - Mean
  - Median
  - Mode

## **UNITIV**

- Measures of dispersion
  - Range
  - Quartile deviation
  - Mean deviation
  - Standard deviation
- Concept of normal distribution curve and probability
  - The meaning and importance of normal distribution
  - Measurement of normal probability distribution
  - Skewness
  - Kurtosis
- Correlation analysis
  - Significance of the study of correlation
  - Types of correlation
  - Methods of studying correlation
    - Scatter diagram method
    - Graphic method
    - Karl Pearson's coefficient of correlation
    - Rank method
    - Method of least squares
- Regression analysis
  - Types of regression models
  - Assumptions for a simple linear regression model
  - Parameters of simple linear regression model
  - Methods to determine regression coefficients
    - Method of normal equations
    - Deviations method
  - Assumptions in multiple linear regression
  - Estimating parameters of multiple regression model
    - Least squares method

---

## **REFERENCES:**

1. Bernard Ostle. Statistics in Research.
2. Best J. W. (1983): Research Education, Prentice Hall, New Delhi.

3. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee
  4. Business statistics by J. K. Sharma, Pearson Education
  5. C.R. Kothari. Research Methodology (Methods & Techniques)
  6. Daryab Singh. Principles of Statistics, Atlantic Publishers & Distributors.
  7. Devdas R.P. (1971): Jamdnppi or Research Methodology, Shri Ramakrishna Mission Vidyalaya.
  8. Dody, J.T. (1967): An Introduction to Social Research, Appleton Center.
  9. Fredrick, Lamson, Whiteney. The Elements of Research.
  10. Garret H.: Statistics in Education and Psychology.
  11. Good, Carter, Scales and Douglas. Methods of Research.
  12. Gupta S. P. (1970): Statistical Methods. S. Chand New Delhi.
  13. M.H. Gopal. Introduction to Research Methodology for Social Sciences.
  14. Philips, B.S. (1977): Social Research Strategy and Tactics, Mae Milan.
  15. Research Methodology – Concepts and Cases, byChawla, Deepak &SondhiNeena
  16. Shukla, M.C. and Gulshan S.S. (1970): Statistics Theory and Practice, S. Chand New Delhi.
  17. Sinha S.L.L. Statistics in Psychology and Education, Anmol Publication Pvt. Ltd., New Delhi.
  18. Statistics by Andy Field, SAGE Publication
  19. Young, P. V. and Schmid, C.F. (1968): Scientific Social Survey and Research , Prentice Hall, New Delhi.
-

**FOOD SCIENCE AND NUTRITION**

**1S1**

**SEMESTER - I**

**SEMINAR 1**

**CURRENT TRENDS AND ISSUES IN FOOD SCIENCE AND  
NUTRITION - I**

**Marks: Sessional: 25**

Current Trends and issues will have seminar presentation and carry Internal Marks.

---

# **FOOD SCIENCE AND NUTRITION**

**2T1**

## **SEMESTER - II**

### **PAPER 5**

### **CORE 5**

## **ADVANCED NUTRITIONAL BIOCHEMISTRY - II**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical: 80**

**Internal Assessment: 20**

### **Objectives:**

- Augment the biochemistry knowledge acquired at the undergraduate level. Understand the mechanism adopted by the human body for the regulation of metabolic pathway.
- Get an insight to interrelationship between various metabolic pathways. Become proficient for specialization in nutrition.
- Understand integration of cellular level metabolic events to nutritional disorders imbalance

### **Contents**

#### **Unit I**

- 1 The concept of pH, dissociation and ionization of acids and bases, pKa, buffers and buffering mechanism, Henderson Hasselbalch equation
- 2 Chromatography: Principles and application of adsorption, partition and ion-exchange chromatography, gel filtration, affinity and high performance liquid chromatography.
- 3 Molecular weight determination of macromolecules (in particular proteins) by gel filtration chromatography, gel electrophoresis and ultracentrifugation.
- 4 Spectrophotometry: Beer-Lamberts law, extinction coefficient and its importance, design of colorimeter, spectrometer and spectrophotometer.
- 5 Principles of atomic absorption spectrophotometry and its application in Nutritional Biochemistry.

#### **Unit II**

- 1 Mechanism of enzymes action: Multienzymes system, Mechanism of action and regulation of pyruvate dehydrogenase and fatty acid synthetase complex, Coenzyme action.
- 2 Enzyme regulation: General mechanisms of enzyme regulation, Allosteric enzymes, sigmoidal kinetics and their physiological significance, Symmetric and sequential

modes for action of allosteric enzymes.

- 3 Enzymes in differential diagnosis of diseases and their clinical significance.

### **Unit III**

- 1 Modes of Hormones action and role in metabolism: Hormones of Pancreas, Pituitary, Adrenal, Thyroid, Sex hormones.
- 2 Bioenergetics: Electron Transport Chain, oxidative Phosphorylation and synthesis of ATP.

### **Unit IV**

- 1 Composition and function of blood, plasma and blood corpuscles, functions of plasma proteins, structure and function of haemoglobin, abnormal haemoglobin.
- 2 Blood coagulation – mechanism and regulation. Blood groups.
- 3 Regulation of water and electrolyte balance, role of kidneys and hormones in their maintenance. Hydrogen ion homeostasis, acid-base balance- metabolic and respiratory acidosis and alkalosis.

---

---

---

<b>2P1</b>	<b>PRACTICAL CORE 5</b>
<b>Marks: 80</b>	
<b>Internal Assessment: 20</b>	

#### **PRACTICALS:**

- Determination of Cholesterol in Blood
- Determination of Serum Acid Phosphatase Activity By Guttmann & Guttmann
- Method Determination of Alkaline Phosphatase
- Estimation of Total Serum Protein And A/G Ratio By Biuret Method
- Estimation of Serum Amylase activity in The Given Serum Sample
- Determination of Total Lipids By Sulphophosphovanillin Method
- Determination of Serum Triglyceride
- Determination of Blood Urea by Nesslerisation Method
- Determination of Uric Acid

#### **REFERENCES:**

1. Conn, E.E., Stumpt. P.K. Bruening, G. and Doi, R.H. (2001) : 5<sup>th</sup> Ed. Outlines of Biochemistry, John Wiley and Sons.
2. Dvlin, T.M. (1997) : 4<sup>th</sup> Ed. Text book of Biochemistry with ClinicalCorrelations,Wiley Liss Inc.
3. King, E.J. and Wootton, I.D.P., (1956) : 3<sup>rd</sup> Ed. Micro-Analysis in Medical Biochemistry,

J. and A. Churchill Ltd.

4. Murray, R.K., Granner, D.K., Mayes, P.A. and Rodwell, VW. (2000) : 25<sup>th</sup> Ed. Harpers Biochemistry, Macmillan Worth Publishers.
  5. Nelson D.L. and Cox, M.M. (2000) : 3<sup>rd</sup> Ed. Lehninger's Principles of Biochemistry, Macmillan Worth Publishers.
  6. Oser, B.L., (1965) : 14<sup>th</sup> Ed. Hawk's Physiological Chemistry, Tata McGraw - Hill Publishing Co. Ltd.
  7. Plummer, D.T., (1987): 3<sup>rd</sup> Ed., An Introduction to Practical Biochemistry, McGraw-Hill Book Co.
  8. Raghuramulu, N., Madhavan Nair and K. Kalyanasundaram, S. (1983) A manual of Laboratory Techniques NIN, ICMR.
  9. Stryer, L. (1998) : 4<sup>th</sup> Ed. Biochemistry, W.H. Freeman and Co.
  10. Tietz, N.W., (1976) : Fundamentals of Clinical Chemistry, W.B. Saunders Co.
  11. Varley, H., Goweklock, A.H. and Bell, M. (1980) : 5<sup>th</sup> Ed. Practical Clinical Biochemistry, Heinemann Medical Books Ltd.
  12. Voet, D. Voet, J..G and Prat, C.W., (1999) : Fundamentals of biochemistry.
  13. Vogel, A.I., (1962) : 3<sup>rd</sup> Ed. A Textbook of Quantitative Inorganic Analysis.The English Language Book Society and Longman.
  14. Winton, A.L., and Winton, K.B., (1999) Techniques of Food Analysis Allied Scientific Publishers.
-

**FOOD SCIENCE AND NUTRITION  
SEMESTER - II  
PAPER 6  
CORE 6  
ADVANCED FOOD SCIENCE - II**

**2T2**

**Marks: Theory: 80  
Internal Assessment: 20  
Practical: 80  
Internal Assessment: 20**

**Objectives:**

- To study scientific principles involved in food preparation and evaluation.
- To acquire knowledge regarding processing of foods.
- To understand the principles underlying newer techniques of food preservation and packaging.

**Contents**

**UNIT I**

**1. Pulses**

- Composition, methods of processing & cooking, effects of soaking, germination & fermentation, Toxic constituents

**2. Oilseeds and Nuts**

- Composition, oil extraction & by products, Toxic constituents

**3. Fats & Oils**

- Composition of food fats, Modification of natural oils – Hydrogenation, Properties of fats and oils, Deterioration of fats & antioxidants, fat substitutes

**UNIT II**

**1. Milk & Milk Products**

- Composition of milk, Types of milk, Processing of milk – Pasteurization, Homogenization, Ultra Heat Treatment System (UHTS), Effect of heat & acid on milk protein
- Composition & processing of curd, cheese, Paneer, Concentrated and dried milk products

**2. Vegetables and fruits**

- Structure of vegetables & fruits, Colour pigments & textural changes during ripening & processing, Recent advances in processing of vegetables & fruits.

- Browning reactions – enzymatic & non-enzymatic, prevention

### **UNIT III**

#### **1. Eggs**

- Structure & composition, Quality evaluation of eggs, Changes during storage, Factors affecting coagulation of egg protein, Uses of eggs as binding, foaming & emulsifying agents, Methods of cooking eggs

#### **2. Meat, Poultry and Fish**

- Structure & Composition, Ripening of meat, Tenderizing of meat, Changes on cooking meat by dry & moist heat methods, Curing & smoking of meat
- Types of fish, Composition, Criteria for fish selection, Changes during heat treatment, Fish products – fish meal, fish protein concentrate, fish oils

### **UNIT IV**

#### **1. Fermented Foods**

- Cereal based, pulse based, fruit- vegetable based

#### **2. Beverages**

- Processing of Beverages – Tea, Coffee, Malted and Ready To Serve Beverage

#### **3. Convenience foods**

- Types, techniques of instant mixes , extruded snacks

#### **4. Packaging**

- Importance, Functions & types of packaging material.
- 

<b>2P2</b>	<b>PRACTICAL CORE 6</b>
<b>Marks: 80</b>	
<b>Internal Assessment: 20</b>	

#### **PRACTICALS:**

- **Jams and Jellies:** Pectin contents of fruits, role of acid, pectin and sugar in jam and jelly formation. Use of gums as emulsifiers/stabilizers.
- **Fats and Oils:** Flash point, melting point and smoking point. Role of fats and oil in cookery as : shortening agent, frying medium. Factors affecting fat absorption. Fat crystals. Plasticity of fat. Permanent and semi permanent emulsions.
- **Milk and Milk Products:** scalding, denaturation. Effect of acid, salt, alkali, sugar, heat, enzymes, polyphenols on milk, khoa, curd, paneer, cheese (ripened and unripened).
- **Egg:** Structure, assessing egg quality, use of egg in cookery-emulsions,

airincorporation, thickening, binding, gelling. Method of egg cookery and effect of heat.Egg white foams and factors affecting foams.

- **Pulses:** Effect of various cooking and processing methods on various characteristics, functional properties of pulses and their products.
- **Meat and Poultry:** Methods affecting tenderness of meat, effect of various methodsof cooking and ingredients on colour, volume, texture, aroma, and water holding capacity.
- **Fish and Sea Foods:** Effect of different cooking methods on various fish and seafoods.
- **Gelatin:** Gel strength and factors affecting gelatin. Ability to foam.
- **Fruits and Vegetables:** Pigments: effects of cooking, metal ions, pH. Effect ofvarious cooking processes on different characteristics of vegetables. Prevention of enzymatic browning.
- **Beverages:** Factors affecting quality of beverages.

#### REFERENCES:

1. Acharya, K.T.: A Historical Dictionary Of Indian Foods, Oxford Publishing Co.
2. Belitz, H.D. and Grosch W., (1999) : Food Chemistry, (2<sup>nd</sup> ed), Springer, New York
3. Belle Lowe (1963) : Experimental Cookery, John Wiley And Sons Inc., New York
4. Bennion, Marion And O. Hughes (1986) : Introductory Foods, Edi : MacMilan N. Y.
5. Girdharilal, G.S. Sidappa And G.L. Tandon (1986) : Preservation Of Fruits And Vegetables, (2<sup>nd</sup> Ed), New Delhi: Indian Council Of Agricultural Research.
6. Griswold, R.M. (1979) : The Experimental Study Of Food, Houghton Mifflim Boston.
7. Lee Frank A. (1975) : Basic Food Chemistry. - Westpot Connecticut: AVI Publishers.
8. Mahindru, S.N.: Food Additives, Characteristics, Detection And Estimation, Tata McGraw Hill Publishing Co. Ltd., New Delhi.
9. Manay S. N., (1987) : Foods, Facts And Principles, Wiley Eastern, New Delhi.
10. Meyer L.J. (1989) : Food Chemistry, CBS Publishers And Distributors, New Delhi.
11. Paul P.C. And Palmer H.H. (1972) : Food Theory And Application John Wiley And Sons, London
12. PeckhamG.andFreeiand-Graves, G.H. (1979) : Foundation Of Food Preparation, Mac Millian Company
13. Potter, N. and Hotchkiss, J.H. (1996) : Food Science, Fifth ed., CBS Publishers and Distributors, New Delhi.

14. Srilakshmi B. (1996) : Food Science, New Age International (P) Ltd. Publishers, Wiley Eastern Ltd., New Delhi.
15. Swaminathan A (1979) : Food Science And Experimental Foods, Ganesh And Company Madras,

**Journals:**

1. Food Technology Abstracts, Central Food Technological Research Institute Mysore.
  2. Food Technology, Journal of the Institute Of Food Technology, Illinois, USA.
  3. Food Digest, CFTRI Mysore.
  4. Journal of Agriculture and Food Chemistry.
  5. Cereal Science.
  6. Indian Food Industry AFSTI, CFTRI, Mysore.
  7. Journal of Food Science and Technology CFTRI, Mysore.
  8. Indian Food Packer, All Indian Food Preserves Association, Delhi.
  9. Journal of Dairy Science.
  10. Advances in Food Research.
-

**FOOD SCIENCE AND NUTRITION  
SEMESTER - II  
PAPER 7  
CORE 7  
INSTITUTIONAL FOOD ADMINISTRATION - II**

**2T3**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives:**

- To develop a knowledge base in key areas of Institutional Food Administration
- To provide practical field level experience in Institutional Food Administration
- To impart necessary expertise to function as a Food Service Manager
- To equip individual to start their own food service unit leading to entrepreneurship
- To develop critical abilities and provide basic grounding in research techniques

**Contents**

**UNIT I**

**1. Food Management**

- Importance of Menu Planning in Food Service Organization, Types of menu, Principles of Menu Planning, Writing the menu, Construction and Evaluation of Menu

**2. Food Production System**

- Standardization of recipe
- Principles involved in construction of recipes in large Scale Cooking
- Utilization of left over foods

**UNIT II**

**1. Food Service**

- Types of food services in a Food Service Establishment
- Types of food service in a Restaurant- silver service, plate service, cafeteria service, buffet service.
- Centralized and Decentralized system of service

**UNIT III**

**1. Personnel Management**

- Approaches to Staff Management

## **2. Staff Recruitment**

- Sources of recruitment, Selection, Induction, Staff Training, Supervision, Performance Appraisal, Motivation, Wages and other compensations, Labor laws and other legal aspects

## **UNIT IV**

### **1. Cost Accounting**

- Budget, Types of Budget, Purchase Records, Receiving Records, Storage Records, Production Records, Service Records, Income and Expenditure Record

### **2. Reviewing Actual Performance Reports**

- Daily Food Cost Report, Cumulative Food Cost Report, Daily Cumulative Food Cost Report, Profit and Loss Statement

### **3. Cost Control**

- Factors affecting cost control, Importance of Costing, Components of Costing, Breakeven Analysis, Determining Selling Price of Food, Checklist for Cost Control

### **4. Sanitation and Safety**

- Standards, Policies and Schedules, Sanitation in Food Services, Sanitation and Public Health, Plant Sanitation and Safety

---

### **INTERNAL ASSESSMENT:**

1. Visit to commercial and non-commercial Food Service Institution to assess the following: -
  - a) Organization
  - b) Physical plant and layout
  - c) Food service equipment
  - d) Sanitation and Hygiene
  - e) Buying and accounting procedure

At least two (02) under each category

### **REFERENCES:**

1. Green Erric (1986): Profitable Food And Beverage Management Operations, John Williams Company
2. Jagmohan Negi: Managing Hotels And Restaurants, Authors Press, Delhi.
3. Peter F. Drucker: The Practice of Management, Allied Publishers limited.
4. Sethi Mohini (2007): Catering Management & Integrated Approach, Wiley Publication.

5. T. Ramaswamy: Principles of Management, Himalaya Publication.
  6. Verghese Brian: Professional Food And Beverage Management, MacMillan India Ltd.
  7. West B.B. Wood L. (1988): Food Service in Institutions, John Wiley & Sons, New York.
-

**FOOD SCIENCE AND NUTRITION  
SEMESTER - II  
PAPER 8  
CORE 8  
RESEARCH METHODS AND STATISTICS - II**

**2T4**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents**

**UNIT I**

- Sampling considerations
  - Sampling concepts
  - Sampling vs non-sampling error
  - Probability sampling design
  - Non-probability sampling design
  - Determination of sample size
- Estimation and confidence intervals
  - Point estimation
  - Interval estimation
- Hypothesis testing
  - Rationale for hypothesis testing
  - A general procedure for hypothesis testing
  - One-tailed and two-tailed tests
  - Errors in hypothesis testing

**UNIT II**

- Students 't' test for small samples for
  - Testing differences in proportions
  - Testing differences in means

- Large sample test (C. R. Test) for testing significance of difference between mean of two groups
- Analysis of variance
  - One way ANOVA
  - Two way ANOVA

### **UNIT III**

- Chi-square test
  - Chi-square distribution
  - Chi-square test statistic
  - Application of chi-square test
    - Equal probability type
    - Normal distribution type
    - 2 X 2 contingency tables type
    - Chi-square test of independence
- Participatory rapid assessment
- Participatory learning assessment

### **Unit IV**

- The writing process
  - Getting started
  - Use outline as a starting device
  - Drafting
  - Reflecting
  - Re-reading
    - Checking organization
    - Checking headings
    - Checking content
    - Checking clarity
    - Checking grammar
- Parts of dissertation/Research report/article
  - Abstract
  - Introduction
  - Review of literature
  - Materials and methods

- Results and discussion
  - Summary and conclusion
  - Bibliography
  - Recommendation
  - Computer applications in data analysis
    - Use of MS-Office for research
    - Graphic representation
    - Use of SPSS for data analysis
- 

## **REFERENCES:**

1. Bernard Ostle Statistics in Research.
  2. Best J. W. (1983) : Research Education, Prentice Hall, New Delhi..
  3. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee
  4. Business statistics by J. K. Sharma, Pearson Education
  5. C.R. Kothari : Research Methodology (Methods & Techniques)
  6. Daryab Singh Principles of Statistics, Atlantic Publishers & Distributors.
  7. Devdas R.P. (197 1): JamdnppiOf Research Methodology, Shri Ramakrishna Mission Vidyayala.
  8. Dody, J. T. (1967): An Introduction To Social Research, AppletonCenter.
  9. Fredrick, Lamson, Whiteney: The Elements of Research.
  10. Garrett, H. : Statistics In Education And Psychology.
  11. Good, Carter, Scales and Douglas: Methods of Research.
  12. Gupta S.P. (1970): Statistical Methods, S. Chand Company, New Delhi.
  13. M.H.Gopal : Introduction to Research Methodology for Social Sciences.
  14. Philips, B.S.( 1977): Social Research Strategy And Tactics, Mae Millan.
  15. Research Methodology – Concepts and Cases, byChawla, Deepak &SondhiNeena
  16. Shukla, M.C. And Gulshan S.S. (1970): Statistics Theory And Practice, S. Chand New Delhi.
  17. Sinha S.L. L Statistics In Psychology And Education, Anmol Publications Pvt. Ltd., New Delhi.
  18. Statistics by Andy Field, SAGE Publication
  19. Young, P.V. And Schmid, C.F. (1968) : Scientific Social Survey And Research, Prentice Hall, New Delhi.
-

**FOOD SCIENCE AND NUTRITION**

**2S1**

**SEMESTER - II**

**SEMINAR 2**

**CURRENT TRENDS AND ISSUES IN FOOD SCIENCE AND  
NUTRITION - II**

**Marks: Sessional: 25**

Current Trends and issues will have seminar presentation and carry Internal Marks.

---

**FOOD SCIENCE AND NUTRITION**  
**SEMESTER - III**  
**PAPER 9**  
**CORE 9**  
**CLINICAL AND THERAPEUTIC NUTRITION - I**

**3T1**

**Marks:** **Theory: 80**

**Internal Assessment: 20**

**Practical: 80**

**Internal Assessment: 20**

**Objectives:**

**The course will enable students to:**

- Understand the role of dietitian/nutritionist in preventive, promotive& curative health care.
- Understand the etiology, physiologic and metabolic anomalies of acute and chronic diseases and patient needs.
- Know the effect of various diseases on nutritional status and nutritional and dietary requirements.
- Be able to recommend and provide appropriate nutritional care for prevention/and treatment of the various diseases.
- Provide practical laboratory training in the preparation of special diets.
- Understand the modifications of normal diet for therapeutic purposes.
- Provide exposure to actual hospital situation; Study the types of cases admitted, their biochemical, clinical and dietary history.

**Contents**

**UNIT I**

**1. Definitions, Classifications of Dietitian in Health Care**

- Dietetics - the Science & Art of human nutrition care
- Role & responsibilities of dietitian in health care
- Adaptation of therapeutic diets
- Therapeutic diets - Types of dietary adaptations for therapeutic needs, Normal nutrition - a base of therapeutic diet, Constructing therapeutic diets
- Routine hospital diets
  - Normal / General diets, Liquid diets, Soft diets, Bland diets

## **2. Nutritional Screening and Assessment of Nutritional Status of Hospitalized and Outdoor Patients**

- Identification of high risk patients
- Assessment of patient needs based on interpretation of patient data: - clinical, biophysical, personal

## **3. Newer Trends in Delivery of Nutritional Care and Dietary Counseling**

- Nutritional care plan - Development of a plan, Implementation of nutritional care, Evaluation of nutritional care, Nutritional care record
- Care Management Strategies - Care management, Patient- focused care
- Counseling for change - Stages of change, Activities that facilitate change, Intervention model, Resistance behaviours & potential strategies to modify them

## **4. Diet, Nutrient and Drug Interaction**

- Effect of drugs on ingestion, digestion, absorption and metabolism of nutrients.
- Effect of foods, nutrients and nutritional status on drug dosage and efficacy.

## **5. Nutritional Care in Weight Management**

- Weight imbalance – Prevalence, Components of body weight, Guidelines for calculating ideal body weight
- **Obesity**– Etiology, Classification, Energy balance, Metabolic aberrations & clinical manifestations, Consequences/risk factors, Dietary modifications, Lifestyle modifications, Pharmaceutical management, Surgical management, Preventive aspects
- **Underweight** – Etiology, Metabolic aberrations & clinical manifestations, Dietary management

## **UNIT II**

### **1. Nutrition in Eating Disorders**

- **Anorexia Nervosa & Bulimia Nervosa** – Diagnostic criteria, Epidemiology, Pathophysiological consequences of eating disorders, Clinical characteristics & medical complications, Psychological management, Nutritional assessment, Nutrition management, Nutrition education

### **2. Nutrition Therapy for Upper Gastro Intestinal Tract Disorders**

Etiology, signs & symptoms, complications, Nutritional care & medical management for upper gastro intestinal tract disorders:

- **Disorders of Oesophagus** – Oesophagitis, Hiatal Hernia

- **Disorders of Stomach** – Indigestion/Dyspepsia, Gastritis, Peptic Ulcer and Duodenal Ulcer, Dumping Syndrome

### **3. Nutrition Therapy for Lower Gastro Intestinal Tract Disorders**

Etiology, signs & symptoms, complications, Nutritional care & medical management for lower gastro intestinal tract disorders:

- **Disorders of Small Intestine and Colon** - Intestinal Gas and Flatulence, Constipation, Diarrhoea, Steatorrhoea, Celiac Disease, Irritable Bowel Syndrome, Diverticular Disease
  - Inflammatory Bowel Disease: Ulcerative Colitis, Crohn's Disease

## **UNIT III**

### **1. Nutritional Therapy for Liver, Biliary System and Exocrine Pancreas Disorders**

#### **Liver Diseases**

- Physiology and functions of the liver, Liver function tests
- Diseases of the liver:
  - Hepatitis - types, etiology, symptoms, complications,
  - Cirrhosis - types, etiology, symptoms, complications, metabolic consequences of alcohol consumption,
  - Hepatic Coma - stages, etiology, symptoms & complications

Medical nutritional management of liver diseases

#### **Gall Bladder Diseases**

- Physiology and functions of Gall Bladder, Gall bladder function tests,
- Disorders of Gall Bladder: Cholelithiasis, Cholecystitis, Acute Cholangitis, Cholestasis

Medical nutritional management of gall bladder diseases

#### **Pancreatic Disorders**

- Physiology and functions of exocrine Pancreas, Pancreatic function tests
- Pancreatitis (Acute & Chronic)

Medical nutritional management of pancreatic disorders

### **2. Nutritional Support**

- Recent advances in techniques and feeding substrates
- Special feeding methods:

- Enteral Nutrition: Enteral access/feeding routes, Types of formulas, Formula composition, Administration methods/delivery methods, Monitoring & complications
- Parenteral Nutrition: Type of access, Parenteral nutrition solutions/composition, Administration methods, Monitoring & complications

## **UNIT IV**

### **1. Hypertension and Coronary Heart Diseases**

- **Hypertension**
    - Definition, Classification, Pathophysiology, Causes, Symptoms & Complications
    - Management - Dietary management, Medication, Lifestyle modification
  - **Coronary Heart Diseases (CHD)**
    - Common Disorders of CHD - Dyslipidemias, Atherosclerosis, Angina Pectoris, Myocardial Infarction (MI), Congestive Cardiac Failure (CCF), Rheumatic Heart Disease (RHD)
    - Pathophysiology, Etiology/Risk Factors for CHD, Clinical Determination
    - Dietary factors - Fatty acids, Amount of fat, Dietary cholesterol, Fiber, Antioxidants, Calcium etc.
    - Management of CHD - MNT, Lifestyle changes, Surgical management
- 

<b>3P1</b>	<b>PRACTICAL CORE 9</b>
<b>Marks: 80</b>	
<b>Internal Assessment: 20</b>	

### **PRACTICALS:**

#### **1. Standards for hospital diets :**

- Food exchange list for use in special diets using common Indian foods.
- Interpretation of diets in common household measures, standardization of measures.
- Determination of raw and cooked weights in selected breakfast, lunch, snacks and dinner recipes, calculation of exchanges in the recipes.

#### **2. Market survey of commercial nutritional supplements and nutritional support substrates**

#### **3. Commonly used tests for diagnosis of various diseases - system-wise.**

- Interpretation of patient data and diagnostic tests and drawing up of patient diet prescription using a case study approach.
- Follow up – acceptability of diet prescription, compliance, discharge diet plan.

**4. Visit to hospital to observe the following :**

- Tray service
- Trolley service
- Centralized food service
- Decentralized food service

**REFERENCES:**

1. Antia F.P. And Philip Abraham (2001) Clinical Nutrition and Dietetics, Oxford Publishing Company.
2. B. Srilakshmi, (2007) : Dietetics, published by K.K. Gupta For Newage International Pvt. Ltd. New Delhi.
3. Benion M. : Clinical Nutrition, Harper And Row Publishing M.Y.
4. Gopalan C., Ram Sastri B.V. And BalSubramaniam S.C., (2006) Nutritive Value of Indian Foods, Hyderabad, National Institute of Nutrition, Indian Council of Medical Research.
5. Mahan L.K., Sylvia Escott-Stump(2000) : Krause's Food Nutrition and Diet Therapy 10<sup>th</sup> Edition, W.B. Saunders Company London.
6. Passmore P. And M.A. East Wood : Human Nutrition And Dietetics, Churchill Living Stone.
7. Raheena M. Begum (1989) : A Text Book of Foods Nutrition And Dietetics, Wiley Eastern Ltd., New Delhi.
8. Robinson Ch., M.B. Lawlea, W.L., Chenoweth, And A.E., Carwick : Normal And Therapeutic Nutrition, Macmillan Publishing Company.
9. Sue Rodwell Williams, (1993) : Nutrition, Diet Therapy, (7<sup>th</sup> Ed) : W.B. Saunders Company London.
10. WohlShils And Goodheart : Modern Nutrition In Health And Disease, McLAREN And UBRMAN, Philadelphia.

**Journals:**

1. Indian Journal of Nutrition and Dietetics, Sri Avinashilingam Home Science College, Coimbatore.
  2. Journal of American Dietetic Association
  3. World Review of Nutrition and Dietetics, Kargar.
  4. Applied Nutrition, Indian Dietetics Association.
  5. American Journals of Clinical Nutrition.
  6. European Journal of Clinical Nutrition.
  7. Nutrition Reviews.
- 
-

**FOOD SCIENCE AND NUTRITION  
SEMESTER - III  
CORE 10  
RESEARCH PROJECT (DESIGN)**

**3RP**

**Marks: 125**

The Research Project (Design) (Semester III) will be continued as Research Project in Semester IV.

**FOOD SCIENCE AND NUTRITION**  
**SEMESTER - III**  
**PAPER 10**  
**ELECTIVE 1**  
**ADVANCED NUTRITION - I**

3T2a

**Marks: Theory: 80**

**Internal Assessment: 20**

**Sessional: 50**

**Objectives:**

**This course is designed to:**

- Provide in-depth knowledge of the physiological and metabolic role of various nutrients and their interaction in human nutrition.
- Enable students to understand the basis of human nutritional requirements and recommendations through the life cycle.
- Enable students to understand the pharmacological actions of nutrients and their implications.
- Nutritional problems / nutrition related diseases prevalent among the affluent and the less privileged groups with reference to their incidence, etiology and public health significance.
- Biochemical and clinical manifestations, preventive and therapeutic measures of the nutritional problems.
- Familiarize students with the recent advances in nutrition.

**Contents**

**UNIT I**

**1. Body Composition**

- Levels of body composition
- Body composition measurement techniques
  - Compartmental Models of body composition
  - Direct methods & Indirect methods - Circumference measurements, Skinfold thickness, Anthropometric indices, Body volume determination/Underwater weighting (UWW), Isotope dilution method, Bioelectrical impedance analysis (BIA), Dual energy X-ray absorptiometry, (DEXA), Near-infrared interactance, Total body potassium (TBK), Total body protein (TBP), Air displacement plethysmography (ADP), Total body electrical conductivity (TOBEC), Total body

electrical conductivity, Imaging techniques: Magnetic resonance imaging (MRI), Computed tomography (CT scan), Ultrasound measurements

- Significance of body composition measurement

## **UNIT II**

### **1. Energy Metabolism**

- Basic Concept of Energy
- Regulation of food intake, Factors influencing food intake
- Energy Intake - Energy from glucose, protein and fat
- Components of energy requirement
- Factors affecting energy expenditure & requirement
- Methods of estimation of energy expenditure & requirement
- Energy requirements & dietary energy recommendations - Energy requirements in infants, children, adolescents, adults, pregnancy, lactation, elderly, physically active group, disease & trauma
- Energy imbalance - Consequences of energy imbalance. Indices for measurement of energy imbalance

## **UNIT III**

### **1. Carbohydrates**

- Classification
- Functions
- Sources
- Digestive fate of dietary carbohydrates
- Absorption and metabolic utilization of carbohydrates
- Regulation of blood glucose concentration
- Dietary management of blood glucose concentration- Glycemic index, Fructose
- Non glycemic carbohydrates - Dietary fiber, Resistance starch, Fructo oligosaccharides
- **Inborn Errors of Metabolism** - Galactosemia, Glycogen storage diseases,

## **UNIT IV**

### **1. Protein**

- Classification - proteins, amino acids
- Functions
- Sources

- Nutritional significance of dietary amino acids
  - Digestion, absorption and transport
  - Protein synthesis, degradation and turnover
  - Factors influencing protein & amino acid requirements
  - Protein and amino acid requirements for various age and physiological groups
  - Concept of protein quality, methods of measuring protein quality
  - Improvement of protein quality of diets.
  - **Inborn Errors of Metabolism** - Phenylketonuria, Maple syrup urine disease (MSUD)
- 

<b>3Ses1a</b>	<b>SESSIONAL ELECTIVE 1</b>
<b>Marks: 50</b>	

### **SESSIONAL:**

#### **The aim of the course is to**

- Familiarize students with basic techniques used in Studies and Research in Nutritional Sciences
- Acquaint student with the methods of estimating nutrient requirements
- Orient students towards planning of metabolic studies

### **Contents**

#### **1. Estimation of body composition using different methods**

#### **2. Calculation of Energy requirements**

- To calculate BMR using different formulas
- To calculate energy expenditure based on physical activities using different methods

#### **3. Evaluation of protein quality of dishes**

- To calculate chemical score & NDPCal% of dishes

### **REFERENCES:**

1. Baeurle, P.A. (ed) (1994) : Inducible Gene Expression. Part 1, Environmental stresses and Nutrients, Boston, Birkhauser.
2. Berdanier, C.D. and Haargrove., J.L. (ed) (1996) : Nutrients and Gene Expression, Clinical Aspects, Boca Raton, FL CRC Press.
3. Bogert, R.j.; Briggs, G.H. and Calloway, D.H. (1973) : Nutrition and Physical Fitness, Saunders and Company.

4. Chandra, R.K. (ed) (1992): Nutrition and Immunology, ARTS Biomedical St. John's Newfoundland.
5. Chaney, M. S. - Rose, M.L. & Wisehi J.C. Nutrition (1979): Houghton Mifflim, Boston.
6. Hawk P.B., Oser B.L. and Summerson, (1972) : W.H. Practical Physiological Chemistry, Ed. Bernard Oser, Tata McGraw Hill.
7. Indian Council of Medical Research Nutrient Requirements and Recommended Dietary Allowances for India, 2010. A Report of the Expert Group of the Indian Council of Medical Research, New Delhi.
8. Kathleen Mahan and Sylvia Escort – Stump (2000) : Food, Nutrition & Diet Therapy 11<sup>th</sup> Edition, W.B. Saunder's Company London.
9. Matab S. Bamji, N. PrahladRao, Vinodini Reddy (2005): Text Book of Human Nutrition, Oxford & IBM Publishing Co. Pvt. Ltd., New Delhi.
10. Michael J. Gibney, Hester V Vorster and Frans J Kok (2003) Introduction to Human Nutrition. Blackwell publishing Oxford, U.K.
11. NandePrajakta. J. and ValiSabiha A. (2010). Fitness Evaluation Tests for Competitive Sports, 1<sup>st</sup> Edition, Himalaya Publishing House, India.
12. National Institute of Nutrition, (1983) : Manual of Laboratory Techniques.
13. Official Methods of Analysis (2000) : Association of Analytical Chemists - Association of Official Agricultural Chemists, Washington D.C.
14. Pike, R.L. and Brown, M.C. (1970): Nutrition An Integrated Approach, Wiley Eastern Private Ltd.
15. Prasad, H.S. (1976) : Trace Elements in Human Health and Disease, Nutrition Foundation Mongraph Series, Academic Press Inc.
16. Roach Benyan (2003) Metabolism and Nutrition Elsevier Science Ltd. Philadelphia. U.S.A.
17. S.P.Singh: A Text Book of Biochemistry, Published by S.K. Jain, CBS publishers, New Delhi,
18. Shilo, M.E., Olson, J.A. and Shike, M. (1994) : Modem Nutrition In Health And Disease, 8'h Edition, Philadelphia; Lea and Febiger (Vol. I & 11).
19. Susan G. Dudek (2007) Nutrition Essentials for Nursing Practice, LippincotWilleams d Wilkias, Philadelphea.
20. Swaminathan M. (1991) : Advanced Text Book on Food & Nutrition, Vol. I & 11 (2nd Edition, Revised), Bangalore printing & Publishing Ltd.

21. W.H.O. (1996): Trace Elements in Human Nutrition and Health, WHO in collaboration with FAO and the International Atomic Energy Agency, Geneva.
22. Yadav : Instrumental Methods of Chemical Analysis, Campus India Publications.
23. Z.S.C. Okoye: Biochemical Aspects of Nutrition, Prentice - Hall of India Private Limited, New Delhi.

**Journals:**

1. American journal of Clinical Nutrition. American Society For Clinical Nutrition, Bethesda, USA.
  2. World review of Nutrition and Dietetics. A. Karger AG 4011 Basel Switzerland.
  3. All WHO and FAO Monographs.
  4. Indian Journal of Medical Research, Indian Council of Medical Research, New Delhi.
  5. The Journal of Nutrition. The American Institute of Nutrition, Bethesda Maryland.
  6. Nutrition Reviews. The Nutrition Foundation, Inc., New York.
  7. Indian Journal of Nutrition & Dietetics, ShriAvinashlingam Home Science College, Coimbatore.
  8. Proceedings of Nutrition Society of India, Nutrition Society of India, NIN, Hyderabad.
-

**FOOD SCIENCE AND NUTRITION**  
**SEMESTER - III**  
**PAPER 10**  
**ELECTIVE 1**  
**NUTRITION AND WEIGHT MANAGEMENT**

**3T2b**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Sessional: 50**

**Objectives:**

**This course is designed to:**

- Provide in-depth knowledge of the physiological and metabolic role of various nutrients and their interaction in human nutrition during weight management.
- Enable students to understand the basis of human nutritional requirements and recommendations during weight management.
- Enable students to understand the pharmacological & surgical interventions during obesity.
- Understand the concept of adequate diet & the importance of meal planning in obesity.
- Nutritional problems / nutrition related diseases prevalent among the affluent and the less privileged groups with reference to their incidence, etiology and public health significance.
- Biochemical and clinical manifestations, preventive and therapeutic measures of the nutritional problems like obesity & underweight.
- Familiarize students with the recent advances in nutrition.

**Contents**

**UNIT I**

**2. Components of Body Weight**

- Adipocytes
  - Types & fat cell development, hypertrophy & hyperplasia
  - Fat storage & transport
- Hunger & Satiety
  - Control of food intake & regulation of body weight
- Energy homeostasis

- Energy expenditure, energy intake, energy balance & weight control (positive energy balance & weight gain, negative energy balance & weight loss)
- Factors affecting energy expenditure
- Regulation of body weight
  - Short term & long term regulation
  - Factors regulating food/energy intake & body weight

## **UNIT II**

### **1. Obesity**

- Prevalence of obesity
- Definition, classification & etiology of obesity
- Assessment of obesity
  - Diagnostic procedures
- Complications of obesity
  - Metabolic syndrome, diabetes mellitus, cardiovascular diseases, musculoskeletal consequences etc.
- Nutritional management of obesity
  - Determination of energy needs
  - Rate & extent of weight loss
  - Dietary modifications-energy restricted diets: moderately energy deficit diet, low & very low energy diets, fasting, low carbohydrate & low fat diets, high fiber diets, fad diets & practices, intake of protein, vitamins, minerals & fluid intake in obesity.
- Childhood & adolescence obesity
  - Prevalence, definition, causes, consequences, treatment & prevention

## **UNIT III**

### **1. Underweight**

- Definition, classification & causes of underweight
- Assessment of underweight
- Complications of underweight
- Nutritional management of underweight

### **2. Eating Disorders**

- Anorexia Nervosa

- Definition, diagnosis, clinical characteristics & complications of anorexia nervosa
- Nutritional management of anorexia nervosa
- Bulimia Nervosa
  - Definition, diagnosis, clinical characteristics & complications of bulimia nervosa
  - Binge eating disorder & obesity
  - Nutritional management of bulimia nervosa
- Psychological management of anorexia nervosa & bulimia nervosa
  - Behaviour management & nutritional counseling

#### **UNIT IV**

- **Psychological viewpoints/aspects of obesity**
    - Eating behavioural control
  - **Prevention of overweight & obesity**
    - Lifestyle modification
    - Diet counseling & nutrition education
    - Weight management in children
    - Maintenance of reduced body weight
  - **Exercise & weight loss**
    - Effect of exercise on obesity & body fat distribution
    - Exercise & use of body fuels
    - Types of exercise for weight reduction
    - Fat utilization & fat mobilization
    - Exercise regime for weight loss & weight maintenance
  - **Pharmaceutical management of obesity**
  - **Surgical management of obesity**
  - **Other methods & techniques of weight reduction**
- 

<b>3Ses1b</b>	<b>SESSIONAL ELECTIVE 1</b>
<b>Marks: 50</b>	

#### **SESSIONAL:**

##### **Contents:**

- Methods of calculation of ideal body weight (IBW).
- Assessment of body composition using-

- Anthropometric measurements
- Skinfold measurements
- Body composition analyzer
- Calculation of energy requirement-
  - Calculation of basal metabolic rate (BMR) using different formula
  - Calculation of energy expenditure (EE) based on physical activities using-
    - i. Factorial Approach
    - ii. Satyanarayana Method
- Designing of low energy food products for overweight/obese persons.
- Visit to weight loss center/Gym.
- Market survey of anti obesity/low energy food supplements available in the market.
- Case study-weight loss & maintenance through diet & exercise.

#### **REFERENCES:**

1. Bogert, R.j.; Briggs, G.H. and Calloway, D.H. (1973) : Nutrition and Physical Fitness, Saunders and Company.
2. Indian Council of Medical Research Nutrient Requirements and Recommended Dietary Allowances for India, A Report of the Expert Group of the Indian Council of Medical Research, New Delhi; ICMR.
3. Kathleen Mahan and Sylvia Escott – Stump (2000) : Food, Nutrition & Diet Therapy 11<sup>th</sup> Edition, W.B. Saunder's Company London.
4. Mahtab S. Bamji, N. PrahladRao, Vinodini Reddy (2005): Text Book of Human Nutrition, Oxford & IBM Publishing Co. Pvt. Ltd., New Delhi.
5. Michael J. Gibney, Hester V Vorster and Frans J Kok (2003) Introduction to Human Nutrition. Blackwell publishing Oxford, U.K.
6. NandePrajakta. J. and ValiSabiha A. (2010). Fitness Evaluation Tests for Competitive Sports, 1<sup>st</sup> Edition, Himalaya Publishing House, India.
7. Prasad, H.S. (1976) : Trace Elements in Human Health and Disease, Nutrition Foundation Mongraph Series, Academic Press Inc.
8. Roach Benyan (2003) Metabolism and Nutrition. Elsevier Science Ltd. Philadelphia. U.S.A.
9. Shilo, M.E., Olson, J.A. and Shike, M. (1994) : Modem Nutrition In Health And Disease, 8'h Edition, Philadelphia; Lea and Febiger (Vol. I & 11).

10. Susan G. Dudek (2007) Nutrition Essentials for Nursing Practice, Lippincot Williams D Wilkins, Philadelphea.

**Journals:**

1. American journal of Clinical Nutrition. American Society For Clinical Nutrition, Bethesda, USA.
  2. World review of Nutrition and Dietetics. A.Karger AG 4011 Basel Switzerland.
  3. All WHO and FAO Monographs.
  4. Indian Journal of Medical Research, Indian Council of Medical Research, New Delhi.
  5. The Journal of Nutrition. The American Institute of Nutrition, Bethesda Maryland.
  6. Nutrition Reviews. The Nutrition Foundation, Inc., New York.
  7. Indian Journal of Nutrition & Dietetics, ShriAvinashlingam Home Science College, Coimbatore.
  8. Proceedings of Nutrition Society of India, Nutrition Society of India, NIN, Hyderabad.
  9. International Journal of Obesity.
-

**FOOD SCIENCE AND NUTRITION  
SEMESTER - III  
PAPER 11  
FOUNDATION 1**

**3T3a**

**Marks: Theory: 80**

**Internal Assessment: 20**

Refer Direction

# **FOOD SCIENCE AND NUTRITION**

**SEMESTER - III**

**PAPER 11**

**CORE 11**

## **COMMUNITY NUTRITION AND PUBLIC HEALTH - I**

**3T3b**

**Marks: Theory: 80**

**Internal Assessment: 20**

### **Objectives:**

- Develop a holistic knowledge base and understanding of nature of important nutrition problems and their prevention and control for the disadvantaged and upper socio-economic strata in society.
- Understand the causes / determinants and consequence of nutrition problems in society.
- Be familiar with various approaches to nutrition and health interventions, programmes and policies.

### **Contents**

#### **UNIT I**

##### **1. Demographic Profile & Vital Statistics**

###### **Demographic Profile**

- Population trends in India, Density of population, Age structure, Sex ratio, Family size, Literacy and Education, Life expectancy.

##### **2. Vital Statistics**

- Infant Mortality (IMR), Birth rate (CBR), Fertility rate, Maternal Mortality Rate (MMR), Under 5 Mortality Rate (U5MR)

#### **UNIT II**

##### **1. Food Production & Sufficiency**

- Food production, post harvest technology, food grain storage
- Food requirements versus food availability, Food & nutritional security

##### **2. Food Security Programmes**

- Public Distribution System (PDS), Antyodaya Anna Yojana (AAY), Annapurna Scheme, Food for Work Programme.

#### **3. UNIT III**

##### **1. Nutrition Policy and Programme**

- National Nutrition Policy- aims and objectives
- Short and long term policies and implementation
- Anganwadi- its management, its role in implementation of nutrition policy programme.
- Functions of Primary Health Centre.

## **2. Nutrition Programme**

- Supplementary feeding programmes (Mid Day Meal Programme), Special Nutrition Programme, PradhanMantriGramodayaYojana (PMGY), Balwadi Feeding Programme, Composite Nutrition Programme, Applied Nutrition Programme

## **UNIT IV**

### **1. Assessment of Nutritional Status**

- Methods of Nutritional assessment, anthropometry, growth standards, dietary and clinical assessment, biochemical and radiological assessment

**2. Nutrition Monitoring** – Objectives, agencies engaged in nutrition monitoring

**3. Nutritional Surveillance** – Need for nutritional surveillance, key indicators of nutritional surveillance programme.

---

### **REFERENCES:**

1. Bamji M.S., Prahaladrao N., Reddy V.: Text Book on Human Nutrition, Oxford & IBM Publishing Co., Pvt. Ltd., New Delhi & Calcutta.
2. Food & Nutrition Board, National Plan of Action on Nutrition, Department of Women and Child Development, Ministry of HRD, Govt. of India.
3. Gayatri Murthy (1996): Food & Nutrition, Arya Publication House, Education Publishers, New Delhi.
4. Gopalan C.: Combating Under Nutrition- Basic Issues and Practical Approaches, Nutrition Foundation of India, New Delhi.
5. Gupta Piyush (2010): Textbook of Preventive and Social Medicine, CBS Publishers Pvt Ltd. New Delhi.
6. Indian Agriculture Year Book (2006): Govt. of India Publication, Ministry of Agriculture, Government Press, New Delhi.
7. Jellife D.B. (1965): Infant Nutrition in Tropics and Sub-tropics, WHO, Geneva
8. Park, K.: Preventive and Social Medicine, Banarsidas Publishers, Jabalpur.

9. Proceedings of Nutrition Society of India, NIN, Hyderabad.
  10. Technical Reports of ICMR, New Delhi.
  11. Technical Reports of WHO.
  12. The Management of Nutrition in Major Emergencies (2002): WHO, Published by AITBS Publishers, New Delhi.
-

<b>3S1</b>	<b>SEMINAR-3</b>
<b>Marks: 50</b>	

**Contents: Any one of the following . Report to be submitted.**

1. Visit to communities and socio-economic survey.
2. Anthropometric Survey – Techniques of measurements, validity and reliability.
3. Clinical Assessment
4. Dietary Survey – 24 hour recall, food frequency and weightment of food

# **FOOD SCIENCE AND NUTRITION**

**4T1**

**SEMESTER - IV**

**PAPER 12**

**CORE 12**

## **CLINICAL AND THERAPEUTIC NUTRITION - II**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical: 80**

**Internal Assessment: 20**

### **Objectives:**

**The course will enable students to:**

- Understand the etiology, physiologic and metabolic anomalies of acute and chronic diseases and patient needs.
- Know the effect of various diseases on nutritional status and nutritional and dietary requirements.
- Be able to recommend and provide appropriate nutritional care for prevention/and treatment of the various diseases.
- Provide practical laboratory training in the preparation of special diets.
- Understand the modifications of normal diet for therapeutic purposes.
- Provide exposure to actual hospital situation; Study the types of cases admitted, their biochemical, clinical and dietary history.

### **Contents**

#### **UNIT I**

##### **1. Nutrition Therapy of Metabolic Disorders**

###### **Diabetes Mellitus**

- Prevalence, Etiology, Symptoms, Types
- Factors affecting normal blood glucose levels, Impaired glucose homeostasis, Diagnostic and screening criteria for diabetes, Complications of diabetes - macro-vascular and micro-vascular
- Management of Diabetes
  - Meal planning approaches, Food exchange list, Glycemic index of foods, Sweeteners and sugar substitutes
  - Medications - Oral hypoglycemic drugs, Insulin
  - Lifestyle modification

## **UNIT II**

### **1. Nutritional Management of Renal Diseases**

- Physiology & functions of kidney, Kidney function tests
- Diseases of kidney - Glomerulonephritis, Nephrotic Syndrome, Acute Renal Failure (ARF), Chronic Renal Failure (CRF)
  - End Stage Renal Disease (ESRD)
    - Dialysis - Hemodialysis, Peritoneal dialysis
    - Kidney Transplant
  - Nephrolithiasis/Renal Calculi
- Etiology, Clinical signs & symptoms and medical nutrition therapy of renal diseases
- Use of sodium, potassium and phosphorus exchange lists in diet planning.
- Psychological support and Lifestyle changes
- Prevention of kidney diseases

## **UNIT III**

### **1. Nutrition and Cancer**

- Development & Characteristics of cancer
- Etiology of cancer
- Metabolic alterations during cancer - Cancer cachexia, Energy metabolism, Other metabolic abnormalities, Sensory changes
- Cancer therapy - Chemotherapy, Radiation therapy, Surgery
- Nutritional considerations - Oral nutritional management, Enteral tube feeding, Total parenteral nutrition

### **2. Nutrition for Bone Health**

- Bone Mass – Measurement of bone mineral density (BMD), Peak bone mass (PBM)
- Nutrition & bone - Calcium, phosphate & vitamin D
- Osteoporosis - Prevalence, types, etiology, pathophysiology & medical nutrition therapy

## **UNIT IV**

### **1. Nutrition During Stress - The Stress Response**

- **Surgery**
  - Physiological response to surgery, Preoperative & postoperative nutritional care in minor & major surgery, Determination of nutritional support, medical nutrition therapy during surgery

- **Burns**

- Classification of burns, Complications of burns, Calculations for nutrient requirements, Dietary management & mode of nutrition support for burns, Non dietary treatment and wound management of burns

- **Trauma & Sepsis**

- Physiological response to injury, Metabolic response to injury, Hormonal response to injury, Dietary management in trauma & sepsis (Multiple Organ Dysfunction Syndrome (MODS)

### 3. Gout

- Pathophysiology, Etiology, Clinical features and medical nutrition therapy
- 

<b>4P1</b>	<b>PRACTICAL CORE 12</b>
<b>Marks: 80</b>	
<b>Internal Assessment: 20</b>	

#### **PRACTICALS:**

##### **1. Commonly used tests for diagnosis of various diseases - system-wise.**

- Interpretation of patient data and diagnostic tests and drawing up of patient diet prescription using a case study approach.
- Follow up – acceptability of diet prescription, compliance, discharge diet plan.

##### **2. Preparation of diet counseling aids for common disorders.**

##### **3. Planning and preparation of diets for patients with common multiple disorders and complications and discharge diet plans.**

##### **4. Six-week internship in 500 bedded hospital providing hospital diets under the care of registered dietitian.**

#### **REFERENCES:**

1. Antia F.P. And Philip Abraham (2001) Clinical Nutrition and Dietetics, Oxford Publishing Company.
2. B. Srilakshmi, (2007) : Dietetics, published by K.K. Gupta For Newage International Pvt. Ltd. New Delhi.
3. Benion M. : Clinical Nutrition, Harper And Row Publishing M.Y.
4. Gopalan C., Ram Sastri B.V. And BalSubramaniam S.C., (2012) Nutritive Value of Indian Foods, Hyderabad, National Institute of Nutrition, Indian Council of Medical Research.

5. Mahan L.K., Sylvia Escott-Stump(2000) : Krause's Food Nutrition and Diet Therapy 10<sup>th</sup> Edition, W.B. Saunders Company London.
6. Passmore P. And M.A. East Wood : Human Nutrition And Dietetics, Churchill Living Stone.
7. Raheena M. Begum (1989) : A Text Book of Foods Nutrition And Dietetics, Wiley Eastern Ltd., New Delhi.
8. Robinson Ch., M.B. Lawlea, W.L., Chenoweth, And A.E., Carwick : Normal And Therapeutic Nutrition, Macmillan Publishing Company.
9. Sue Rodwell Williams, (1993) : Nutrition, Diet Therapy, (7<sup>th</sup> Ed) : W.B. Saunders Company London.
10. WohlShils And Goodheart : Modern Nutrition In Health And Disease, McLAREN And UBRMAN, Philadelphia.

**Journals:**

1. Indian Journal of Nutrition and Dietetics, Sri Avinashilingam Home Science College, Coimbatore.
  2. Journal of American Dietetic Association
  3. World Review of Nutrition and Dietetics, Kargar.
  4. Applied Nutrition, Indian Dietetics Association.
  5. American Journals of Clinical Nutrition. The Clinical Division of American Institute of Nutrition.
  6. European Journal of Clinical Nutrition.
  7. Nutrition Reviews.
-

**FOOD SCIENCE AND NUTRITION  
SEMESTER – IV  
CORE 13  
RESEARCH PROJECT (VIVA-VOCE)**

**4RP**

**External Assessment : 75**

**Internal Assessment : 50 Marks: 125**

Submission of Research Project Report & open viva-voce.

**FOOD SCIENCE AND NUTRITION**  
**SEMESTER – IV**  
**PAPER 13**  
**ELECTIVE 2**  
**ADVANCED NUTRITION - II**

**4T2a**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Sessional: 50**

**Objectives:**

**This course is designed to:**

- Provide in-depth knowledge of the physiological and metabolic role of various nutrients and their interaction in human nutrition.
- Enable students to understand the basis of human nutritional requirements and recommendations through the life cycle.
- Enable students to understand the pharmacological actions of nutrients and their implications.
- Nutritional problems / nutrition related diseases prevalent among the affluent and the less privileged groups with reference to their incidence, etiology and public health significance.
- Biochemical and clinical manifestations, preventive and therapeutic measures of the nutritional problems.
- Familiarize students with the recent advances in nutrition.

**Contents**

**UNIT I**

**1. Lipids**

- Classification - fats and fatty acids
- Functions
- Sources
- Digestion, absorption, transport and storage of fat in the body
- Nutritional and metabolic effects of dietary fatty acids
- Effect of diet on serum lipids and lipoproteins
- Nutritional requirements of fats/oils & fatty acids for various age and physiological groups

**2. Nutrition Regulation of Gene Expression**

- Regulation of gene expression - Role of nutrients

**UNIT II**

**1. Water, Electrolyte and Acid Base Balance**

- Water
  - Functions

- Distribution
- Compartments of body water
- Factors influencing water distribution
- Water balance - water intake and elimination, Regulation of water balance
- Water requirements
- Disturbances in fluid balance
- **Electrolytes**
  - Sodium, Potassium and Chloride
    - Functions
    - Sources
    - Absorption, transport and excretion
    - Recommended intake
- **Acid - Base Balance**
  - Acid generation
  - Regulation of acid - base balance
  - Disorders of acid - base imbalance

## **2. Nutritional Requirements in Special Conditions**

- High Altitudes, Cold and hot environments, Space mission

## **UNIT III**

### **1. Vitamins**

- **Fat Soluble Vitamins**
  - **Vitamin A, Vitamin D, Vitamin E & Vitamin K**
    - Absorption, transport, storage & excretion
    - Bioavailability
    - Functions
    - Food sources
    - Deficiency
    - Toxicity
    - Requirements and recommended dietary allowances
    - Assessment of vitamin Status
    - Interaction with other nutrients
- **Water Soluble Vitamins**
  - **Thiamin (B<sub>1</sub>), Riboflavin (B<sub>2</sub>), Niacin (B<sub>3</sub>), Pyridoxine (B<sub>6</sub>), Folic Acid (B<sub>9</sub>), Cyanocobalamin (B<sub>12</sub>), Pantothenic Acid, Biotin & Vitamin C (ascorbic acid)**
    - Absorption, transport, storage & elimination
    - Bioavailability

- Functions
- Food sources
- Deficiency
- Toxicity
- Requirements and recommended dietary allowances
- Assessment of vitamin Status
- Interaction with other nutrients

## **UNIT IV**

### **1. Minerals**

- **Macro Minerals**

- **Calcium, Phosphorus & Magnesium**

- Absorption, transport, storage & excretion
- Bioavailability
- Functions
- Food sources
- Deficiency
- Toxicity
- Requirements and recommended dietary allowances
- Assessment of vitamin Status
- Interaction with other nutrients

- **Micro Minerals/Trace Elements**

- **Iron, Zinc, Copper & Fluorine**

- Absorption, transport, storage & excretion
- Bioavailability
- Functions
- Food sources
- Deficiency
- Toxicity
- Requirements and recommended dietary allowances
- Assessment of vitamin Status
- Interaction with other nutrients

- **Micro Minerals/Ultra Trace Elements**

- **Iodine, Selenium, Manganese, Chromium, Molybdenum, Boron & Cobalt**

- Absorption, transport, storage & excretion
- Bioavailability
- Functions

- Food sources
- Deficiency
- Toxicity
- Requirements and recommended dietary allowances
- Assessment of vitamin Status
- Interaction with other nutrients

## **2. Nutritional Requirements of Sports Persons**

- Sports specific requirements of nutrients, Pre game and post game meals, Commercial sports specific supplements, Sports drinks, Ergogenic aids

## **3. Potential Health Benefits of Food Components other than nutrients**

- Polyphenols, Phytoestrogens, Probiotics, Prebiotics and Symbiotics
  - Non nutritive food components with Health Benefits
    - Tannins, Phytates, Lectins and Saponins
- 

<b>4Ses1a</b>	<b>SESSIONAL ELECTIVE 2</b>
<b>Marks: 50</b>	

### **SESSIONAL:**

#### **Objectives:**

**The aim of the course is to:**

- Familiarize students with basic techniques used in Studies and Research in Nutritional Sciences
- Acquaint student with the methods of estimating nutrient requirements
- Orient students towards planning of metabolic studies

#### **Contents**

##### **1. Assessment of proximate components of foods**

- Moisture, Fat, Protein, Ash, Crude fiber & Carbohydrate
- Preparations of Ash solutions for estimations of Minerals (Ca, P, Na, K, Fe).

#### **REFERENCES:**

1. Baeurle, P.A. (ed) (1994) : Inducible Gene Expression. Part 1, Environmental stresses and Nutrients, Boston, Birkhauser.
2. Berdanier, C.D. and Haargrove., J.L. (ed) (1996) : Nutrients and Gene Expression, Clinical Aspects, Boca Raton, FL CRC Press.
3. Bogert, R.J.; Briggs, G.H. and Calloway, D.H. (1973) : Nutrition and Physical Fitness, Saunders and Company.
4. Chandra, R. K. (ed) (1992): Nutrition and Immunology, ARTS Biomedical St. John's Newfoundland.
5. Chaney, M. S. - Rose, M.L. & Wisehi J.C. Nutrition (1979): Houghton Mifflim, Boston.

6. Hawk P.B., Oser B.L. and Summerson, (1972) : W.H. Practical Physiological Chemistry, Ed. Bernard Oser, Tata McGraw Hill.
7. Indian Council of Medical Research Nutrient Requirements and Recommended Dietary Allowances for India, A Report of the Expert Group of the Indian Council of Medical Research, New Delhi; ICMR.
8. Kathleen Mahan and Sylvia Escott – Stump (2000) : Food, Nutrition & Diet Therapy 11<sup>th</sup> Edition, W.B. Saunders Company London.
9. Mahtab S. Bamji, N. PrahladRao, Vinodini Reddy (2005): Text Book of Human Nutrition, Oxford & IBM Publishing Co. Pvt. Ltd., New Delhi.
10. Michael J. Gibney, Hester V Vorster and Frans J Kok (2003) Introduction to Human Nutrition. Blackwell publishing Oxford, U.K.
11. NandePrajakta. J. and ValiSabiba A. (2010). Fitness Evaluation Tests for Competitive Sports, 1<sup>st</sup> Edition, Himalaya Publishing House, India.
12. National Institute of Nutrition: Manual of Laboratory Techniques.
13. Official Methods of Analysis (2000) : Association of Analytical Chemists - Association of Official Agricultural Chemists, Washington D.C.
14. Pike, R.L. and Brown, M.C. (1970): Nutrition an Integrated Approach, Wiley Eastern Private Ltd.
15. Prasad, H.S. (1976) : Trace Elements in Human Health and Disease, Nutrition Foundation Monograph Series, Academic Press Inc.
16. Roach Benyan (2003) Metabolism and Nutrition Elsevier Science Ltd. Philadelphia. U.S.A.
17. S.P.Singh: A Text Book of Biochemistry, Published by S.K.Jain, CBS publishers, New Delhi,
18. Shilo, M.E., Olson, J.A. and Shike, M. (1994) : Modem Nutrition In Health And Disease, 8'h Edition, Philadelphia; Lea and Febiger (Vol. I & 11).
19. Susan G. Dudek (2007) Nutrition Essentials for Nursing Practice, LippincotWilleams d Wilkias, Philadelphea.
20. Swaminathan M. (1991) : Advanced Text Book on Food & Nutrition, Vol. I & 11 (2nd Edition, Revised), Bangalore printing & Publishing Ltd.
21. W.H.O. (1996): Trace Elements in Human Nutrition and Health, WHO in collaboration with FAO and the International Atomic Energy Agency, Geneva.
22. World Reviews of Nutrition and Dietetics.
23. Yadav : Instrumental Methods of Chemical Analysis, Campus India Publications.
24. Z.S.C.Okoye: Biochemical Aspects of Nutrition, Prentice - Hall of India Private Limited, New Delhi.

#### **Journals:**

1. American journal of Clinical Nutrition. American Society for Clinical Nutrition, Bethesda, USA.
2. World review of Nutrition and Dietetics. A. Karger AG 4011 Basel Switzerland.
3. All WHO and FAO Monographs.
4. Indian Journal of Medical Research, Indian Council of Medical Research, New Delhi.

5. The Journal of Nutrition. The American Institute of Nutrition, Bethesda Meryland.
  6. Nutrition Reviews. The Nutrition Foundation, Inc., New York.
  7. Indian Journal of Nutrition & Dietetics, ShriAvinashlingam Home Science College, Coimbatore.
  8. Proceedings of Nutrition Society of India, Nutrition Society of India, NIN, Hyderabad.
-

**FOOD SCIENCE AND NUTRITION**  
**SEMESTER – IV**  
**PAPER 13**  
**ELECTIVE 2**  
**SPORTS NUTRITION**

**4T2b**

**Marks:** **Theory: 80**  
**Internal Assessment: 20**  
**Sessional: 50**

**Objectives:**

**This course is designed to:**

- Provide in-depth knowledge of the physiological and metabolic role of various nutrients and their interaction in human nutrition during exercise & sports.
- Enable students to understand the basis of human nutritional requirements and recommendations during exercise & sports.
- Familiarize students with the recent advances in sports nutrition.

**Contents**

**UNIT I**

- **Energy systems for exercise & sports**
  - Energy production: Aerobic pathway & anaerobic pathway
  - Factors influencing aerobic fitness
- **Fuel for body work**
  - Sources of fuel from foods
  - Substrate choice in relation to exercise type, intensity & duration
  - Mobilization of fuel stores during exercise
  - Effect of sports training on energy requirement
  - Energy allowances for various types of sports activities
- **Energy expenditure**
  - Energy expenditure & energy balance in athletes & sports persons
  - Factors affecting energy expenditure
- **Body composition**
  - Effect of sports training on body composition of sports persons
  - Methods to assess body composition
  - Factors affecting body composition among sports persons

**UNIT II**

- **Nutritional Requirements for exercise & sports**

- **Carbohydrates:**

- Types, sources, glycemic index of foods
- Carbohydrate intake before, during & after exercise
- Carbohydrate loading
- Requirements of carbohydrate for different sports activities
- Maintenance of blood glucose level

- **Protein:**

- Types & sources
- Role of protein in sports & exercise
- Protein needs for different types of exercise (endurance, resistance etc.)
- Amino acids: classification, sources, role in sports & exercise, amino acid supplementation & requirements
- Effect of protein deficiency & excess on performance

## UNIT III

- **Nutritional Requirements for exercise & sports**

- **Fat:**

- Fat as energy sources for sports persons
- Fat needs for exercise
- Types, sources & requirements of fats for sports & exercise
- Fatty acids: classification, sources & effect of fatty acids on work performance & exercise, requirement of essential fatty acids for sports persons
- Effect of deficient intake of fats on sports performance

- **Micronutrients: Functions, role in exercise & sports, sources, deficiency, toxicity & requirement for various sports activities:**

- **Vitamins:** Fat soluble vitamins- A, D, E & K

Water soluble vitamins- Thiamine, riboflavin, niacin, pyridoxine, folic acid, vitamin B<sub>12</sub>, pantothenic acid, biotin & vitamin C

- **Minerals:** Calcium, phosphorus, magnesium, sulphur, iron, zinc, copper, iodine, selenium, manganese, sodium, potassium & chloride

## UNIT IV

- **Body Water**

- Distribution of body fluids (intra-cellular & extra-cellular water), water/fluid balance
- Water/fluid intake, absorption & elimination of fluids

- Factors affecting water/fluid absorption: sodium content, glucose content, osmolality, temperature etc.
  - Water requirement for short duration & endurance events
  - Dehydration: Symptoms & effects
  - Hydration guidelines & regime for sports persons
  - **Sports drinks:** Classification, use & advantages
  - **Ergogenic Aids**
    - Types, role in sports performance, nutritional & non-nutritional Ergogenic aids
  - **Pre &post game meals**
    - Food choices for pre & post event meals, quality & quantity to be consumed, dietary modifications
- 
- 

<b>4Ses1b</b>	<b>SESSIONAL ELECTIVE 2</b>
<b>Marks: 50</b>	

### **SESSIONAL:**

#### **Contents:**

- Assessment of body composition using-
  - Anthropometric measurements
  - Skinfold measurements
  - Body composition analyzer
- Calculation of energy expenditure (EE)-
  - Calculation of basal metabolic rate (BMR) using different formula
  - Calculation of energy expenditure (EE) based on physical activities using-
    - i. Factorial Approach
    - ii. Satyanarayana Method
- Market survey of sports supplements & sports drinks.
- Formulation of high energy foods for sports persons.
- Formulation of sports drinks.
- Planning a day's diet for sports persons.

### **REFERENCES:**

1. Bogert, R.j.; Briggs, G.H. and Calloway, D.H. (1973) : Nutrition and Physical Fitness, Saunders and Company.
2. Indian Council of Medical Research Nutrient Requirements and Recommended Dietary Allowances for India (2010). A Report of the Expert Group of the Indian Council of Medical Research, New Delhi.
3. Kathleen Mahan and Sylvia Escott – Stump (2000) : Food, Nutrition & Diet Therapy 11<sup>th</sup> Edition, W.B. Saundier's Company London.

4. Mahtab S. Bamji, N. PrahladRao, Vinodini Reddy (1996): Text Book of Human Nutrition, Oxford & IBM Publishing Co. Pvt. Ltd., New Delhi.
5. Michael J. Gibney, Hester V Vorster and Frans J Kok (2003) Introduction to Human Nutrition. Blackwell publishing Oxford, U.K.
6. NandePrajakta. J. and ValiSabiha A. (2010). Fitness Evaluation Tests for Competitive Sports, 1<sup>st</sup> Edition, Himalaya Publishing House, India.
7. Prasad, H.S. (1976) : Trace Elements in Human Health and Disease, Nutrition Foundation Mongraph Series, Academic Press Inc.
8. Roach Benyan (2003) Metabolism and Nutrition Elsevier Science Ltd. Philadelphia. U.S.A.
9. Shilo, M.E., Olson, J.A. and Shike, M. (1994) : Modern Nutrition In Health And Disease, 8th Edition, Philadelphia; Lea and Febiger (Vol. I & 11).
10. Susan G. Dudek (2007) Nutrition Essentials for Nursing Practice, Lippincot Williams D Wilkins, Philadelphaea.

**Journals:**

1. American journal of Clinical Nutrition. American Society For Clinical Nutrition, Bethesda, USA.
2. World review of Nutrition and Dietetics. A. Karger AG 4011 Basel Switzerland.
3. All WHO and FAO Monographs.
4. Indian Journal of Medical Research, Indian Council of Medical Research, New Delhi.
5. The Journal of Nutrition. The American Institute of Nutrition, Bethesda Meryland.
6. Nutrition Reviews. The Nutrition Foundation, Inc., New York.
7. Indian Journal of Nutrition & Dietetics, ShriAvinashlingam Home Science College, Coimbatore.
8. Proceedings of Nutrition Society of India, Nutrition Society of India, NIN, Hyderabad.

**FOOD SCIENCE AND NUTRITION  
SEMESTER – IV  
PAPER 14  
FOUNDATION 2**

**4T3a**

**Marks: Theory: 80  
Internal Assessment: 20**

Refer Direction

**Marks: Theory: 80****Internal Assessment: 20****Objectives:**

- Develop a holistic knowledge base and understanding of nature of important nutrition problems and their prevention and control for the disadvantaged and upper socio-economic strata in society.
- Understand the causes / determinants and consequence of nutrition problems in society.
- Be familiar with various approaches to nutrition and health interventions, programmes and policies.

**Contents****UNIT I**

1. **Nutrition and Infection-** Introduction to immune system, types of immunity. Vicious cycle of malnutrition & infection, immune response to infection, effects of malnutrition on immunity.
2. **HIV/AIDS-** Causes, Effects, Prevention & Therapies, National Programmes

**UNIT II****1. Nutrition Education**

- Scope of nutrition education, steps in planning, conducting, monitoring & evaluating nutrition and health education programmes.
- Methods of imparting nutrition education – design messages, mass media, traditional methods

**UNIT III**

1. **Problems in Human Nutrition** – Protein energy malnutrition, obesity, underweight, anemia, vitamin A deficiency, iodine deficiency, rickets, osteomalacia and osteoporosis, fluorosis.
2. **Strategies to combat Nutritional Deficiencies** – Food fortification, Food enrichment, Nutrition and health education, vitamin A prophylaxis programme, prophylaxis against nutritional anemias, control of iodine deficiency disorders.

**UNIT IV****1. Natural /manmade disasters resulting in emergency situation**

- Famine, draught, flood, earthquake, cyclone, war and political emergencies.

**2. Assessment and Surveillance of nutritional status in emergency affected population**

- Indicators of malnutrition, clinical signs for screening acute malnutrition.

**3. Nutritional relief and rehabilitation**

- Assessment of food needs
  - Mass & supplementary feeding
  - Local foods in rehabilitation
  - Scarcity ratio
- 

## **REFERENCES:**

1. Bamji M.S., Prahaladrao N., Reddy V.: Text Book on Human Nutrition, Oxford & IBM Publishing Co., Pvt. Ltd., New Delhi & Calcutta.
  2. Food & Nutrition Board, National Plan of Action on Nutrition, Department of Women and Child Development, Ministry of HRD, Govt. of India.
  3. Gayatri Murthy (1996): Food & Nutrition, Arya Publication House, Education Publishers, New Delhi.
  4. Gopalan C.: Combating Under Nutrition- Basic Issues and Practical Approaches, Nutrition Foundation of India, New Delhi.
  5. Indian Agriculture Year Book (2006): Govt. of India Publication, Ministry of Agriculture, Government Press, New Delhi.
  6. Jellife D.B. (1965): Infant Nutrition in Tropics and Sub-tropics, WHO, Geneva
  7. Park, K.: Preventive and Social Medicine, Banarsidas Publishers, Jabalpur.
  8. Proceedings of Nutrition Society of India, NIN, Hyderabad.
  9. Technical Reports of ICMR, New Delhi.
  10. Technical Reports of WHO.
  11. The Management of Nutrition in Major Emergencies (2002): WHO, Published by AITBS Publishers, New Delhi.
- 

<b>4S1</b>	<b>SEMINAR</b>
<b>Marks: 50</b>	

**Contents: Any one of the following. Submit the Report.**

1. KAP Survey to assess perception of people.
2. Visit to ongoing Public Health nutrition programmes, Day Care Centers.
3. Planning low cost nutrition recipes for beneficiaries of supplementary feeding programme.
4. Designing and implementation of Nutrition and Health Programme for community.

**FACULTY OF HOME SCIENCE**

**SCHEME AND SYLLABUS**

**FOR**

**M.Sc. HOME SCIENCE**

**RESOURCE MANAGEMENT**

**CHOICE BASED CREDIT SYSTEM**

**SEMESTER PATTERN**

**2016-2017**

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**NAGPUR**

**MAHARASHTRA**

**INDIA**

**M.Sc. Home Science (RESOURCE MANAGEMENT)**

Choice Based Credit System Semester Pattern

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (M. S.), India

Paper	SubjectCode	Name of Paper	Marks	Credits
<b>Semester - I</b>				
<b>Paper 1 (Core 1)</b>	<b>1T1</b>	Theory of Management -1	<b>100</b>	<b>25</b>
<b>Paper 2 (Core 2)</b>	<b>1T2</b>	Housing and Interiors -1	<b>100</b>	
<b>Paper 3 (Core 3)</b>	<b>1T3</b>	Hospitality Administration and services-1	<b>100</b>	
<b>Paper 4 (Core 4)</b>	<b>1T4</b>	Research Methods and Statistics – I	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 1</b>	<b>1P1</b>	Theory of Management -1	<b>100</b>	
<b>Practical Core 2</b>	<b>1P2</b>	Housing and Interiors -1	<b>100</b>	
<b>Seminar 1</b>	<b>1S1</b>	Current Trends & Issues in Resource Management - I	<b>25</b>	
<b>Semester - II</b>				
<b>Paper 5 (Core 5)</b>	<b>2T1</b>	Theory of Management –II	<b>100</b>	<b>25</b>
<b>Paper 6 (Core 6)</b>	<b>2T2</b>	Housing and Interiors –II	<b>100</b>	
<b>Paper 7 (Core 7)</b>	<b>2T3</b>	Hospitality Administration and services-II	<b>100</b>	
<b>Paper 8 (Core 8)</b>	<b>2T4</b>	Research Methods and Statistics – II	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 5</b>	<b>2P1</b>	Theory of Management –II	<b>100</b>	
<b>Practical Core 6</b>	<b>2P2</b>	Housing and Interiors –II	<b>100</b>	
<b>Seminar 2</b>	<b>2S1</b>	Current Trends & Issues in Resource Management - II	<b>25</b>	
<b>Semester - III</b>				
<b>Paper 9 (Core 9)</b>	<b>3T1</b>	Ergonomics-I	<b>100</b>	<b>25</b>
<b>Core 10</b>	<b>3RP</b>	Research Project (Design)	<b>125</b>	
<b>Paper 10 (Elective 1)</b>	<b>3T2a</b>	Landscape Design –I	<b>100</b>	
	<b>3T2b</b>	Environment Management	<b>100</b>	
<b>Paper 11 (Foundation 1/Core 11)</b>	<b>3T3a/ 3T3b</b>	Foundation 1* Entrepreneurship Management -I	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 9</b>	<b>3P1</b>	Ergonomics-I	<b>100</b>	
<b>Sessional Elective 1</b>	<b>3Ses1a</b>	Landscape Design -1	<b>50</b>	
	<b>3Ses1b</b>	Environment Management	<b>50</b>	
<b>Seminar 3</b>	<b>3S1</b>	Seminar	<b>50</b>	
<b>Semester - IV</b>				
<b>Paper 12 (Core 12)</b>	<b>4T1</b>	Ergonomics-II	<b>100</b>	<b>25</b>
<b>Core 13</b>	<b>4RP</b>	Research Project (Viva-Voce)	<b>125</b>	
<b>Paper 13 (Elective 2)</b>	<b>4T2a</b>	Landscape Design –II	<b>100</b>	
	<b>4T2b</b>	Sustainable Development & Resource Management	<b>100</b>	
<b>Paper 14 (Foundation 2/Core 14)</b>	<b>4T3a/ 4T3b</b>	Foundation 2* Entrepreneurship Management -II	<b>100</b>	
<b>Practical</b>				
<b>Practical Core 12</b>	<b>4P1</b>	Ergonomics-II	<b>100</b>	
<b>Sessional Elective 2</b>	<b>4Ses1a</b>	Landscape Design -II	<b>50</b>	
	<b>4Ses1b</b>	Sustainable Development & Resource Management	<b>50</b>	
<b>Seminar 4</b>	<b>4S1</b>	Seminar	<b>50</b>	
<b>Total</b>				<b>2500</b>
				<b>100</b>

## **RESOURCE MANAGEMENT**

The major objective of the specialization in Resource Management is to train students to optimize the use of resources - human and material - to achieve family/ institutional goals and improve the quality of life of the families and communities. This is achieved by synthesizing knowledge from physical, biological and social sciences and technology. This integrated and synthesized knowledge is to be applied in managing family/organizations. In the context of changing scenario in all facets of society and the socio economic and political changes, the curriculum in Resource Management address to the family and societal problems which ultimately would lead to family and community well being which is the crux of development in the national context.

The curriculum is planned to prepare students to be effective managers of the family and the community by managing the human and material resources effectively. It should also enable them to develop professional competence for jobs in the private and public sector.

The curriculum as a whole deals with the roles and interrelationship of individuals in the family and the near environment, relationship of design, changing technology and environment to standards of living and human well-being. Emphasis is laid on management of resources and of change, creative cognitive skills of analysis, problem identification and solving, technological skills in order to create and change products and machines and using them effectively, research skill in order to identify and help to broaden knowledge base and to evaluate. Besides, considerable attention is given to give enough input to students to develop communication skills, leadership skills, cooperative skills and skills in professional development in order to understand and foster continued competence and commitment.

The specific objectives of the specialization are

- To understand the significance of Resource Management in the current socio-economic context.
- To acquire professional skills in financial management and control, designing of interiors and work places and equipment, institutional management and rendering consumer services.
- To develop entrepreneurship skills and self employment potential.
- To understand the use and application of computers and information technology in interior designing, hospitality administration, research and development.
- To achieve social advancement through value education.

**RESOURCE MANAGEMENT**  
**SEMESTER – I**  
**PAPER 1**  
**CORE 1**  
**THEORY OF MANAGEMENT – I**

**1T1**

**Marks:** **Theory: 80**  
**Practical: 80**

**Internal Assessment: 20**  
**Internal Assessment: 20**

**Objectives:**

- To understand the significance of management in the micro and macro level organizations.
- To know the conceptual, human and scientific aspects of management function.
- To develop the ability to evaluate the management efficiency and effectiveness in the family and other organizations.
- To enhance the understanding of the similarities among all areas of management education and research, and dissemination of the professional knowledge, skills and attitude.

**Contents**

**Unit I**

- Introduction to management, Functions and features of management, Types of management, Advantages and Disadvantages & limitations of management
- Management discipline and approach to its study
- Process theory – Quantitative and behavior approach systems and contingency approach
- History and development of management in India and elsewhere – Industrial, Farm and Agriculture, Institutional, Household, Education
- Development of resource management as a field of study

**Unit II**

- Work Simplification
- History of work simplification
- Techniques of time and motion studies
- Mundel's classes change
- Body mechanics

**Unit III**

- Technical, human, conceptual aspects of management functions – planning, organizing, staffing, directing, controlling and feedback
- Planning: Nature and principles of planning objectives (steps and types) and quality management.
- System approach to management – Definition, elements, Types

**Unit IV**

- Organizing – Principles and processes of organizational structure, features and organizational charts
- Power of authority and staff relationship

- Leadership styles and direction
- Management Control – Management control tools
- Development of information and communication system
- Formal and informal channels of communication
- Concepts of feedback and forward as controls.

1P1

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 1</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

1. Diagrammatic representation of the following
  - Management Process
  - System approach to management
  - Types of management
2. To simplify daily Household activity
  - Pathway chart
  - Flow process chart
  - Operation chart

#### **Internal Assessment:Marks: 20**

1. To submit assignment on history and development of management in India
  - Industrial
  - Farm and Agriculture
  - Institutional
  - Household
  - Education
2. To prepare power point presentation on related topic.
3. To present seminar on related topic

#### **References:**

1. I Kapur, S.K. (1996): Professional Management, S.K. Publishers, New Delhi.
2. Deacon, R.E. and Firebaugh, F.M. (1975) : Home Management Context and Concept Houghton, Mifflen, Boston.
3. Deacon, RE. and Firebaugh, F.M. (1981) Resource Management Principles and Applications, Allyn and Bacon, Boston.
4. Sherman A\_W. et al (1988): Managing Human Resources, South-Western Publication Co Cincinnati.
5. Iyancevich J.M. eta] (1980) : Managing for performance, Business Publications INC, Texas.
6. Dwivedi, R.S. (1981) : Dynamics of Human Behaviour of Work, Oxford and IBH, New Delhi.
7. Saiyadain, M S. (1988) : Human Resource Management, Tata McGraw Hill, New Delhi.
8. Dayal, R. (1996) : Dynamics of Human Resource Development, Mittal Publications, New Delhi.

9. Tripathi P.C., Reddy P. N. - (1991) Principles of Management TATA McGraw-Hill Publication Co. Ltd.
10. Prasad L. M. (1999) Principles and Practice of Management, Sultan Chand and Sons.
11. Gross I. H, Crandall E. W. (1967) Management for Modern Families Sterling Publishers (P) Ltd.
12. Kootz H., Weihrich H. (1998) Essentials of Management. TATA McGraw-Hill Publication Co. Ltd.

**Marks: Theory: 80****Internal Assessment: 20****Practical: 80****Internal Assessment: 20****Objectives****To enable the students to:**

- Recognize the role of housing for national development.
- Be aware of the housing problems in India and the measures for alleviating the problems.
- Understand and apply the principles of design in housing.
- Understand the application of anthropometrics measurements in space designing for various activities.
- Apply aesthetics and creative abilities in interiors.
- Analyze, design, and study dwellings plans of different income families.

**Contents****UNIT I**

- History of Housing, concept and development of Housing
- Changes in housing needs and standards, change in style due to influence of services and modern amenities
- Housing in India as affected by trends in –
  - Establishment of households
  - Levels of income per households
  - Occupation
  - Family mobility
  - Technological development

**UNIT II**

- **Present housing condition in India**
  - Rural and urban
  - Cost of housing
  - Availability of building materials

- Quality of housing available
- Quantity of house available
- Housing management problem
- Slums causes, Prevention, Rehabilitation
- Low cost housing

### **UNIT III**

- Factors affecting housing
  - Social
  - Cultural
  - Demographic
  - Climatic
  - Political factors
  - Population
  - Space / plot and material availability
- **Private and public housing**
  - Various housing schemes
  - Central government programs
  - Local government programs
  - Industrial housing

### **UNIT IV**

- **Building materials and finishes**
  - Basic building materials are cement, concrete, steel, iron
  - Basic finishing materials are wood, glass, plastic, acrylic, ceramics, marble, granite, plaster.
  - Building finishes – Painting, pointing, polishing
- **Cost of housing design**
  - Factors influencing cost
  - Estimating, costing and cost reduction techniques
  - Sources for housing finance

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 2</b>	
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>	

1P2

**Practical:- Marks: 80**

1. Floor plan, elevation and graphics in Auto CAD.

**2. Study of different housing designs.**

**Internal Assessment:- Marks : 20**

1. Market survey of different building materials and finishes.

**References:**

1. Ahmed Kasu: Interior Design.
2. Alexander, M.J. : Designing interior environment, Harcourt Brace Havonovich, 1972.
3. Ambedkar, V.N. and Modak, N.V. (1971): Town and country Planning and Housing Orient Longman.
4. Deshpande, R.S. (1974): Modern ideal homes for India, United Book Corporation.
5. Dongarkery, K.S.: Interior decoration in India.
6. Faulkner, S. (1979): Planning a House, Holt, Richard and Winson.
7. Faulkner, R. (1975): Inside today's home, Holt, Richard and Winson.
8. George, D. (1981): How to be your own Electrician, Science, Stall Book, Harper and Row.
9. Graham, L. (1982): Lighting your Home, Wills and Boons Ltd.
10. Harriet and Reel Goldstein: Art in everyday life.
11. Rangwala, S.C. (1974): Town planning, Charotar Book Stall, Arland.
12. Publication of Housing Board S., NBO, ISI, HUCPO etc.
13. Chudley, R. (1985): Construction Technology, Vol. 1-5.
14. Chaira, J.D. and Callendar, J.H. (1980): Time saver standard for building types, McGraw Hill, New York.
15. Agan, T.: The Rouse - Its plan and use.
16. Pranav Bhatt: Foundation of art and design.
17. N. D. Bhat: Engineering Drawing.
18. Cherunilam F. and Heggade, O. D.: Housing in India, Himalaya Publishing Bombay (1987).
19. Inside Outside.

**HOSPITALITY ADMINISTRATION AND SERVICES-I****Marks: Theory: 80****Internal Assessment: 20****Objectives**

To enable the students to

- Understand the organizational procedures of the front office.
- Comprehend the principle of front office operation.
- Acquire skills in personnel management.
- Develop effective communication skills and the art of dealing with people.

**Contents****UNIT I**

- **Introduction**
  - Classification of Hotels (Types)
  - Major Departments in a Hotel
  - Numbering of rooms and food plans
  - Management structure of a Hotel
  - Room divisions, Room rates, tariff structure and basis of charging
- **Hotel Guests**
  - Types of hotel guests and selection of a Hotel
  - Guests and their needs
  - The guest cycle
  - Interaction between guests and Front Office Personnel

**UNIT II**

- Types of institutions offering hospitality services
- Importance of the hospitality industry and its relationship to tourism.
- Hospitality functions
  - Role of housekeeping in hospitality industry.

- Housekeeping in relation to commercial and welfare section.
- Management of housekeeping department
  - Layout of housekeeping department.
  - Planning, organization and communication of housekeeping activities.
  - Coordination with other departments.
  - Roles/responsibilities of personnel in the housekeeping department.

## **UNIT III**

### **Front Office Operations**

- Front office salesmanship
- Duties of front office personnel
- Qualities and attributes of front office personnel
- Basic terminology used in the front office
- Co-ordination and communication between front office and other departments

### **Front Office Organization**

- Layout of a front office
- Planning Equipment and furniture for the front office
- Organizational structure of the front office

## **UNIT IV**

### **Reservations**

- Sources of hotel booking
- Modes of room reservation
- Systems of room reservation — conventional, whitney, computerized
- Recording from reservations — charts, records, diaries, forms etc.
- Filing system
- Advance bookings

### **Internal Assessment:- Marks : 20**

1. Prepare list of basic terminology used in the front office
2. Write assignments on the following topic
  - a. Tour organizers in major cities
3. Table Setting & Cutlery, Crockery & other equipment and write assignment on it.

4. Visit to Hotel/ Hospital Kitchen/ Railway canteen and pantry/ Industrial Canteen etc.(any one)
5. Report writing for the above visits.

**References:**

1. Andrews, S (1982) Hotel Front Office Training Manual, Tata McGraw Hill.
2. Baker Sue, Bradley P. Huyton, J.: Principles of Hotel Front Office Operation Cassell, Wellington House.
3. Basis, J. R., Medlik, S. (1985(:A manual of Hotel /reception,3<sup>rd</sup> edition Hunmann.
4. Dix C. (1979): Accommodation Operations Front Office, McDonalds and Evans Ltd.
5. Dukes, P.: Hotel Front Office Management and Operations, I. O. W A., W. M. C.
6. Maszom's, J. J. (1971): Front Office Operation, Bobbs.
7. Jones, C. and Paul, J. V. (1980): Accommodation Management: A system Approach, Bateford.
8. Vallen J. Jerom: Check in Check out Principles of Effective Front Office Management, Wm. C. Brown Publishers, College Division.

**Marks: Theory: 80****Internal Assessment: 20****Objectives**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents**

- **UNIT I**
  - Definition of research
  - Objectives of research
  - Scope of research in home science
  - Types of research
  - Anthropological and epidemiological research
  - Research process
  - Defining the research problem
  - Formulation of research hypotheses
  - Research design
    - Meaning
    - Important concepts relating to research design
    - Different research designs
    - Important experimental designs

**UNIT II**

- Literature search

- Referencing
- Abstracting
- Computer search
- Bibliography
- Measurement and scaling
  - Classification of measurement scales
  - Goodness of measurement scales
  - Scaling techniques
- Questionnaire designing
  - Criteria for questionnaire designing
  - Questionnaire design procedure
- Data collection
  - Collection of primary data
  - Collection of secondary data

## **UNIT III**

### **Sampling:**

- Concept of statistics
- Scope of statistics
- Classification and tabulation of data
  - Introduction, meaning and objectives of classification
  - Types of classification
  - Formation of discrete frequency distribution
  - Formation of continuous frequency distribution
  - Tabulation of data
  - Parts of a table
  - General rules for tabulation
  - Types of tables
- Diagrammatic and graphic presentation

- Significance of diagrams and graphs
- General rules for constructing diagrams and graphs
- Types of diagrams
- Graphs
- Graphs of frequency distributions
- Measure of central tendency
  - Mean
  - Median
  - Mode

## **UNIT IV**

- Measures of dispersion
  - Range
  - Quartile deviation
  - Mean deviation
  - Standard deviation
- Concept of normal distribution curve and probability
  - The meaning and importance of normal distribution
  - Measurement of normal probability distribution
  - Skewness
  - Kurtosis
- Correlation analysis
  - Significance of the study of correlation
  - Types of correlation
  - Methods of studying correlation
    - Scatter diagram method
    - Graphic method
    - Karl Pearson's coefficient of correlation
    - Rank method
    - Method of least squares
- Regression analysis

- Types of regression models
- Assumptions for a simple linear regression model
- Parameters of simple linear regression model
- Methods to determine regression coefficients
  - Method of normal equations
  - Deviations method
- Assumptions in multiple linear regression
- Estimating parameters of multiple regression model
  - Least squares method

## **References:**

1. Best J. W. (1983) : Research Education, Prentice Hall, New Delhi..
2. Dody, J. T. (1967): An Introduction To Social Research, Appleton Center.
3. Philips, B.S.( 1977): Social Research Strategy And Tactics, Mae Millan.
4. Devdas R.P. (197 1): Jamdnppi Of Research Methodology, Shri Ramakrishna Mission Vidyayala.
5. Young, P.V. And Schmid, C.F. (1968) : Scientific Social Survey And Research, Prentice Hall, New Delhi.
6. Shukla, M.C. And Gulshan S.S. (1970): Statistics Theory And Practice, S. Chand New Delhi.
7. Gupta S.P. (1970): Statistical Methods, S. Chand Company, New Delhi.
8. Garrett, H. : Statistics In Education And Psychology.
9. Sinha S.L. L Statistics In Psychology And Education, Anmol Publications Pvt. Ltd., New Delhi.
10. Daryab Singh Principles of Statistics, Atlantic Publishers & Distributors.
11. Bernard Ostle Statistics in Research.
12. M.H.Gopal : Introduction to Research Methodology for Social Sciences.
13. C.R. Kothari : Research Methodology (Methods & Techniques)
14. Fredrick, Lamson, Whiteney: The Elements of Research.
15. Good, Carter, Scales and Douglas: Methods of Research.
16. Business statistics by J K Sharma, Pearson Education
17. Research Methodology – Concepts and Cases, Dr Deepak Chawla, Dr NeenaSondhi
18. Discovering Statistics by Andy Field, SAGE Publication
19. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee.

**CURRENT TRENDS AND ISSUES IN RESOURCE  
MANAGEMENT-I**

**Seminar 1  
Objectives**

**Internal Assessment: 25**

Study current trends and issues and researches in resource management by current reading, surveys, brain storming, group discussion, debate and do the presentations on various assigned topics.

Current Trends and issues will have seminar presentation and carry internal marks.

**RESOURCE MANAGEMENT**  
**SEMESTER – II**  
**PAPER 5**  
**CORE 5**  
**THEORY OF MANAGEMENT – II**

**2T1**

**Marks: Theory: 80**  
**Practical: 80**

**Internal Assessment: 20**  
**Internal Assessment: 20**

### **Objectives**

- To understand the significance of management in the micro and macro level organizations.
- To know the conceptual, human and scientific aspects of management function.
- To develop the ability to evaluate the management efficiency and effectiveness in the family and other organizations.
- To enhance the understanding of the similarities among all areas of management education and research, and dissemination of the professional knowledge, skills and attitude.

### **Contents**

#### **Unit I**

- Management of material goods
- Complexity of managing materials
- Planning, controlling and evaluating material goods
- Management abilities
  - Conceptual
  - Human
  - Technical

#### **Unit II**

- Resource Management
- Energy Management
- Physical energy – energy demands and stages of family life cycle
- Fatigue – types
- Planning, Controlling and evaluating energy
- Natural energy
- Conventional and non-conventional energy

#### **Unit III**

- Time Management (G.C & K) g & C.P.M. Pert
- Time as resource – Vitally important dimension of human life, human effectiveness and time management (e.g. gentle assertiveness)

- Culture and times
- Use of time and family management
- Time variation and biorhythms
- Time planning and scheduling of work (Prioritization of time to avoid wastages and distractions)
- IT support and family communications in relation to time management
- Decision making
  - Concept and definitions, process, types
  - Modes of decision making
  - Techniques and special tools for decision making: Decision tree
  - Cost benefit analysis
  - Limits of applicability of family and institutional situations.

## **Unit IV**

- Stress Management
  - Stress – meaning and significance
  - Manifestation of Stress – psychosomatic disorders
  - Intra-psychic stress
- Health Management
  - Measures adopted to overcome stress-
  - Physical, Mental, Psychological, social and positive health aspect

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 5</b>	<b>2P1</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>	

1. Practical related to energy management by using equipments for various activities e.g. long handled, short handled, mopes, brushes etc. in standing and sitting posture.
2. To find out maximum and comfortable reaching heights for group of students.
3. Diagrammatic representation of Decision making.
4. To determine working heights for different household activities.
5. Practical on modes of decision making and decision tree explained with the help of power point presentation.

## **Internal Assessment:Marks : 20**

1. Seminar and power point presentation on the following topics.

Time planning and scheduling of work

- a. Working women
  - b. Business women
  - c. Women Entrepreneur
  - d. Other employment including shift duties
2. Study on psychosomatic disorders due to stress.
  3. Assignment on stress management studies conducted in India
  4. Power point presentation on measures adopted to overcome stress.

**References :**

1. I Kapur, S.K. (1996) : Professional Management, S.K. Publishers, New Delhi.
2. Deacon, R.E. and Firebaugh, F.M. (1975) : Home Management Context and Concept Houghton, Mifflin, Boston.
3. Deacon, RE. and Firebaugh, F.M. (1981) Resource Management Principles and Applications, Allyn and Bacon, Boston.
4. Sherman A\_W. et al (1988) : Managing Human Resources, South-Western Publication Co Cincinnati.
5. Iyancevich J.M. eta] (1980) : Managing for performance, Business Publications INC, Texas.
6. Dwivedi, R.S. (1981) : Dynamics of Human Behaviour of Work, Oxford and IBH, New Delhi.
7. Saiyadain, M S. (1988) : Human Resource Management, Tata McGraw Hill, New Delhi.
8. Dayal, R. (1996) : Dynamics of Human Resource Development, Mittal Publications, New Delhi.
9. Tripathi P.C., Reddy P. N. - (1991) Principles of Management TATA McGraw-Hill Publication Co. Ltd.
10. Prasad L. M. (1999) Principles and Practice of Management, Sultan Chand and Sons.
11. Gross I. H, Crandall E. W. (1967) Management for Modern Families Sterling Publishers (P) Ltd.
12. Kootz H., Weihrich H. (1998) Essentials of Management. TATA McGraw-Hill Publication Co. Ltd.

**RESOURCE MANAGEMENT**  
**SEMESTER – II**  
**PAPER 6**  
**CORE 6**  
**HOUSING AND INTERIORS – II**

**2T2**

**Marks:** **Theory: 80**  
**Practical: 80**

**Internal Assessment: 20**  
**Internal Assessment: 20**

### **Objectives**

To enable the students to:

- Recognize the role of housing for national development.
- Be aware of the housing problems in India and the measures for alleviating the problems.
- Understand and apply the principles of design in housing.
- Understand the application of anthropometrics measurements in space designing for various activities.
- Apply aesthetics and creative abilities in interiors.
- Analyze, design, and study dwellings plans of different income families.

### **Contents**

#### **UNIT I**

- Approaches to housing- role of housing in integrated development, housing for good family living, housing demands and future projections
- Type of housing - own, rented, cooperative, slum
- Housing standards and housing legislation.
- Building codes and byelaws, Floor Space Index (FSI)
- Rent control act

#### **UNIT II**

- Principles of House planning
- Study of house plan
- Functional design in house
- Grouping of activities and circulation
- New concepts of planning such as rain water harvesting, eco friendly green housing

#### **UNIT III**

##### **Anthropometric data**

- Its application to furniture design (living room-sofa; dining table chair; bed room-wardrobe and beds).

- Layout of furniture
- Elbow room and clearance space
- Circulation space in rooms and corridors
- Working heights while standing and sitting
- Bodily attitudes and psychological effects of space.

## **UNIT IV**

### **Essential services**

- Different types of services
- Plumbing
- Water supply, drainage
- Electricity and telephone etc.
- Research in the field of housing and prefabrication innovative and indigenous materials and techniques
- Research related to social, psychological and physical aspect of housing
- Housing research institutions

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 6</b>	<b>2P2</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>	

1. Application of furniture arrangement in Auto CAD and colour scheme.
2. Study of Anthropometric measurement and spaces.
3. Layout of plumbing and electric supply.

### **Internal Assessment:- Mark: 20**

1. Visit to private and public housing.

### **References:**

1. Ahmed Kasu: Interior Design.
2. Alexander, M.J : Designing interior environment, Harcourt Brace Havonovich, 1972.
3. Ambedkar, V.N. and Modak, N.V. (1971): Town and country Planning and Housing Orient Longman.
4. Deshpande, R.S. (1974): Modern ideal homes for India, United Book Corporation.
5. Dongarkery, K.S.: Interior decoration in India.
6. Faulkner, S. (1979): Planning a House, Holt, Richard and Winson.

7. Faulkner, R. (1975): Inside today's home, Holt, Richard and Winson.
8. George, D. (1981): How to be your own Electrician, Science, Stall Book, Harper and Row.
9. Graham, L. (1982): Lighting your Home, Wills and Boons Ltd.
10. Harriet and Reel Goldstein: Art in everyday life.
11. Rangwala, S.C. (1974): Town planning, Charotar Book Stall, Arland.
12. Publication of Housing Board S., NBO, ISI, HUCPO etc.
13. Chudley, R. (1985): Construction Technology, Vol. 1-5.
14. Chaira, J.D. and Callendar, J.H. (1980): Time saver standard for building types, McGraw Hill, New York.
15. Agan, T.: The Rouse - Its plan and use.
16. Pranav Bhatt: Foundation of art and design.
17. N. D. Bhat: Engineering Drawing.
18. Cherunilam F. and Heggade, O. D.: Housing in India, Himalaya Publishing Bombay (1987).
19. Inside Outside.

**Marks: Theory: 80****Internal Assessment: 20****Objectives**

To enable the students to

- Understand the organizational procedures of the front office.
- Comprehend the principle of front office operation.
- Acquire skills in personnel management.
- Develop effective communication skills and the art of dealing with people.

**Contents****UNIT I****Reception**

- 6 Expected arrival and departure list
- 7 Contractual terms between hotel and guest
- 8 VIP procedure
- 9 Functions of all room rack and mail rack
- 10 Change of guest room
- 11 Key handling and control
- 12 Room status report, occupancy percentage
- 13 Preparing room report, night clerks report**

**UNIT II****Information**

- About the hotel and city
- Postal regulations
- Transportation, travel agents, package tours
- Shopping centers, monuments
- Local festivals
- Rules and regulations regarding foreign currency
- Banquet Management

## **UNIT III**

### **Administrative Policies**

- Personnel management, Recruitment, training, handling personnel promotion, evaluation, distribution of jobs, job schedules, job analysis.
- Procurement policies, buying techniques, stores, stock control.
- Cost control: inventory management, budget process, controlling expenses.
- Safety, security and sanitation: safety, fire fighting, first aid safety in equipment use, pest control, sanitation standard.
- Uniforms, type's selection, distribution and control.
- Hostess Training

## **UNIT IV**

### **Energy and water management:**

- Power requirements, flushing system, water control taps, waste water circulation.
- Communication system- Public address system, intercom system, music and television.
- Maintenance - Repairs and redecoration programmes.

### **Internal Assessment:-Marks: 20**

1. Event Planning and Management Exhibition/ Festival/Social Gathering/ Conference/Work Shops/Seminar.
2. Visit to two different travel agencies.
3. Field visit to different hotels.
4. Report writing for above visits.

### **References:**

1. I Andrews, S (1982) Hotel Front Office Training Manual, Tata McGraw Hill.
2. Baker Sue, Bradley P. Huyton, J.: Principles of Hotel Front Office Operation Cassell, Wellington House.
3. Basis, J. R., Medlik, S. (1985):A manual of Hotel /reception,3<sup>rd</sup> edition Hunmann.
4. Dix C. (1979): Accommodation Operations Front Office, McDonalds and Evans Ltd.
5. Dukes, P.: Hotel Front Office Management and Operations, I. O. W A., W. M. C.
6. Maszom's, J. J. (1971): Front Office Operation, Bobbs.
7. Jones, C. and Paul, J. V. (1980): Accommodation Management: A system Approach, Bateford.
8. Vallen J. Jerom: Check in Check out Principles of Effective Front Office Management, Wm. C. Brown Publishers, and College Division.



**RESEARCH METHODS AND STATISTICS – II****Marks: Theory: 80****Internal Assessment: 20****Objectives**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents****UNIT I**

- Sampling considerations
  - Sampling concepts
  - Sampling vs non-sampling error
  - Probability sampling design
  - Non-probability sampling design
  - Determination of sample size
- Estimation and confidence intervals
  - Point estimation
  - Interval estimation
- Hypothesis testing
  - Rationale for hypothesis testing
  - A general procedure for hypothesis testing
  - One-tailed and two-tailed tests
  - Errors in hypothesis testing

**UNIT II**

- Students ‘t’ test for small samples for
  - Testing differences in proportions
  - Testing differences in means
- Large sample test (C. R. Test) for testing significance of difference between mean of two groups
- Analysis of variance
  - One way ANOVA
  - Two way ANOVA

## **UNIT III**

- Chi-square test
  - Chi-square distribution
  - Chi-square test statistic
  - Application of chi-square test
    - Equal probability type
    - Normal distribution type
    - 2 X 2 contingency tables type
    - Chi-square test of independence
- Participatory rapid assessment
- Participatory learning assessment

## **UNIT IV**

- The writing process
  - Getting started
  - Use outline as a starting device
  - Drafting
  - Reflecting
  - Re-reading
    - Checking organization
    - Checking headings
    - Checking content
    - Checking clarity
    - Checking grammar
- Parts of dissertation/Research report/article
  - Abstract
  - Introduction
  - Review of literature
  - Materials and methods
  - Results and discussion
  - Summary and conclusion
  - Bibliography
  - Recommendation
- Computer applications in data analysis
  - Use of MS-Office for research
  - Graphic representation

- o Use of SPSS for data analysis

## **References:**

1. Best J. W. (1983) : Research Education, Prentice Hall, New Delhi..
2. Dody, J. T. (1967): An Introduction to Social Research, Appleton Center.
3. Philips, B.S.( 1977): Social Research Strategy And Tactics, Mae Millan.
4. Devdas R.P. (197 1): Jamdnppi Of Research Methodology, Shri Ramakrishna Mission Vidyayala.
5. Young, P.V. And Schmid, C.F. (1968) : Scientific Social Survey And Research, Prentice Hall, New Delhi.
6. Shukla, M.C. And Gulshan S.S. (1970): Statistics Theory And Practice, S. Chand New Delhi.
7. Gupta S.P. (1970): Statistical Methods, S. Chand Company, New Delhi.
8. Garrett, H. : Statistics In Education And Psychology.
9. Sinha S.L. L Statistics In Psychology And Education, Anmol Publications Pvt. Ltd., New Delhi.
10. Daryab Singh Principles of Statistics, Atlantic Publishers & Distributors.
11. Bernard Ostle Statistics in Research.
12. M.H.Gopal : Introduction to Research Methodology for Social Sciences.
13. C.R. Kothari : Research Methodology (Methods & Techniques)
14. Fredrick, Lamson, Whiteney: The Elements of Research.
15. Good, Carter, Scales and Douglas: Methods of Research.
16. Business statistics by J K Sharma, Pearson Education
17. Research Methodology – Concepts and Cases, Dr Deepak Chawla, Dr NeenaSondhi
18. Discovering Statistics by Andy Field, SAGE Publication
19. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee

**CURRENT TRENDS AND ISSUES IN RESOURCE  
MANAGEMENT-II**

**Seminar 2**

**Internal Assessment: 25**

**Objectives**

Study current trends and issues and researches in resource management by current reading, surveys, brain storming, group discussion, debate and do the presentations on various assigned topics.

Current Trends and issues will have seminar presentation and carry internal marks.

**RESOURCE MANAGEMENT**  
**SEMESTER – III**  
**PAPER 9**  
**CORE 9**  
**ERGONOMICS – I**

**3T1**

**Marks: Theory: 80**  
**Practical: 80**

**Internal Assessment: 20**  
**Internal Assessment: 20**

**Objectives**

- To become aware of the roll of ergonomics in work effectiveness and efficiency
- To understand the environmental factors contributing to productivity, safety, control and well-being of individual performing the work.

**Contents**

**UNIT I**

- Ergonomics
  - Scope of ergonomics in home and other occupations
  - Ergonomics and its areas of application in the worksystem
  - Interdisciplinary and applied nature of ergonomics as a field of study
  - Man-machine - Environmental system

**UNIT II**

- **Physiological Aspects of Work**
  - Anatomy, Posture and Body Mechanism
  - Musculoskeletal Problems in Sitting and Standing
  - Physical Work Capacity, Factors affecting Work Capacity.
  - Neuromuscular system and types of muscular contraction and energy requirement.
  - Risk Factors for Musculoskeletal Disorders
  - Cardiovascular circulation on general and emphasis on muscle circulation

**UNIT III**

- Energy management and factors affecting muscular activity
  - Energy expenditure for different activities and energy balance
  - Aerobic and anaerobic work
  - Muscular strength-endurance and energy consumption

- Efficiency, work load and physiological fatigue
- Sources of Energy
- Time motion studies - principles of motion economy.

## **UNIT IV**

### **• Anthropometry And Biomechanics**

- Definition of Anthropometry
- Measurements of body dimensions
- Static and dynamic anthropometry.
- Work space and work station design for standing and sitting operations.
- Identification and analysis of posture.
- Principles of applied anthropometry in ergonomics
- Correct techniques of lifting and carrying weight, work load and postures.

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 9</b>	<b>3P1</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>	

### **1. Use of instruments employed in ergonomics research**

- Treadmill, step-stool
- Heart rate monitor, ECG
- Noise level meter, Lux meter, Thermohygrometer
- Skin thermometer
- Sphygmomanometer
- Height and weight measuring instruments
- Stop watch
- Bicycle Ergometer

### **2. Determination of workload using heart rate and sphygmomanometer**

1. Treadmill
2. Bicycle ergo meter
3. Step stool

### **3. Determination of workload of some selected household activities by using**

1. Pulse rate techniques
2. Time and motion study

3. Psychological cost

4. Energy cost

5. Cardiac cost

6. Temporal Cost

#### 4. Assignments on above topic

#### References:

1. Roebuck, J. A.; Kroemer, K.H.E. and Thomson, W. G. (1975): Engineering Anthropometric Methods. Wiley-Interscience Publication, New York.
2. Galer, I. A. R. (1987): Applied Ergonomics Handbook, (c) Butterworth & Co
3. Sander S., Mark S., McCormick, Ernest J. (1987): Human Factors in Engineering and Design. McGraw-Hill Book Co. – Singapore
4. Kanawaty, George (1994): Introduction to work study, 4th revised edition. Navneet Prakashan Ltd . Bombay
5. Astrand, P. O. and Rodahi,.K. (1986): Textbook Of Work Physiology, McGraw Hill, New York
6. Haupt, W. Q. and Feinteis, M. E. (1979): Physiology of movements, Vol. 7, Verlog Publications; Berlin Springer.
7. Grandjean, E. (1968): Fitting the Task of the Man; A Textbook of Occupational Ergonomics, Taylor and Francis, London.
8. McArdle, D. W. Katch, F. I. and Katch, V. L. (1981 & 1991): Exercise Physiology, 4th edition, Henry Kempton Publishers, Baltimore
9. Chaffin, D. B. and Anderson G. B. (1984): Occupational Biomechanics, John Wiley, and Sons.
10. Wells, K. and Luttgens Kathryn (1976): Kinesiology : Scientific Basis of Human Motion 6th edition
11. Davis, D. R. and Shackleton, V. J. (1975): Psychology of Work, Motunen & Co Ltd
12. Eastman Kodak Company (1986): Ergonomic Design for People at Work, Vol. 1 & 2, Van Nostrand Reinhold, New York
13. Oborne David (1980): Ergonomics at Work, John Wiley and Sons, New York, London
14. Nag, P.K (1996): Ergonomics and Work Design: Emerging Issues in Organizational Science, New age international (P) Ltd. New Delhi
15. Kumar Shrawan (1997): Perspectives in rehabilitation ergonomics: Taylor and Francis, London
16. Steidle and Braton: Work in Home
17. Close Guy (1980): Work improvement, John Wiley and Sons, New York
18. Grandjeans Ettiens (1978): Ergonomics of the Home, Taylor and Francis, London
19. Murell, K. F. H. (1965): Ergonomics, Chapman Hall, London
20. Anshel, Jeffrey (1968): Visual Ergonomics in the Workplace, Taylor and Francis, London

21. Macleod, Dan (1995): The Ergonomics edge, improving safety, quality and productivity, Van Nosternad Reinhold New York
22. Crossman, Richard (1995): Ergonomics, Pocket guide, Genium Publications
23. Dul, Jan and Weerdmeester Bernard (2001): Ergonomics for Beginners, Taylor & Francis, London
24. Parsons, K. C. (2001): Human Thermal Environments, Taylor and Francis, London
25. Ringdahl Lars Harms (2001): Safety Analysis, Taylor and Francis, London
26. Jordan, P. W. (2001): Pleasure with Products, Taylor and Francis, London
27. Norris, B. and Wilson J. R. (2001): Designing Safety into products, Taylor an Francis, London
28. Wilson, J. R. and Covlett, N. (2001): Evaluation of Human Work. A Practical Ergonomics Methodology, Taylor and Francis, London
29. Pheasant Stephan (2001): Body Space, Anthropometry, ergonomics and the Design Work, Taylor and Francis, London
30. Jordan Pat (1998): Human Factors in Product Design, Current Practice and Future Trends, Taylor and Francis, London
31. Wogalter, M. Dejoy, D. and Laugherty, K. (2001): Warnings and Risk Communications, Taylor and Francis, London

**RESEARCH PROJECT (DESIGN)**

**Internal Assessment: 125**

The Research Project (Design) (Semester III) will be continued as Research Project in Semester IV.

**RESOURCE MANAGEMENT**  
**SEMESTER – III**  
**PAPER 10**  
**Elective -1**  
**LANDSCAPE DESIGN – I**

**3T2a**

**Marks: Theory: 80**  
**Sessional: 50**

**Internal Assessment: 20**

**Objectives**

- To study & understand the landscape designing & its appropriate application
- To get familiar with the various types of equipment & furniture used in landscaping
- To know the horticulture practices in landscaping
- To gain the knowledge of landscape planning
- To acquire skills of lighting in landscaping
- To know the styles of garden

**Contents**

**Unit I**

- Introduction & definition of landscaping
- Meaning & Importance of landscaping
- Principles of landscape gardening
- Component of landscape design
- Principles of external space organization
- Objectives of landscape gardening
  - 1) Functionalism
  - 2) Aesthetic
- Garden Styles
  - Formal, Informal

Small, Medium, Large

English, Italian, French,

Persian, Mughal & Japanese

**UNIT II**

- Location & orientation of garden
- Elementary Horticultural Practices

- 1) Soil Types
- 2) Soil Preparation
- 3) Soil PH
- 4) Organics Manures
- 5) Fertilization
- 6) Pruning
- Climatic Condition
  - Microclimatic consideration in landscape

### **UNIT III**

- Schematic Planning
- Colour
- The Colour Wheel
- Foliage for colour
- Fruit growing in small areas
- Containers, tubs
- Plants to define areas
- Measuring a garden & Recording the details
- Measuring the area of a garden
- To find the area of triangular part in the garden working with curves
- Symbols used in landscaping

### **UNIT IV**

- Garden Furniture
- Importance – Use, Types & selection
- General Introduction to garden equipment – types & use
- Garden Lighting
- Lights & their use
- Lamps, Filters, how to choose a lamp
- Fittings
- Focal points & statues
- Steps

**Sessional:- Marks : 50**

**3Ses 1a**

- 1) Visit to Gardens of various types
  - Commercial
  - Residential
- 2) Visit to light shop for garden lighting
- 3) Visit to shop of garden equipment and furniture
- 4) Report writing on the above all in details with picture.
- 5) Draw on sheets –ResidentialLandscape plan & commercial landscape plan

### **References:**

1. Alexander, N.S. and Mercourt, B. (1972): Designing Interior Environment, Havanovich Inc.
2. Ball V.K.: The Art of Interior Design; The Macmillan and Co., New York.
3. Chudley, R. (1978): Construction Technology; Vol. 1 to 4, ELBS and Longman Group Ltd.
4. Grandjean, E. (1978): Ergonomics of the Home, Taylor and Francis Ltd., London.
5. Kasu, Ahmed Abdullah, (1992): An introduction to art craft technique, science and profession of interior design;Bombay,Iquara Publication
6. Panero, J. and Zelink, M. (1979): Human Dimensions and Interiors Spaces;Whitney Library of Design,New york
7. Steidle, R. and Braton, E.C. (1968): Work in the Home; John Wilen & sons, London.
8. Design 02, Residential Space I, Juzhu Kongjan
9. Design 09, Residential Space III, Juzhu Kongjan
10. Shenzhen Nanhir Art Design Co./ed, RS 03 Residential Space III, Juzhu Kongjan
11. Thames & Hudson, Living Large in Small Spaces, Thames 7 Hudson
12. Aurora Cuito, New small homes, Loft Publications. S.l.
13. Ruth Pretty, The Ultimate Interior Designer, Ward Lock
14. Stephen Cratti, Making the Most of Small Spaces, Images Publishing Group. Pvt. Ltd
15. James Grayson Trulove, Studio Appartments, James Grayson Trulove
16. Cednc Croelxer - All about Landscaping – Ortho Books.
17. Lemer J.M. - The Complete Home Landscape Designer.
18. Paul Anthony - Garden Design, Collins, Illinois.
19. Sunset books (1982) How to build walks, Walls, and patis fillor, Lane Publishing Co. California
20. Bazin Germain (1999) Paradisos -The Art of Garden Artillery House. London.
21. Aquaa George, Text Book of Horticulture
22. Arora, J. S., Introductory Ornamental Horticulture
23. Hunter M K and Hunter E. H. Indoor Garden Design
24. Manibhushan Rao, Text Book of Horticulture, Macmillan India Ltd., New Delhi
25. Singh J. Basic Horticulture

26. Swarup, V. 1997, Ornamental Horticulture, Macimilan India Ltd. Chennai
27. Toye Sunil S. (2003) Introduction to Landscape Design, Central Techno Publications, Nagpur
28. Trived, PP. Homes Gardening

**Marks: Theory: 80****Internal Assessment: 20****Sessional: 50****Objectives**

- To enable students to understand the relevance of environment to resource management.
- To enable students to know various community resources and their management.
- To inculcate eco concerns in students.
- To empower the students to think and act ethically about environment issues.

**Contents****Unit I**

- Energy sources and classification
- Energy use. The patterns of energy use in the past, present and in the future.
- Over exploitation of energy sources and its effect on environment

**Unit II**

- Energy crisis and it's management
- Need for combating energy crisis
- Alternate energy sources, their potentialities and environment impacts of their use
- Energy conservation and need, ways

**Unit III**

- Environment meaning, inter-relationship between population and development
- Socio economic environment impact on families and organization.
- Environment issues – women and environment
- Environment pollution and sources of pollution
- Soil, Water, Air, Noise pollution- causes, effects and remedies
- Global Warming – Role of ozone in environment, ozone layer depleting gases, Green house effect, Acid rain

**Unit IV**

- Environmental protection, meaning, need and protection measures
- Environmental protection laws, National environment policy
- Social movements and organizations and sustainable environment.

**Sessional:Marks:50****3 Ses 1b**

- Conduct survey on environment pollution / sustainable development
- To present seminar on related topic.

## **References:**

1. Asthana D. K. and Asthana M (2006) Environment problems and solutions, S. Chand & company Ltd. New Delhi.
2. Jefferson W. Tester et. al (2009) sustainable Energy, PHI learning Pvt. Ltd, New Delhi
3. N. Manivasakam (2010) Environmental Pollution, National Book Trust India, New Delhi.
4. Nambiar, R. K. (2007), Text book of Environmental Studies, SCITECH Publication (India) Pvt. Ltd. Chennai
5. P.S. Ramakrishnan (2009) Ecology and Sustainable Development, National Book Trust India, New Delhi.
6. Rao, C.S. (2006), Environmental Pollution Central Engineering, New Age International (P) Ltd. New Delhi.
7. S.C. Santra (2010) Fundamentals of Ecology and Environment, New Central Book Agencies (P) Ltd, Kolkata.
8. Misra S.P. & Pandey S. N. (2010), Essential Environment Studies, 2<sup>nd</sup>ed<sup>n</sup> Anes Books Pvt. Ltd. New Delhi.
9. Murphy W. R (2003), Energy Management, Elsevier Books Pvt. Ltd.
10. Leo A. Meyer and Carol Markos (2009), The Green Energy Management, 1<sup>st</sup> edition, Lama Books
11. Debi Prasad Tripathi (2011) Noise Pollution, APH Publishing Corporation
12. Rhonda Lucas – Donald (2002), Water Pollution: Environment and Conservation, Children's Press
13. Rao, M and H.V.N. Rao (2001), Air Pollution, McGraw Hill Education Pvt. India.
14. Kim H. Tan (2000), Environmental Soil Science 2<sup>nd</sup> Edition, CRC press
15. Frederick R. Anderson (1999) Environmental Protection: Law and policy, 3<sup>rd</sup> edition Aspen Publishers
16. Team Books Matrix (2013) Global Warming: Climate Change, 1<sup>st</sup> edition, Macaw Books.
17. Team Books Matrix (2013) Global Warming: Greenhouse Gases & the Ozone layer, 1<sup>st</sup> edition Macaw Books.

## **RESOURCE MANAGEMENT**

**SEMESTER – III**

**PAPER 11**

**FOUNDATION 1**

**See Annexure**

**Marks: Theory: 80**

**Internal Assessment: 20**

**3T3a**

**Marks: Theory: 80****Internal Assessment: 20****Objectives**

- To provide conceptual inputs regarding entrepreneurship management.
- To sensitize and motivate the students towards entrepreneurship management.
- To orient and impart knowledge towards identifying and implementing entrepreneurship opportunities.
- To become familiar with the techniques of financial management.
- To familiarize with the marketing strategies and market research.
- To understand the role of advertising in sales and promotion.
- To provide an understanding of the significance of consumer information.

**Contents****UNIT I**

- The Entrepreneur
  - Entrepreneurial motivation
  - Entrepreneurial Competency – Concepts
  - Developing entrepreneurial competencies

**UNIT II**

- Conceptual Frame Work
  - Concept need and process in entrepreneurship development and women entrepreneurship.
  - Role of enterprise in national and global economy
  - Types of enterprise
  - Government policies and schemes for enterprise development
  - Institutional support in enterprise development and management

**UNIT III**

- **Launching and organizing an enterprise**
  - Information sources, problems
  - Enterprise selection market assessment, enterprise feasibility study, SWOT analysis
  - Resource mobilization – finance, technology raw material, site and manpower

- Costing and marketing management and quality control
- Feedback, monitoring and evaluation
- **Growth Strategies**
- Performance appraisal and assessment
- Profitability and control measures
- Future growth - technique of expansion and diversification

## **UNIT IV**

- **Enterprise Networking**
- Concept and dynamics
- Methods
- Joint venture, co-ordination
- **Financial Planning and Implementation**
- Budgeting – allocation of resourcesgoals, objectives, disadvantage of budgeting, control in the context of changing economic conditions.
- Purchase, storage, cost reduction.

## **References:**

1. Meredith, G. G. et al. (1982): Practice of entrepreneurship, ILO, Geneva
2. Patel, V. C. (1987): Women Entrepreneurship – Developing New Entrepreneurs, Ahmadabad, EDII.
3. Akhauri, M. M. P. (1990): Entrepreneurship for Women in India, NIESBUD, New Delhi.
4. Hisrich, R. D. and Petero, M. P. (1995): Entrepreneurship – starting, developing and managing a new enterprise, Richard D., Irwin, INC, USA
5. Hisrich, R. D. and Brush, C. G. (1986): The women entrepreneurs, D. C. Health and Co., Toronto
6. Prophalia et al. (1997): Financial management, function, planning and policy. Kanishka Publishers, New Delhi
7. Chandra Prasanna (1993): Financial Management, Theory and Practice, Tata McGraw Hill Publishing, New Delhi
8. Kulshreshtha, R. S.: Financial Management, Sahitya Bhawan, Agra
9. Kuchal, S. C. (1982): Financial Management, An Analytical and Conceptual Approach, Chaitnya Publishers, Allahabad
10. Reid, H. G.: Consumers and market Appleton century crafts
11. Barotiya, G. R. & Sharma N. K. (1998): Effective Advertising, Marketing and Sales Management, Managaldeep Publications, Jaipur
12. Dhar, P. K. (1991): India Economy – Its growing dimensions, Kalyan Publishers, New Delhi

13. Hawking D. I., Best R. J., Coney K. A. (1983): Consumer Behaviours, Revised Ed., Newman J. W. Motivation Research and Marketing Management, Prentice Hill
14. Kitler, Philip, (1983): Marketing Management, Analysis, Planning and Control, Prentice Hall Ltd., New Delhi
15. Schiffman G. Leon, auk Lazer Leslie (1992): Consumer Behaviour, Prentice Hall of India, New Delhi
16. Zikmund, G. William and Micheal d'aunico (1996): Basic Marketing, West Publishing Co.
17. Naz M., ParahKas V. N., Montesio (1984): Advertising (4<sup>th</sup> edition), Vishal Prakashan, Publication

<b>3S1</b>	<b>SEMINAR-3</b>
<b>Marks: 50</b>	

**Contents: Any one of the following. Report to be submitted.**

1. To prepare list of entrepreneurial opportunities in resource management
2. To prepare proposal for launching an Enterprise
3. List entrepreneurs, list from various enterprises in your city
4. Select of enterprise, do SWOT analysis and suggest strategies for action

**RESOURCE MANAGEMENT**  
**SEMESTER – IV**  
**PAPER 12**  
**Core 12**  
**ERGONOMICS-II**

**4T1**

**Marks:** **Theory: 80**  
**Practicakl: 80**

**Internal Assessment: 20**  
**Internal Assessment: 20**

**Objectives**

- To become aware of the roll of ergonomics in work effectiveness and efficiency.
- To understand the environmental factors contributing to productivity, safety, control and well-being of individual performing the work.

**Contents**

**UNIT I**

- Contribution of Ergonomics in Work Station Design
- Anthropometry and its uses
- Application of anthropometry in Design
- Work Surface design- design for seated and standing workers

**UNIT II**

**Environment**

- Fundamentals of human Thermal -Thermal balance
- Thermoregulatory mechanism
- Effect of working in hot and cold climate
- Heat stress
- Effect of climate on performance
- Effect of hearing, sound, noise and light on work performance

**UNIT III**

- Visual
  - Vision and the light
  - Qualitative and quantitative aspect of lighting
  - Lighting design considerations
  - Glare
  - Psychological effect of indoor lighting

**UNIT IV**

- The design of Human machine system
- Work Organization, Motivation and Job Satisfaction
- Ergonomic consideration for the physically challenged

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 12</b>	<b>4P1</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>	

1. Identifying the types of postures assumed by women during work, analysis and interpretation of risks.
2. Determination of jobs, stress and work by survey of a few selected families.
3. Assessment of heat Stress and interpretation of results: Outdoor and indoor work place
4. Measurement of noise and light by using noise level meter and Lux meter for various situations in home, office, traffic situation.
5. Determination of Anthropometric Measurement
6. Determining of maximum and comfortable work areas at vertical and horizontal planes.
7. Assessment of Environmental conditions
8. Designing and arrangement of physical areas in a kitchen
9. Evaluation of furniture used in a kitchen
10. Flexi curve for measuring spinal cord curvature and Goniometry for measuring joint angles while performing household work.

#### **Internal Assessment: Marks: 20**

- Posture analysis
- Combination of Psycho-physiological activities and physiological stress

#### **References:**

1. Roebuck, J. A.; Kroemer, K.H.E. and Thomson, W. G. (1975): Engineering Anthropometric Methods. Wiley-Interscience Publication, New York.
2. Galer, I. A. R. (1987): Applied Ergonomics Handbook, (c) Butterworth & Co
3. Sander S., Mark S., McCormick, Ernest J. (1987): Human Factors in Engineering and Design. McGraw-Hill Book Co. – Singapore
4. Kanawaty, George (1994): Introduction to work study, 4th revised edition. Navneet Prakashan Ltd . Bombay
5. Astrand, P. O. and Rodahi,.K. (1986): Textbook Of Work Physiology, McGraw Hill, New York
6. Haupt, W. Q. and Feinteis, M. E. (1979): Physiology of movements, Vol. 7, Verlog Publications; Berlin Springer.

7. Grandjean, E. (1968): Fitting the Task of the Man; A Textbook of Occupational Ergonomics, Taylor and Francis, London.
8. McArdle, D. W. Katch, F. I. and Katch, V. L. (1981 & 1991): Exercise Physiology, 4th edition, Henry Kempton Publishers, Baltimore
9. Chaffin, D. B. and Anderson G. B. (1984): Occupational Biomechanics, John Wiley, and Sons.
10. Wells, K. and Lutgens Kathryn (1976): Kinesiology : Scientific Basis of Human Motion 6th edition
11. Davis, D. R. and Shackleton, V. J. (1975): Psychology of Work, Motunen & Co Ltd
12. Eastman Kodak Company (1986): Ergonomic Design for People at Work, Vol. 1 & 2, Van Nostrand Reinhold, New York
13. Oborne David (1980): Ergonomics at Work, John Wiley and Sons, New York, London
14. Nag, P.K (1996): Ergonomics and Work Design: Emerging Issues in Organizational Science, New age international (P) Ltd. New Delhi
15. Kumar Shrawan (1997): Perspectives in rehabilitation ergonomics: Taylor and Francis, London
16. Steidle and Braton: Work in Home
17. Close Guy (1980): Work improvement, John Wiley and Sons, New York
18. Grandjeans Ettiens (1978): Ergonomics of the Home, Taylor and Francis, London
19. Murell, K. F. H. (1965): Ergonomics, Champman Hall, London
20. Anshel, Jeffrey (1968): Visual Ergonomics in the Workplace, Taylor and Francis, London
21. Macleod, Dan (1995): The Ergonomics edge, improving safety, quality and productivity, Van Nostarnad Reinhold New York
22. Crossman, Richard (1995): Ergonomics, Pocket guide, Genium Publications
23. Dul, Jan and Weerdmeester Bernard (2001): Ergonomics for Beginners, Taylor & Francis, London
24. Parsons, K. C. (2001): Human Thermal Environments, Taylor and Francis, London
25. Ringdahl Lars Harms (2001): Safety Analysis, Taylor and Francis, London
26. Jordan, P. W. (2001): Pleasure with Products, Taylor and Francis, London
27. Norris, B. and Wilson J. R. (2001): Designing Safety into products, Taylor an Francis, London
28. Wilson, J. R. and Covlett, N. (2001): Evaluation of Human Work. A Practical Ergonomics Methodology, Taylor and Francis, London
29. Pheasant Stephan (2001): Body Space, Anthropometry, ergonomics and the Design Work, Taylor and Francis, London
30. Jordan Pat (1998): Human Factors in Product Design, Current Practice and Future Trends, Taylor and Francis, London
31. Wogalter, M. Dejoy, D. and Laugherty, K. (2001): Warnings and Risk Communications, Taylor and Francis, London.

**RESOURCE MANAGEMENT**  
**SEMESTER – IV**  
**CORE 13**

**4RP**

**RESEARCH PROJECT (Viva - Voce)**

**External Assessment: 75**

**Internal Assessment: 50    Total 125**

The Research Project (Viva-Voce) Submission of Research Project Report & open Viva-voce.

**RESOURCE MANAGEMENT**  
**SEMESTER – IV**  
**PAPER 13**  
**Elective 2**  
**LANDSCAPE DESIGN-II**

**4T2a**

**Marks: Theory: 80**                           **Internal Assessment: 20**  
**Sessional: 50**

### **Objectives**

- To study how to design a garden with lawn, flowers & plants
- To get familiar with the various materials related to landscaping
- To understand about Floriculture
- To know how to provide drainage facility & lighting in garden
- To know various types of garden
- To acquire skills in cultivation of different garden plants.

### **Contents**

#### **Unit I**

- Layout of front Garden
  - The landscape plan
  - Preparation of lawn
- Floriculture
  - Flower beds, planting flowers, kinds of flowers
    - Classification - Annuals & Perennials
      - Summer, Winter & Rainy-season
  - Trees & Shrubs, Hedges
  - Importance & Role of trees
  - Hardy shrubs
  - Climbers & creepers
  - Cactus & Succulents, ferns, palms planting in various environment

#### **UNIT II**

- Understanding of various materials for paving walk way etc.  
(Stone, Masonry, Brick Masonry)
- Pergolas, Green House
- Kitchen Garden (Vegetable garden)

- Road side plantation
- Terrace Garden
- Indoor & Outdoor Plants
- Types of Parks
- Modern trends in gardening
- Indoor gardening care & maintenance
- Bonsai & styles
- Identification of suitable plants for containers, bottle garden / dish garden

### **UNIT III**

- Landscape division according to use for ground area
  - The side walk
  - The drive way
  - Private area & living area
  - Porches
  - Terrace or Patio
  - Pool
  - Play space for children
- Service area or utility area
  - Garage
  - The drying area
  - Space for keeping garden food
  - Space for dumping garbage

### **UNIT IV**

- Water Garden and Rock Garden
- Positioning a water feature
- Pumps & Filters
- Construction
- Water Safety
- Use of rainwater in landscape
- System of Irrigation Drainage
- Surface drainage

- Underground drainage
- Garden elements

4 Ses 1 a

### **Sessional: Marks : 50**

1. Survey and selection of material for landscape design
2. List of plants for garden and landscaping
3. Market survey and report writing of paving walkway
4. Visit to kitchen garden / terrace garden / Indoor Landscaping / Pergolas / Greenhouse and write a report
5. Designing layout of garden path

### **References:**

1. Alexander, N.S. and Mercourt, B. (1972): Designing Interior Environment, Havanovich Inc.
2. Ball V.K.: The Art of Interior Design; The Macmillan and Co., New York.
3. Chudley, R. (1978): Construction Technology; Vol. 1 to 4, ELBS and Longman Group Ltd.
4. Grandjean, E. (1978): Ergonomics of the Home, Taylor and Francis Ltd., London.
5. Kasu, Ahmed Abdullah, (1992): An introduction to art craft technique, science and profession of interiordesign; Bombay: Iquara Publications.
6. Panero, J. and Zelink, M. (1979): Human Dimensions and Interiors Spaces; Whitney Library of Design, New York.
7. Steidle, R. and Braton, E.C. (1968): Work in the Home; John Wilen & sons, London.
8. Design 02, Residential Space I, Juzhu Kongjan
9. Design 09, Residential Space III, Juzhu Kongjan
10. Shenzhen Nanhir Art Design Co./ed, RS 03 Residential Space III, Juzhu Kongjan
11. Thames & Hudson, Living Large in Small Spaces, Thames 7 Hudson
12. Aurora Cuito, New small homes, Loft Publications. S.I.
13. Ruth Pretty, The Ultimate Interior Designer, Ward Lock
14. Stephen Cratti, Making the Most of Small Spaces, Images Publishing Group. Pvt. Ltd
15. James Grayson Trulove, Studio Apartments, James Grayson Trulove
16. Cednc Croelxer - All about Landscaping - Ortho Books.
17. Lemer J.M. - The Complete Home Landscape Designer.
18. Paul Anthony - Garden Design, Collins, Illinois.
19. Sunset books (1982) How to build walks, Walls, and patis fillor, Lane Publishing Co. California.
20. Bazin Germain (1999) Paradisos -The Art of Garden Artillery House. London.

**SUSTAINABLE DEVELOPMENT & RESOURCE  
MANAGEMENT****Marks: Theory: 80****Internal Assessment: 20****Sessional: 50****Objectives**

- To become familiar with social environmental problems
- To understand the relation between environmental problems and solution
- To acquire knowledge in recent green building materials and rain water harvesting technique.
- To create awareness & develop interest regarding waste management

**Contents****Unit I**

- Sustainable Development : Definition and concept
- Advantages , Disadvantages and limitation of sustainable developmentGreen building Technology – Meaning, concept, impact of green building on human health importance and benefits of green buildings
- Climate change and their impacts on human environment

**Unit II**

- Technologies for sustainable development
- Energy Saving Technology – Biogas plant
- Solar energy and significance, solar radiation, solar devices, solar cooker, solar drier, solar water heater, solar distillation, solar photo voltaic cell and working, application.
- Wind energy and windmill and working applications and advantages and limitations.
- Energy from biomass, classifications sources, characteristics.

**Unit III**

- Water management and water related problems.
- Water conservation technology – Rainwater harvesting technology, meaning, purpose, benefits of using rainwater.
- Water recycling technologies

## **Unit IV**

- Waste Management – Classification of waste, characteristics, need, methods
- Zero waste management – vermicomposting, organic composting
- Technologies for non degradable waste, principles of non degradable waste management

### **Sessional : Marks 50**

**4 Ses 1b**

- Preparation of vermicompost
- Visit to any renewable energy centre
- Report writing on above mentioned activities.

### **References:**

1. Abbasi, S.A. and Abbasi, N (2001) Renewable Energy Resources and their Environmental Impact, Prentice Hall of India Pvt. Ltd. New Delhi.
2. G. N. Tiwari (2010) Solar Energy Fundamentals Design, Narosa Publishing House, New Delhi.
3. Chauhan D. S. & Srivastava S. K. (2010) Non-Conventional Energy Resources, New Age International (P) Ltd, New Delhi
4. S. Rao & B.B. Parulekar (2011) Energy Technology Non Conventional, Khanna Publishers, New Delhi.
5. R. Paul, H. John, M. Sarah (2010) Environment and Society: A critical introduction, Wiley, New York
6. Rai G.D. (1996), Solar Energy utilization, Khanna Publishers, Delhi
7. Kothari D. P. and Singal K. C. (2011) Renewable energy sources and Emerging Technologies, 2<sup>nd</sup> edition.
8. Rajput R. K. (2012) Non-Conventional Energy Sources and utilization, S. Chand publishing
9. Bhatt M. S. (2012) Solid Waste Management: An Indian Perspective, Synergy Books India.
10. Rao, M.N. S. Sultana R (2012) Solid and Hazardous Waste Management, Bs Publications
11. Shah, M and Agrawal D.P. (2012) Traditional water management, Pentagon Press.
12. Singh D. K. (2012) Rain Water Harvesting Oxford Book Company
13. Zeppel H (2006) indigenous Ecotourism: Sustainable Development and Management, 1<sup>st</sup> edition, CABI Publishing
14. Jean Garner Stead, W. Edward Stead (2013), Sustainable Strategic Management, 2<sup>nd</sup> edition, Greenleaf Publishing
15. Kay Jay (2012) Save the world – Zero Waste Management: Environment, Pollution Central, Recycle, Create Space Independent publishing platform

**RESOURCE MANAGEMENT  
SEMESTER – IV  
PAPER 14  
FOUNDATION 2  
See Annexure**

**Marks: Theory: 80**

**4T3a**

**Internal Assessment: 20**

**Objectives**

- To provide conceptual inputs regarding entrepreneurship management.
- To sensitize and motivate the students towards entrepreneurship management.
- To orient and impart knowledge towards identifying and implementing entrepreneurship opportunities.
- To become familiar with the techniques of financial management.
- To familiarize with the marketing strategies and market research.
- To understand the role of advertising in sales and promotion.
- To provide an understanding of the significance of consumer information.

**Contents****UNIT I**

- **Fundamentals of Accounting**
  - Fundamental principles of accounts
  - Income and expenditure Account
  - Revenue and Capital Items of Expenditure
  - Balance sheet/ledger
  - Ratio analysis, cash flow, fund flow

**UNIT II**

- Advertising and Sales Promotion
- Advertising objectives &functions
- Advertising budget and cost of sales promotion
- Types of advertising
- Advertising claims
- Evaluating advertising effectiveness
- Advertising legislations

- Ethics and self regulation

## **UNIT III**

### **Marketing**

- Evaluating and controlling market performance
- Sales analysis
- Market share and financial analysis
- Customer satisfaction index
- Impact of technology on marketing
- Global marketing

## **UNIT IV**

- Consumer Protection
- Consumer apathy the important cause for quality information and services
- Legal aid by legislation
  - Food And Drug Adulteration Act
  - Monopoly Restrictive Trade Practices Act (MRPT)
  - Public Distribution Systems
- Role of standardization and labelling
- Consumer action consumer movement in India, consumer education and consumer forum

### **References:**

1. Meredith, G. G. et al. (1982): Practice of entrepreneurship, ILO, Geneva
2. Patel, V. C. (1987): Women Entrepreneurship – Developing New Entrepreneurs, Ahmadabad, EDII.
3. Akhauri, M. M. P. (1990): Entrepreneurship for Women in India, NIESBUD, New Delhi.
4. Hisrich, R. D. and Petero, M. P. (1995): Entrepreneurship – starting, developing and managing a new enterprise, Richard D., Irwin, INC, USA
5. Hisrich, R. D. and Brush, C. G. (1986): The women entrepreneurs, D. C. Health and Co., Toronto
6. Prophalia et al. (1997): Financial management, function, planning and policy. Kanishka Publishers, New Delhi
7. Chandra Prasanna (1993): Financial Management, Theory and Practice, Tata McGraw Hill Publishing, New Delhi
8. Kulshreshtha, R. S.: Financial Management, Sahitya Bhawan, Agra

9. Kuchal, S. C. (1982): Financial Management, An Analytical and Conceptual Approach, Chaitnya Publishers, Allahabad
10. Reid, H. G.: Consumers and market Appleton century crafts
11. Barotiya, G. R. & Sharma N. K. (1998): Effective Advertising, Marketing and Sales Management, Managaldeep Publications, Jaipur
12. Dhar, P. K. (1991): India Economy – Its growing dimensions, Kalyan Publishers, New Delhi
13. Hawking D. I., Best R. J., Coney K. A. (1983): Consumer Behaviours, Revised Ed., Newman J. W. Motivation Research and Marketing Management, Prentice Hill
14. Kitler, Philip, (1983): Marketing Management, Analysis, Planning and Control, Prentice Hall Ltd., New Delhi
15. Schiffman G. Leon, auk Lazer Leslie (1992): Consumer Behaviour, Prentice Hall of India, New Delhi
16. Zikmund, G. William and Micheal d'aunico (1996): Basic Marketing, West Publishing Co.
17. Naz M., ParahKas V. N., Montesio (1984): Advertising (4<sup>th</sup> edition), Vishal Prakashan, Publication

<b>4S1</b>	<b>SEMINAR-4</b>
<b>Marks: 50</b>	

**Contents : Any one of the following. Report to be submitted.**

1. Visit to Consumer Forum, AGMARK
2. Report on advertising technique used by entrepreneur
3. Assignment on women entrepreneurship
4. Computer application on record keeping & accounting

**FACULTY OF HOME SCIENCE**

**SCHEME AND SYLLABUS**

**FOR**

**M.Sc. HOME SCIENCE**

**HUMAN DEVELOPMENT**

**CHOICE BASED CREDIT SYSTEM**

**SEMESTER PATTERN**

**2016-2017**

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**NAGPUR**

**MAHARASHTRA**

**INDIA**

## **M.Sc. Home Science (HUMAN DEVELOPMENT)**

Choice Based Credit System Semester Pattern

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (M. S.), India

Paper	SubjectCode	Name of Paper	Marks	Credits	
<b>Semester – I</b>					
Paper 1 (Core 1)	1T1	Management Of Programmes For Children And Families	100	25	
Paper 2 (Core 2)	1T2	Methods And Materials For Working With Young Children	100		
Paper 3 (Core 3)	1T3	Overview Of Theoretical Perspectives In Human Development	100		
Paper 4 (Core 4)	1T4	Research Methods and Statistics – I	100		
<b>Practical</b>					
Practical Core 1	1P1	Management Of Programmes For Children And Families	100	25	
Practical Core 2	1P2	Methods And Materials For Working With Young Children	100		
Seminar 1	1S1	Current Trends & Issues in Human Development - I	25		
<b>Semester – II</b>					
Paper 5 (Core 5)	2T1	Methods Of Studying Human Development	100	25	
Paper 6 (Core 6)	2T2	Early Childhood Care And Education	100		
Paper 7 (Core 7)	2T3	Study Of Family In Society	100		
Paper 8 (Core 8)	2T4	Research Methods and Statistics – II	100		
<b>Practical</b>					
Practical Core 5	2P1	Methods of Studying Human Development	100	25	
Practical Core 6	2P2	Early Childhood Care And Education	100		
Seminar 2	2S1	Current Trends & Issues in Human Development - II	25		
<b>Semester – III</b>					
Paper 9 (Core 9)	3T1	The Child With Special Needs	100	25	
Paper 10 (Core 10)	3T2	Adolescent Needs And Challenges	100		
Paper 11 (Elective 1)	3T3a	Care Of Children With Disabilities And Illness	100		
	3T3b	Parenting In Early Years			
Paper 12 (Foundation 1/Core 11)	3T4a/ 3T4b	Foundation 1*/ Child And Human Rights	100		
<b>Practical</b>					
Practical Core 9	3P1	The Child With Special Needs	100	25	
Practical Core 10	3P2  3RP	Adolescent Needs And Challenges	100		
		Research Project ( Design)	025		
<b>Semester – IV</b>					
Paper 13 (Core 12)	4T1	Guidance, Counselling And Psychotherapeutics	100	25	
Paper 14 (Core 13)	4T2	Mental Health In Developmental Perspective	100		
Paper 15 (Elective 2)	4T3a	Media In Human Development	100		
	4T3b	Curriculum For ECCE			
Paper 16 (Foundation 2/Core 14)	4T4a/ 4T4b	Foundation 2*/ Care Of The Elderly	100		
<b>Practical</b>					
Practical Core 12	4P1	Guidance, Counselling And Psychotherapeutics	100	25	
Research Project	4RP  4S1	Research Project And Viva	100		
Seminar 3		Research Project Seminar	25		
<b>Total</b>			<b>2500</b>	<b>100</b>	

# **HUMAN DEVELOPMENT**

**SEMESTER – I**

**PAPER 1**

**Core 1**

## **MANAGEMENT OF PROGRAMMES FOR CHILDREN AND FAMILIES**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical: 80**

**Internal Assessment: 20**

### **Objectives**

- To understand the purpose, scope and challenges in the management of programmes for children and families.
- To understand the various approaches to programme management.
- To offer students opportunity to work with children & families in different settings.
- To offer students the opportunity to apply & translate the theoretical knowledge into practice.
- To organize, implement & evaluate programmes for children & family.
- To critically evaluate & review programme models..

### **UNIT – I**

#### **1. Planning**

- Basic concepts; Need, purpose. Feasibility, project formulation.
- Functions of planning.
- Steps in Planning; define the objectives, quality specifications and outcomes, decide the time frame, plan the cost dimensions, plan implementation details.

### **UNIT – II**

#### **1. Management**

- Meaning and importance of management.
- Management skills.

### **UNIT – III**

#### **1. Programmes for children**

- Identification of specific Programmes for children.
- Types of programmes & their management.

### **UNIT – IV**

#### **1. Programmes for Family**

- Identification of specific programmes for family.
- Types of programmes & their management.

**1T1**

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 1</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

### Practicals

1. Prepare a project plan based on the information secured on an existing program in the locality. (as a learning exercise on a known case).
2. Prepare short term/long-term plan(s) for enhancing quality of any program/project that exists in the locality.
3. Organize and implement parent education programme.
4. Organize & implement a study skills programme for children.
5. Organize & manage a “Development of creativity programme for preschoolers”.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

### Practical Examination :

### Marks

- Planning a programme of activities for children/adult (30)
- Planning a parent teacher meeting and conducting in a mock setup. (30)
- Viva (20)
- Resource file / reports (20)

### References –

1. Chaudhary, P. (1985). Child Welfare Services. New Delhi: Atmaram & Sons.
2. Daughtery, A.S. and Ricks, B.R. (1989). Contemporary Supervision: Managing people and technology. New York : Mac Grawh Hill.
3. Grewal, J. S. (1984). Eraly Childhood Education Foundation & Practice, Agra : National Psychological Corporation.
4. Hildbrand V (1984). Management of Child Development Centers, New York : Collier Macmillan Publishing, 1984.
5. Leeper, S.H. Wither Spoon, R.L. & Day, B. (1984). Good Schools for Young Children (5<sup>th</sup> edition), New York: Macmillan.
6. Maluccio, A. N., Fein, E and Olmstead, K.A. (1986). Permanancy Planning for Children: Concepts & Methods. New York: Tavistock Publication.
7. Mohanty, J. Mohanty B. (1984). Early Childhood Care & education, New Delhi : Deep & Deep.
8. Peter T (1997). The Cricle of Innovation: You Can't Shrink Your Way to greatness, U.K. : Hodder & Stoughton.
9. Shaffir, W.B. (1991). Experiencing Field- Work. New York : Sage.
10. Watkins, P.K. & Divant L. (1987). Preschool Director's Staff Development Handbook. New York : Center for applied research in education, prferion publishing.

### Other Sources

1. Encyclopedia of Social Work in India, Ministry of Welfare Govt. of India, Vol. 1, 2, 3, 4.
2. Social welfare Administration Vol. 1, Theory & Practice. S.L. Goel , R.K. Jain, Deep & Deep Publications, New Delhi 1988.

**HUMAN DEVELOPMENT**  
**SEMESTER – I**  
**PAPER 2**  
**Core 2**

**1T2**

**METHODS AND MATERIALS FOR WORKING WITH YOUNG CHILDREN**

**Marks:** **Theory: 80**  
**Practical: 80**

**Internal Assessment: 20**  
**Internal Assessment: 20**

**Objectives**

1. To know the requirement of infants and toddlers and develop skills to create play materials and designing learning experiences.
2. To understand the significance of various creative activities and teacher's role in implementing them.

**Unit I : a. Infancy and Toddlerhood**

Characteristics of human childhood, development through interaction of maturation and stimulation from environment, exploration, Importance and ways of meeting child's psychological needs to promote feelings of security, trust and acceptance.

Activities according to developments for various age groups.

**0-6 months**

Activities for stimulation and sensory motor experiences with emphasis on seeing , hearing , touching, feeling sensation and movements.

**7-12 months**

Integration of experience involving more than one sense to deepen sensory-motor experiences. Promote manipulation, concept formation, communication and perceptual discrimination.

**13-24 months**

Promotion of co-ordination and control of body movements, gross and fine motor skills. Strengthening concept formation, imagination and communication through language. Promotion of problem solving, environment to explore and satisfy curiosity and develop confidence.

**25-36 months**

Improvement in body movement and communication skills, social skills and concept formation.

**b. Creativity**

- Concept of creativity and highlights of the role of creative expressions in overall development of children, multiple intelligence, a physical environment that encourages creativity.
- Art- meaning an theories of development of art, variety of media for creative expressions.

**Unit II : Art Activities**

- Painting and graphics
- a) Painting with brush, drawing with crayons, chalk, rangoli on floor, finger painting. (Some special characteristics of this medium)
  - b) Values, materials required, use of substitutes from indigenous materials.
  - c) Teacher's role in conducting activities.

- d) Stages in child art.
  - Tearing, cutting, pasting and collage, mural
- a) Values, materials required and Teacher's role in conducting activities.
- b) Development stages.
  - Modeling
- a) Values, special characteristics or this medium
- b) Techniques used, rolling, pressing, pinching, pasting, folding.
- c) Materials required i.e. clay, dough, plasticine, thick paper folding, stocking paper on hollow objects i.e. balloon cardboard cartons, paper machine, wire, rope.
- d) Teacher's role.
  - Printing
- a) Types of printing i.e. block, vegetable, string, leaf stencils, spray crumpled paper, different textured surface
- b) Values, materials required techniques
- c) Teacher's role stage in printing.
  - Blocks
- a) Some special features of this medium.
- b) Types of blocks : hollow large blocks, unit blocks and small blocks.
- c) Stages in blocks play
- d) Values, materials and accessories for block play.
- e) Teacher's role

### **Other Materials**

- Sand
- a) Characteristics of the medium.
- b) Values, materials required and teacher's role.
- Water
- a) Characteristics of the medium
- b) Values, materials required and teacher's role.

### **Music and Rhythm**

- Importance of music in child's life and teacher's role in providing appropriate experiences
- a) Criteria for selection of songs.
- b) Creating environment for musical growth.
- c) Developmental stages in musical activities.
- d) Rhythmic movements body and with simple musical instruments.

### **Puppetry and Creative Drama**

- Puppetry
- a) Characteristics of puppetry as a medium
- b) Values of puppetry
- c) Kinds of puppets : finger, glove, stick, and string puppets.
- d) Basic staging techniques, use of lights, and simple sound effects in puppetry.
- Creative drama
- a) Meaning and values

- b) Techniques involved in creative drama e.g. rhythmic movements, pantomime, characterization, improvisation story building.
- c) Process of scripting for puppet plays and creative drama.

### **Unit III:**

- Importance of communication.
- Promotion of language skills: listening, speaking, reading and writing.
- Experiences for language development:
- a) Infants and toddlers: sound games, talking, picture books, simple instructions, singing, finger plays and experiences.
- b) Children from 3-8 years
  - Listening: information, appreciative and critical or analytical
  - Conversation in group
  - Picture, object discussion
  - Reading and story telling
  - Narration of stories, events in proper sequence
  - Describing observations
  - Poems, riddles
  - Following teacher's instructions
  - Opportunities for interaction with peer group

### **Literature for Children**

- Understanding need for literature for children.
- Types of literature, appropriateness and criteria for selection.
- Toddlers: picture books
- Books for preschoolers: picture books, story books, information and concept books, number and alphabet books, poems.
- Physical characteristics of good books
- Characteristics of good story.
- Values of story telling
- Techniques of storytelling: reading of story books, narration without aids but with help of modulation of voice and gestures, flash cards, flannel board, puppets.
- Dramatization, sand trays and slides.
- Criteria for selection poems

### **Mathematics**

- Material to promote mathematical concepts:
- a) Infancy and toddlerhood
 

Use of number vocabulary in informal, incidental learning situations e.g. more, less, big small, less more, many etc. singing rhymes and action songs.
- b) 3-5 years
  - Counting: concept of cardinality, use of number rhymes, action songs and number readiness vocabulary.
  - Concept of relative location
  - Concept of relative sizes

- Concept of classification: formation of sets: objects pictures or according to other characteristics.
- Duplicating pattern, series
- Concept of seriation- ordering objects, on any criterion, size,
- Weight, volume etc
- Comparison of sets of one Vs many, more Vs few or more Vs less etc. as well as equal sets.
- Identification and description of shapes.
- Using ordinals to name position in a series.
- Introducing numbers through concrete materials, oral work activities and worksheets, 1-9 only.
- Understand additions and subtraction using manipulative and concrete objects to illustrate simple stories.

#### **Unit IV: Environmental studies**

- Social structures- Family- School Community
- Social Relationships within family and in the community with special emphasis on gender equality.
- Importance of conservation- pollution – water, food, air
- Various communities- their traditions and festivals- significance of celebrating festivals
- Role of transport in modern living-brief history of transportation – use of animals for transport- means of transport on land, water, and air
- Role of communication in modern living.
- Communication systems – from bird and messengers to post, telegraph, telephone, radios and television to computers.
- Role of teacher in sensitizing the children in becoming ware of the world around. Understand inter dependence and develop appreciation of various section and occupations of all members and communities.

#### **Games**

- Types of games- indoor, outdoor, organized game etc.
- Values of games and play

**Internal marks -will be based on assignments related to four units (20 Marks)**

1P2

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 2</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

**Practicals :**

**Practical exam**

Record/ Journal	(20)
Practical performance	(60)
Viva Voce	(20)

#### 1. Infancy and Toddlerhood

- A file to be prepared to list activities appropriate for age groups -0-6 months, 7-12 months, 13 to 20 months and 25-36 months.

- Students be encouraged to observe materials available in the locality.
  - Develop play materials suitable for each age group.
  - List activities, which can be used for working with different age groups:
- a) 0-6 months
    - Prepare materials and design activities for seeing, hearing touching and feeling
    - Sensation and movement for soothing movement and exercises.
  - b) 7-12 months
    - Prepare materials and design activities for touching and feeling sensation and movement, and manipulation.
  - c) 13-14 months
    - Identify activities promote manipulation sensory experiences, concepts and language.
    -

### **Art activities**

- a) A few suggestions are given under each category as guideline students be encouraged to explore experiment with each media and understand the characteristics of each medium.
- b) Samples of each be included in the resource file which each student is expected to maintain along with description of values materials and technique used.
- c) Difficulty level of each activity be considered and decide its suitability for different age groups.
  - Painting and graphics:
  - Prepare a variety of brushes from different types of brooms, cotton, wool, strips of cloth, feather etc.
- d) Where necessary demonstration of preparation of materials required for conducting activity be included, i.e. paint with starch, paste etc.
  - Painting with different brushes, crayon design given a paint wash, etching, blow painting, block painting, finger painting. Painting on wet paper, painting masks.
  - Drawing with crayons, dry and wet chalk
  - 6 to 8 years
  - Wet paints, painting masks, brush music

### **Tearing cutting and pasting**

- 3-5 years  
Tearing with all fingers, tearing with thumb and two finger as used in holding pencil, tearing on straight line, curved line.
- 6-8 years  
Tearing circular rings starting from one corner of the page till centre of page. Making designs.
- 3-5 cutting and pasting  
Cutting a design, pasting, please of paper, cloth, sticks leaves collage, mosaic.
- 6-8 years  
Tracing and cutting designs, creating designs, pasting mosaic, paper balls glass pieces etc.

### **Modeling**

- 3-5 years  
Modeling with clay, dough, plastacine, saw dust, providing accessories.
- 6-8 years  
Besides above medium. Modeling with straw, match sticks rope, wire, thick paper fold and slot sculpture

Pasting papers on a balloon, when dry remove air and colour to create accessories for clay sculpture/ crumbled paper pasting designs.

### **Printing**

- Printing with strings, leaf, vegetable blocks, stencil printing, thumb, finger, spray painting.
- Keeping coins, leaves with veins below paper and gently colouring with crayon.
- Older children to make their own stencils.
- Printing on large pieces of paper (group activity)

### **Decorating empty plastic bottles, boxes, boxes makes etc.**

### **III. Music and movements**

- Learning to sign rhymes songs with actions
- Folk songs

### **IV Puppetry and Creative Drama**

- Puppetry stick, singer, table top, rhythm, puppets glove and cock puppets.
- Learning basic manipulation skills
- Use of music, voice modulation and sound effects,
- 1. Compile songs for finger play and lullabies suitable for infants and toddlers.
- 2. Prepare picture books for infants toddlers.
- 3. Develop riddles for language and concepts.
- 4. Recite poems with expression and actions.
- 5. Preparation of materials and games to promote various mathematical concepts.
- 6. Plan field trips to various places, institutions, parks, Zoo, Dams, Television station, post office etc.
- 7. Write stories and songs reinforcing messages of hygiene and cleanliness.
- 8. Collect traditional stories- folk songs from different parts of the country and different communities.
- 9. Games- compilation of outdoor games. Games for cognitive development.

### **References**

- Blackie, Pamela (1972): Drama, London: MacMillan education.
- Contractor, M. (1984): Creative drama and puppetry in education, Delhi: National Book trust of India.
- Currell . (1985): The complete book of puppet Theatre, London: A and C. Black.
- Garretson, R. (1966): Music in childhood education, NewYork: Meredith publishing company.
- Hendrick, J. (1980): total learning for the whole child, St. Louis: The C V. Mosby.
- Kaul, V. (1991): Early childhood education programme, New Delhi: NCERT
- Kaul, V., Bhatnagar , R. (1992): early childhood education A trainer's handbook, New Delhi: NCERT
- Lacper, S., Witherspoon, R., Day, B. (1984): Good schools for young children, New York : MacMillan publishing company.
- Maxim, G. (1985): they very young, Belmont, California: Wadsworth, publishing Company.
- Robinson, H. (1983): Exploring teaching, London: Allyn and Bacon.
- Swaminathan, M. (1984): Play activities for young children, New Delhi: UNICEF.

**HUMAN DEVELOPMENT**  
**SEMESTER – I**  
**PAPER 3**  
**Core 3**

**1T3**

**Overview of Theoretical Perspectives in Human Development**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives :**

- To understand the need of theory in Human Development
- To equip the students with knowledge regarding general issues of different theories of learning cognition and behaviour
- To understand the practical application of personality theories.
- To understand education and research applications of different theories.

**Unit I : Theories: Meaning, importance & functions.**

Early Theories- Preformationism, Locke, Rousseau, Eastern Philosophers.

Ethological Theories- Darwin, Lorenz, Tinbergen and Bowlby; cross-cultural relevance.

**Unit II : Introduction to different perspectives and approaches of personality**

- Psychoanalytic theory of Sigmund Freud
- Carl Gustav Jung- Analytic Psychology
- Alfred Adler – Individual Psychology
- GordanAlport- trait theory
- Henry H Murray- need theory

**Unit III :**

- Psychosocial theory of Erick H Erickson
- BronfenBrenner Ecological theory
- Theory of old age : Kubler Ross & Disengagement theory

Humanistic and Existential Psychology

- Abraham Maslow & Carl R. Rogers- self actualization theory
- Curt Lewin- Field Theory

**Unit IV : Learning theories**

- Pavlov- classical conditioning
- B.F. Skinner- Operant Conditioning
- Bandura- Observation learning

Cognitive and Moral development

- Jean Piaget- theory of cognitive development
- Vygotsky- sociocultural perspective
- Kohlberg's theory
- Howard Gardner's theory of Multiple intelligence

**Internal marks - Will be based on assignments related to four units (20 Marks)**

**References:**

1. Ausuted D.P., 'Theory & problems of adolescent development', New York, Gsune and Stratton, 1954.
2. Balswin, A.L. Theories of Child Development. New York: John Wiley and sons. 1980
3. Berk, L.E. Human Development. SUA, Allyn and Bacon 2002
4. Decaprio N.S. ' Personality Theories: A guide to human nature', C.B.S College Publishing, 1963.
5. Aries, P. (1962) Centuries of Childhood. New York: Knopf.
6. Crain, W. (1992). Theories of Development, Concepts and applications. New Jersey: Prentic Hall.
7. James, A. and Prout, J.( Ed). (1990). Constructing and Reconstructing Childhood. London: Falmer Press.
8. Kakar, S. (1977). Culture and Psyche- Selected Essays. Delhi: Oxford University Press.
9. Kakar, S. (1978). The Inner World. Delhi: Oxford University Press.
10. Vasta, R. (ed.). (1992) six Theories of Child Development : Revised formulations and current issues. London: Sessica Kingsley Publishers Ltd.s

**HUMAN DEVELOPMENT  
SEMESTER – I  
PAPER 4  
CORE 4  
RESEARCH METHODS AND STATISTICS – I**

**1T4**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives:**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents**

**UNIT I**

- Definition of research
- Objectives of research
- Scope of research in home science
- Types of research
- Anthropological and epidemiological research
- Research process
- Defining the research problem
- Formulation of research hypotheses
- Research design
  - Meaning
  - Important concepts relating to research design
  - Different research designs
  - Important experimental designs

**UNIT II**

- Literature search
  - Referencing
  - Abstracting
  - Computer search
  - Bibliography
- Measurement and scaling

- Classification of measurement scales
- Goodness of measurement scales
- Scaling techniques
- Questionnaire designing
  - Criteria for questionnaire designing
  - Questionnaire design procedure
- Data collection
  - Collection of primary data
  - Collection of secondary data

### **UNIT III**

- Concept of statistics
- Scope of statistics
- Classification and tabulation of data
  - Introduction, meaning and objectives of classification
  - Types of classification
  - Formation of discrete frequency distribution
  - Formation of continuous frequency distribution
  - Tabulation of data
  - Parts of a table
  - General rules for tabulation
  - Types of tables
- Diagrammatic and graphic presentation
  - Significance of diagrams and graphs
  - General rules for constructing diagrams and graphs
  - Types of diagrams
  - Graphs
  - Graphs of frequency distributions
- Measure of central tendency
  - Mean
  - Median
  - Mode

### **UNIT IV**

- Measures of dispersion
  - Range
  - Quartile deviation

- Mean deviation
    - Standard deviation
  - Concept of normal distribution curve and probability
    - The meaning and importance of normal distribution
    - Measurement of normal probability distribution
    - Skewness
    - Kurtosis
  - Correlation analysis
    - Significance of the study of correlation
    - Types of correlation
    - Methods of studying correlation
      - Scatter diagram method
      - Graphic method
      - Karl Pearson's coefficient of correlation
      - Rank method
      - Method of least squares
  - Regression analysis
    - Types of regression models
    - Assumptions for a simple linear regression model
    - Parameters of simple linear regression model
    - Methods to determine regression coefficients
      - Method of normal equations
      - Deviations method
    - Assumptions in multiple linear regression
    - Estimating parameters of multiple regression model
      - Least squares method
- 

## **REFERENCES:**

1. Bernard Ostle. Statistics in Research.
2. Best J. W. (1983): Research Education, Prentice Hall, New Delhi.
3. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology,  
Editor- K VisweswaraRao, Jaypee
4. Business statistics by J. K. Sharma, Pearson Education
5. C.R. Kothari. Research Methodology (Methods & Techniques)
6. Daryab Singh. Principles of Statistics, Atlantic Publishers & Distributors.

7. Devdas R.P. (1971): Jamdnppi or Research Methodology, Shri Ramakrishna Mission Vidyalaya.
  8. Dody, J.T. (1967): An Introduction to Social Research, Appleton Center.
  9. Fredrick, Lamson, Whiteney. The Elements of Research.
  10. Garret H.: Statistics in Education and Psychology.
  11. Good, Carter, Scales and Douglas. Methods of Research.
  12. Gupta S. P. (1970): Statistical Methods. S. Chand New Delhi.
  13. M.H. Gopal. Introduction to Research Methodology for Social Sciences.
  14. Philips, B.S. (1977): Social Research Strategy and Tactics, Mae Milan.
  15. Research Methodology – Concepts and Cases, by Chawla, Deepak & Sondhi Neena
  16. Shukla, M.C. and Gulshan S.S. (1970): Statistics Theory and Practice, S. Chand New Delhi.
  17. Sinha S.L.L. Statistics in Psychology and Education, Anmol Publication Pvt. Ltd., New Delhi.
  18. Statistics by Andy Field, SAGE Publication
  19. Young, P. V. and Schmid, C.F. (1968): Scientific Social Survey and Research , Prentice Hall, New Delhi.
-

**HUMAN DEVELOPMENT**

**1S1**

**SEMESTER – I**

**SEMINAR 1**

**CURRENT TRENDS AND ISSUES IN HUMAN  
DEVELOPMENT– I**

**Marks: Sessional: 25**

Current Trends and issues will have seminar presentation and carry Internal Marks.

---

## **HUMAN DEVELOPMENT**

**2T1**

### **SEMESTER – II**

### **PAPER 5**

### **Core 5**

### **METHODS OF STUDYING HUMAN DEVELOPMENT**

**Marks: Theory: 80**

**Practical: 80**

**Internal Assessment: 20**

**Internal Assessment: 20**

#### **Objectives**

- To study different methods and techniques of understanding Human Development.
- To apply the various methods studied in a practical context.

#### **UNIT – I**

##### **1. What is H.D.? Assumptions in H.D.**

##### **2. Life span development – traditional and life span approaches characteristics of life span perspective.**

##### **3. Methods and Research**

- Measures – observation, interviews and questionnaires, case studies standardized tests, life history records and multimeasure, multisource, multicontext approach.

#### **UNIT – II**

##### **1. Observation Method**

- Theoretical perspectives; use of checklists, establishing reliability in observations, maintaining an observation record, report writing and evaluation.

##### **2. Interview Method**

- Theoretical perspectives, development of different types of interview protocols, analysis and coding of interview data.

#### **UNIT – III**

##### **1. Some Psychometric Methods**

- Scales for infant assessment.
- The Wechsler battery of tests.
- Children's Appreciation Test.
- Draw a Man Test.
- House-Tree-Person.
- Raven's Progressive Matrices.
- Self-Esteem Inventory.
- Sex-Role Inventory.

#### **UNIT – IV**

##### **1. Questionnaire Method**

- Theoretical perspectives, development of different types of questionnaire protocols, analysis and coding of questionnaire data.

## **2. Case Study Method**

- Theoretical perspectives, development of different types of case study protocols, analysis and coding of data.

- **Internal marks - Will be based on assignments related to four units (20 Marks)**

2P1

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 2</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

### **Practicals**

1. Standardised Tests- meaning, characteristics, types, validity & reliability item writing & item analysis, building rapport, administrating & basic concept of measurement and interpretation, norms & interpretation of test scores.
2. Administration of test & report writing :
  - a. The Weschler's battery of tests.
  - b. Children's Appreciation Test.
  - c. Draw a Man Test.
  - d. House-Tree-Person.
  - e. Raven's Progressive Matrices.
  - f. Self-Esteem Inventory.
  - g. Sex-Role Inventory.
  - h. Myers Briggs type indicator etc.

### **Practical Examination :**

### **Marks**

- Two tests to be administered & scores to be interpreted and reported (50)
- Viva (20)
- Journal (10)

### **References**

1. Aylward, G. (1994). Practitioner's guide to developmental and psychological testing. New York: Plenum Press.
2. Baxter, L., Hughes, C. and Tight, M. (1999). How to Research. New Delhi: Viva Books.
3. Hayes, N. (ed). (1997). Doing Qualitative Analysis in Psychology. Hove: Psychology Press.
4. Smith, J.A., Harre, R., and van Langenhove, L. (1995). Rethinking Psychology. London: Sage.
5. Yin, R. (1994). Case study research : Design and methods (2<sup>nd</sup> ed.) Beverly Hills, CA: Sage Publishing.
6. Nagpal, R. and Sell, H. (1985). Subjective well-being inventory. New Delhi : World Health Organization.

**HUMAN DEVELOPMENT**  
**SEMESTER – II**  
**PAPER 6**  
**Core 6**

**2T2**

**EARLY CHILDHOOD CARE AND EDUCATION**

**Marks:** **Theory: 80**  
**Practical: 80**

**Internal Assessment: 20**  
**Internal Assessment: 20**

**Objectives**

- To gain knowledge and insight regarding principles of early childhood care and education.
- To develop the skills and techniques to plan activities in ECCE centres of different types, to conduct activities in early childhood care and education and to work effectively with parents and community.

**UNIT – I**

**1. Principles of Early Childhood Care and Education**

- Importance, need and scope of ECCE.
- Objectives of ECCE.
- Types of preschools/programmes: Play centres, day care, Montessori, kindergarten, balwadi, Anganwadi etc.
- Concepts of non-formal, formal and play way methods.

**2. Historical Trends (overview)**

- Contribution of the following thinkers to the development of ECCE (their principles, applications and limitations) in the context of ECCE.
- Pestalozzi, Rousseau, Froebel, Maria Montessori, John Dewey, Gijubhai Badheka, Tarabai Modak, M.K. Gandhi, Rabindranath Tagore.

**UNIT – II**

**1. ECCE in India**

Pre Independence period, Post Independence – Kothari Commission, contribution of the five year plans to ECCE – Yashpal Committee, Maharashtra Preschool Centre Act.

**2. Contribution of the following agencies/programmes to ECCE in India**

ICCW, IAPE, NCERT, ICDS, UNICEF, NCTE, Mobile Creche etc.

**UNIT – III**

**1. Organization of Pre-school Centres**

- Concepts of organization and administration of early childhood centres.
- Administrative set up and functions of personnel working at different levels.
- Building and equipment : Location and site, arrangement of rooms, different types and size of rooms, play ground, storage facilities, selection of different types of outdoor and indoor equipment, maintenance and display of equipment and material.
- Staff/personnel service conditions and role : Role and responsibilities, essential qualities of a care giver / teacher, other personnel.

- Record and Report : Types, aim and purpose / need, general characteristics e.g. anecdotal, cumulative, sample work, medical etc.

## **2. Programme Planning**

Planning : Setting goals and objectives of plans – long term, short term, weekly and daily planning, routine and schedules.

### **UNIT – IV**

#### **1. Activities for ECCE**

- Language Arts : Goals of language, types of listening and activities to promote listening various activities – (songs, object talk, picture talk, free conversation, books games, riddles, jokes, stories, criteria and selection of activities, teacher's role).
- Art and craft activities (Creative activities of expression) : Types of activities – chalk, crayon, paints, paper work and best out of waste. Role of teacher in planning the activity, motivating children. Fostering appreciation of art and craft activities.
- Music : Songs, objectives of music education, establishing goals, setting the stage and role of the teacher. Three aspects of music, making, listening and singing.
- Mathematics : Goals of mathematical learning, developmental concepts at different stages : principles of teaching mathematics – firsthand experience, interaction with others, using language, reflection. Mathematical concepts like : classification, conservation, seriation, comparison, counting, fraction, one to one correspondence, addition and subtraction.
- Science : a ) Thinking : Observing, inferring, classifying, communicating. B) Concept formation : Differentiation, grouping, labeling, Role of Science, developing scientific outlook by a spirit of inquiry, objectivity, observation. Role of teacher in some important science experiences.
- Social Studies : Goals of social studies, field trips, of fostering good self-concept and respect for others. Promoting social studies through celebrations of festivals. Role of teacher.

**Internal marks -will be based on assignments related to four units (20 Marks)**

**2P2**

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 2</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

#### **Practicals**

1. Visits to various centres, which cater to th preschool stage e.g. : Day care Centre, Balwadi, Anganwadi, Mobile Creche etc.
2. Preparing a resource unit file on the basis of play way method/approach.
3. Preparing teaching material kit and presentation in mock set up :-
  - Story and their techniques
  - Types of puppets and mobiles
  - Art and craft portfolio
  - Song booklet and low cost musical instruments
  - Readiness games and material
  - Picture talk and object talk related material etc.
4. Planning and executing activities in ECCE centres.
5. Participating in Preschools.

<b>Practical Examination :</b>	<b>Marks</b>
• Planning five activities on the given concept and presenting	(30)
• Conducting the five activities in a EC centre	(30)
• Resource Files	(20)

### **References**

1. Bhatia & Bhatia (1995). Theory and Principles of Education, Doaba House, Delhi.
2. Brewer, J.A. (1998). Introduction to early childhood education. (3<sup>rd</sup> Ed.). Boston : Allyn & Bacon.
3. Grewal, J.S. (1984). Early childhood education, Agra National Psychological Corporation Pub.
4. Hildebrand Verma (1981). Introduction to Early Childhood education, N.Y. : Macmillan.
5. Kaul, V. (1997). Early childhood education programme, New Delhi: NCERT.
6. Kulkarni S. (1988). Parent Education, Perspectives and Approaches. Jaipur: Ravat Publications.
7. Mohanti & Mohanti (1996). Early childhood care & education. New Delhi : Deep & Deep Publication.
8. Pankajam, G. (1994). Preschool Education. Ambala : Indian Pub.
9. Read Katherine (1980). The nursery School, Holt Rinehart & Winston.
10. Swaminathan Mina. A Source book on early childhood care and education, UNESOC, Clinical co-operative programme Paris.

**HUMAN DEVELOPMENT**  
**SEMESTER – II**  
**PAPER 7**  
**Core 7**

**2T3**

**STUDY OF FAMILY IN SOCIETY**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To understand family as a component of socio-cultural milieu and context.
- To familiarize students with developmental perspective in family life cycle.
- To realize and appreciate universals and variations in family life patterns across cultures and subcultures.
- To create awareness regarding philosophy, structure, function, needs and strength of families with specific reference to the Indian family.
- To understand theoretical and methodological concerns related to family studies.

**UNIT – I**

**1. The Family in Social Context**

- Family as a component of social system, structure and context.
- Family as an evolving and dynamic institution.
- Functions of family.

**2. Socio-cultural studies of family patterns in India**

- Family structure : Traditional extended / joint families.
- Alternate families – single parent, childless, female headed.
- Unitary families.
- Cause and effect of different family structures on changing roles of family.

**UNIT – II**

**1. Approaches and Theories in Family Studies**

- Developmental approach  
    Interactional approach
- Institutional approach
- Systemic approach
- Family life-cycle approach
- Cyclical theory
- Progressive theory
- Structural – functional theory

**UNIT – III**

Socialization in Indian cultural settings: Meaning of socialization, factors affecting socialization, Cultural similarity and diversity, its relevance to socialization, Personality as a social phenomenon personality and society. Their inter-relations, cultural influences on human personality and social behavior, Cultural and civilization; institutions, customs, habits, custom and Law, Fashion, convention and etiquette, Manners,

tradition and ceremonies Folkways and mores social control and conformity, Social status and social class differences in behavior.

## **UNIT – IV**

### **1. Contemporary Issues and concerns**

- Family violence, battered women, child maltreatment, sexual abuse
- Dowry and family violence
- Child rearing and socialization
- Gender roles
- Divorce and remarriage.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

## **References**

1. Adams, B.N. (1975). The Family: A sociological interpretation. Chicago: Rand Mc Nally.
2. Ahuja, R.(1997). Indian Social System (2<sup>nd</sup> Ed.) Jaipur : Rawat.
3. Bharat, S & Desai, M. (1995). Indian Bibliographies on the Family. Bombay: Tata Institute of Social Sciences.
4. Colemar, J.C.(1988). Intimate relationships: Marriage and family patterns. N.Y.: Macmillan.
5. Das, H.s. & Bardis, P.D (Eds.) (1978). The World Revolution in Family Patterns. New York: The Free Press.
6. Leslie, G.R. (1988). The family in social context, New York : Oxford.
7. Rao, U.P.P.& Rao, V.N. (1985). Marriage: The Family and Women in India. New Delhi: Heritage.

**HUMAN DEVELOPMENT**  
**SEMESTER – II**  
**PAPER 8**  
**Core 8**

**2T4**

**RESEARCH METHODS & STATISTICS-II**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents**

**UNIT I**

- Sampling considerations
  - Sampling concepts
  - Sampling vs non-sampling error
  - Probability sampling design
  - Non-probability sampling design
  - Determination of sample size
- Estimation and confidence intervals
  - Point estimation
  - Interval estimation
- Hypothesis testing
  - Rationale for hypothesis testing
  - A general procedure for hypothesis testing
  - One-tailed and two-tailed tests
  - Errors in hypothesis testing

**UNIT II**

- Students ‘t’ test for small samples for
  - Testing differences in proportions
  - Testing differences in means
- Large sample test (C. R. Test) for testing significance of difference between mean of two groups
- Analysis of variance
  - One way ANOVA

- Two way ANOVA

## **UNIT III**

- Chi-square test
  - Chi-square distribution
  - Chi-square test statistic
  - Application of chi-square test
    - Equal probability type
    - Normal distribution type
    - 2 X 2 contingency tables type
    - Chi-square test of independence
- Participatory rapid assessment
- Participatory learning assessment

## **Unit IV**

- The writing process
  - Getting started
  - Use outline as a starting device
  - Drafting
  - Reflecting
  - Re-reading
    - Checking organization
    - Checking headings
    - Checking content
    - Checking clarity
    - Checking grammar
- Parts of dissertation/Research report/article
  - Abstract
  - Introduction
  - Review of literature
  - Materials and methods
  - Results and discussion
  - Summary and conclusion
  - Bibliography
  - Recommendation
- Computer applications in data analysis
  - Use of MS-Office for research

- Graphic representation
  - Use of SPSS for data analysis
- 

## **REFERENCES:**

1. Bernard Ostle Statistics in Research.
  2. Best J. W. (1983) : Research Education, Prentice Hall, New Delhi..
  3. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee
  4. Business statistics by J. K. Sharma, Pearson Education
  5. C.R. Kothari : Research Methodology (Methods & Techniques)
  6. Daryab Singh Principles of Statistics, Atlantic Publishers & Distributors.
  7. Devdas R.P. (197 1): JamdnppiOf Research Methodology, Shri Ramakrishna Mission Vidyayala.
  8. Dody, J. T. (1967): An Introduction To Social Research, AppletonCenter.
  9. Fredrick, Lamson, Whiteney: The Elements of Research.
  10. Garrett, H. : Statistics In Education And Psychology.
  11. Good, Carter, Scales and Douglas: Methods of Research.
  12. Gupta S.P. (1970): Statistical Methods, S. Chand Company, New Delhi.
  13. M.H.Gopal : Introduction to Research Methodology for Social Sciences.
  14. Philips, B.S.( 1977): Social Research Strategy And Tactics, Mae Millan.
  15. Research Methodology – Concepts and Cases, byChawla, Deepak &SondhiNeena
  16. Shukla, M.C. And Gulshan S.S. (1970): Statistics Theory And Practice, S. Chand New Delhi.
  17. Sinha S.L. L Statistics In Psychology And Education, Anmol Publications Pvt. Ltd., New Delhi.
  18. Statistics by Andy Field, SAGE Publication
  19. Young, P.V. And Schmid, C.F. (1968) : Scientific Social Survey And Research, Prentice Hall, New Delhi.
-

**HUMAN DEVELOPMENT  
SEMESTER – II  
PAPER 7  
Core 7**

**2S1**

**CURRENT TRENDS & ISSUES IN HUMAN DEVELOPMENT-II**

**Semianr 2**

**Internal Assessment: 25**

**HUMAN DEVELOPMENT**  
**SEMESTER – III**  
**PAPER 9**  
**Core 9**

**3T1**

**THE CHILD WITH SPECIAL NEEDS**

**Marks: Theory: 80**

**Practical : 80**

**Internal Assessment: 20**

**Internal Assessment: 20**

**Objectives**

1. To appreciate the special needs of children with different disabilities and disorders;
2. To gain insights into the causes of disability and disability and in children, and into their prevention and treatment;
3. To be sensitized to the similarities and differences between disabled and non-disables children; and
4. To perceive the importance of the family and the community in the development of the child with special needs.

**Unit I : Introduction**

- Definition and terminology, relationship of delayed development and disability
- Incidence and prevalence in India
- The child at risk: poverty and gender issues
- Rights of the disabled child
- Issues in classification and labeling
- Genetic and environmental factors in disability
- Prevention of disability
- Early detection, screening, identification and assessment in the community and at Centre- based programmes
- Need for intervention, education and rehabilitation
- Normalization and mainstreaming
- Understanding the family with a special child

**The Child with Mental Retardation**

- Definition of intelligence, adaptive behaviour and mental retardation.
- Approaches to measurement.
- Mental illness as different from retardation
- Current classification and terms: mild, moderate, severe and profound retardation
- Genetic and environmental causes; prevention
- Characteristics of children with mental retardation from infancy to adolescence – physical – motor, cognitive, language, personal-social and emotional. Effect on the family.
- Family and Community: mutual support, role in development, attitudes, acceptance and integration of child.

**Unit II: The child with Sensory Deficits**

**Auditory impairment:**

- Definition – deaf and hard-of –hearing children
- Classification- mild, moderate, severe and profound loss

- Conductive and sensorineural loss
- Genetic, prenatal and perinatal cause of deafness. Approaches to measurement- simple and clinical methods
- Cognitive, language, social and emotional development of children with hearing loss. Importance of age of onset of loss for language development.
- Communication in children with hearing loss.
- Prevention, early treatment and stimulation.
- Family- its role in detection and child's language development. Supports and counselling for family.
- Community- effect of attitudes, services for rehabilitation, integration of child and family.

#### **Visual impairment:**

- Definitions/ blindness and partial sight. Legal and educational implications of definition
- Genetic and environmental causes- with special reference to nutrition
- Prevention and treatment of impairment
- Development of concepts in children from infancy to adolescence- significance of onset, early stimulation and mobility training
- Motor, language and socio-emotional development. Sensitivity of other senses
- Family: role in detection and early stimulation. Support and counselling for family.
- Community: role in prevention and awareness
- Services for rehabilitation. Integration of child and family.

#### **Unit III:The Child with learning Difficulties and Disability**

- Definition of Learning Disability. Difference between difficulty and disability Problems of labeling. Criteria for identification and diagnosis.
- Characteristics of children- sensori motor, perceptual, language difficulties consequences for school achievement. Cause and correlates of learning disability. Learning difficulties as related to academic and psychological problems.
- Profile of the learning disabled child at school and in the family. Parents dilemma in socializing the child.
- Role of culture's expectations and family norms in seeking solutions.

#### **The Child with Cerebral Palsy and Orthopaedic Disability**

- Definitions, classification and prevalence.
- Causes and associated conditions. Prevention and treatment approaches.
- Role of family and community. Stress in family and support mechanisms integration of children.

#### **Unit IV: The Child with Communication Disorders**

- Significance of speech and language in communication.
- Definition of communication disorders
- Classification of disorders of speech and language. Multiple disorders.
- Psychological and behavioural characteristics of children.
- Family support and community services in treatment and management.

#### **The Child with Behavioural Disorders**

- Definition and characteristics of behaviour disorders. Contextual and cultural differences.

- Ecological and clinical classification.
- Behaviour problems associated with autism, schizophrenia, attention deficit hyperactivity disorder, enuresis and encopresis.
- Behaviour problems of children showing excessive anxiety school refusal, phobia, temper-tantrums and delinquency.
- Biophysical and environmental correlates of disorders.
- Role of family in treatment and therapy.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

**3P1**

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 9</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

### **Practicals**

**Use of Survey methods to detect and screen for disability in childhood procedures and methods in early stimulation of children (birth- 6years) language and speech development**

**implementing educational practices in an institution (a special school/an integrated programme/a regular school)**

Working with children who may have-

- Mental retardation
- Learning disability
- Auditory impairment & Visual impairment
- Behaviour disorders
- Communication disorders
- Mixed disabilities
- Practicing methods to enhance sensori-motor development, cognitive abilities, language skills, mathematical concepts and interpersonal competence at different levels in the programme.
- In an integrated programme, observing and participating in processes in the inclusion of children with disability, peer and teacher-child interactions, administrative arrangements.

### **Meeting families to :**

- Plan intervention programme
- Discuss child's progress and problems
- Involve parents and siblings in socialization and education
- Provide basic counselling and referrals to other allied services

### **Case-study of a child with special needs**

### **Practical Exam**

1. Methods in Early stimulation(20)
2. Planning an intervention programme (20)
3. Viva (20)
4. Resource File (20)

## **References**

1. Berdine, W.H., Blackhurst, A.E. (1985): An introduction to special education (second ed), Lexington, Harper Collins, (Complete book).
2. Hallahan, D.P. & Kauffman, J.M., (1991): Introduction to exceptional children (fifth ed.). boston, allyn and Bacon, (Complete book).
3. Loring J.& Burn, G. (eds.)(1978): Integration of handicapped children in society, London, Routledge & Kegan Paul, (Complete book).
4. Narasimhan, M.C.& Mukheerjee, A.K. (1986) : Disability: a continuing challenge, (Chapters 1,2,3). (Complete book).
5. Werner, D. (1994): Disabled village Children, (Indian edition), New Delhi, Voluntary Halth Assocation of India, (Complete book).
6. Philip, M. & Duckworth, D. (1985): Children with disabilities and their families: a review of research, Windsor, Berks: NFER-NELSON publishing Co., (Complete book).
7. Achenbach, T.M. (1982): Developmental Psychopathology (second edition), New York, John Wiley, (Chapters 8,10,11,12,13).
8. Tinberger,N.& Tinberger, E.A. (1983): Autistic Children: New Hope for a cure, London, Allen & Unwin, (Chapter 5).

**ADOLESCENT NEEDS AND CHALLENGES****Marks: Theory: 80****Internal Assessment: 20****Practical : 80****Internal Assessment: 20****Objectives:**

- Understand the stage of Adolescence in Human Development
- Study of needs and Challenges of adolescent years.

**Unit I : Adolescence**

Meaning, importance and Concept of adolescence in India, **Perspective of Adolescent Development**- Transition from childhood to sexual maturity- Puberty and its consequences; Physical and Psychological changes, Gender Differences- Sexuality, sexual needs and sex education

**Unit II :**

**Cognitive Development:** Development of formal thoughts; Moral reasoning and judgment; Integration of the self-Issues of identity formation and Personality, Changes in attitude, interest and behavior; Factors influencing the developments and its consequences

**Unit III :**

**Relationships During Adolescence** – Parents-adolescent relationship, sibling relationship; Peer relationship, Heterosexual relationship Family, Community, and Culture as agents of influence; Electronic Media.

**School, College, Work and Career During Adolescence** - Educational Opportunities and Formal Training, Importance of Academic Achievement and Failure – Related Issues, Training for Career and work

**Unit IV :**

**Challenges and Problems of Adolescents** – Psychological, Physiological, Sociological, Educational and Vocational problems; Challenges and problems in the Indian educational context.

**Adolescent Guidance And Counseling** – Principles and strategies for guidance, theoretical approaches and developing a personal/ Eclectic approach, Parents and Family Involvement etc.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 9</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

### **Practical Core- 10**

**3 HDP-6**

**Practical Exam 80 Marks**

**Int. Assessment 20 Marks**

**I Demonstration of Experiments and Tests related to adolescents.**

- 1. Intelligence**
- 2. Aptitude**
- 3. Adjustment**
- 4. Personality Types**
- 5. Self concept and body image, self esteem**
- 6. Achievement Motivation**
- 7. Parent-adolescent relationships**
- 8. Vocational interest of adolescents**

### **II Activity**

Study on the Vocational interest of adolescents

Study the parent-adolescent relationships

Case studies of adolescents with psycho-physiological problems (any two categories)

Visit to Institution or organization working for the welfare of Adolescents and presentation

**Practical Examination 50 Marks**

- Conducting two psychological test and interpreting results and writing report
- Preparing a questionnaire on adolescents interests/ parent-adolescent relationships  
10 Marks
- Viva 10 Marks
- Record file 10 Marks

### **References:**

1. Balk, D.E (1995). Adolescent Development, New York, Brooks/ Cole
2. NIPCCD, (2000). Adolescents Girls Scheme- An evaluation. New Delhi. NIPCCD
3. Sharma, N. (1999). Understanding Adolescence. New Delhi. National Book Trust.

**HUMAN DEVELOPMENT**  
**SEMESTER – III**  
**PAPER 11**  
**Elective 1**

**3T3a**

**CARE OF CHILDREN WITH DISABILITIES AND ILLNESSES**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To gain information on different impairments and illness that affect children.
- To be sensitive to desires and wishes of children.
- To identify and assess impairment, illness, disability and the child's physical and social environment.
- To plan for inclusive educational programmes for children and involving the disabled child in the process.
- To become sensitive to concerns of parents of children with disabilities and collaborate with them for children's education and development.
- To interact and relate sensitively with children with disability, accepting individual differences and enable others to do so.

**UNIT – I**

**1 Different types of impairments and serious illness, causes and the effects on children.**

- Physical, intellectual, sensory and emotional impairments
- Illnesses such as juvenile diabetes, asthma

**2 The philosophy of inclusion.**

**3 Attitudes of others in the family and community**

**UNIT – II**

1. Techniques for identification and recording progress
2. Physical, organizational and social barriers in the development of children with disabilities
3. Use of assistive devices

**UNIT – III**

1. Listening to children and including their views in life at school and home.
2. Care of the child in the family, role of parents, siblings and other members.

**UNIT – IV**

1. The rights versus needs of the children
2. Examples of programmes for children with disabilities, innovative projects.
3. Issues in planning inclusive care programmes.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

**References**

1. Chand. I. (1997). Climb every mountain: Harper Collins Publishers India. New Delhi.
2. D. Mitchell & R.I. Brown (Eds.). early Intervention studies for young children with special needs (pp 19-49). London: Chapman and Hall.
3. Dale, N. (1996). Working with families of children with special needs. London: Routledge.
4. Indira Gandhi National Open University (IGNOU). (1995). In Sen, R.S. (Ed.), Children with special needs-1 (p.17), DECE 3 services and Programmes for Children. New Delhi : IGNOU School of Counting Education.
5. Kaur, B., & Karanth, P. (1993). Education for young children with special needs. In Y.S. Saraswathi& B.Kaur(Eds.), Human Development and family studies in India: An agenda for policy (pp. 300-314). New Delhi: Sage.
6. Philips, M., & Duckworth, D. (1982). Children with disabilities and their families : A review of Research. Windsor: NFER-Nelson.
7. Wang, M.C. (1987-89). Handbook of special Education: Research & Practice. Vol. -3, Oxford : Pergamon.

### **Journals**

1. Disability and Society
2. Action Aid Disability News
3. Impairment and disability.
4. Asia Pacific Disability Rehabilitation Journal

**HUMAN DEVELOPMENT**  
**SEMESTER – III**  
**PAPER 11**  
**Elective 1**  
**PARENTING IN EARLY YEARS**

**3T3b**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To understand the significance of parents role in early childhood.
- To develop skills to involve parents in early childhood education programmes.
- To learn to conduct parent education programmes..

**UNIT – I**

**1. Introduction**

- The task of parenting and the concept of parenting skills.
- Changing concept of parenthood and childhood.
- Being a competent parent.

**2. Individual Parenting Roles**

- Determinants of parenting behaviour.
- Characteristics of the parenting roles.
- The mothering role.
- The fathering role.
- Concept of family, the family life cycle stages.

**UNIT – II**

**1. Developmental Interaction in Early Childhood Years**

- Parents role in developing self awareness in children
- Family relations and communication
- Helping the child to learn to express and control emotions
- Helping children discover personal capabilities
- Establishing routines and showing responsible behaviour
- Learning social role and interactions with others.
- Meeting the family needs during this stage
- Meeting the children's needs

**UNIT – III**

**1. Techniques of Parent Education in Preschool Setting**

- Informal meetings : Occasional / accidental meeting, written / printed – newsletter, circulars, notices etc.
- Parent library, toy library
- Workshops / demonstration centre
- Parents' corner
- Open house
- Large / small group meetings

- Individual meetings : Home visits, individual sessions
- Working with vulnerable families.

## **UNIT – IV**

### **1. Parent Education and Support**

- Role of professional
- Parents as family workers
- Flexibly to different needs.
- Personal development for parents.

**Internal marks -Will be based on assignments related to four units (20 Marks)**

## **References**

1. Bigner, J. (1979) : Parent child relations: An introduction to parenting. N.Y. : Mc Millan Pub.
2. Brim, Harman (1980): Learning to be parents, principles, programmes and methods. Sage Pub.
3. Fine Marwin (1980) : handbook on parents education, New York : Academic Press Inc.
4. Goldolein, J.C. (Ed.) (1994). Toys, Child Development, Cambridge University Press.
5. Gordon , Thomas (1975): Parents effectiveness training, New York : New American Library.

**HUMAN DEVELOPMENT  
SEMESTER – III  
PAPER 12  
FOUNDATION 1**

**3T4a**

**Marks: Theory: 80**

**Internal Assessment: 20**

**HUMAN DEVELOPMENT**  
**SEMESTER – III**  
**PAPER 12**  
**Core 11**  
**CHILD AND HUMAN RIGHTS**

**3T4b**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To develop awareness and perspective of Human Rights as a professional in the field of Human Development.
- To develop sensitivity to Human Rights with specific reference to children's rights
- To gain knowledge about Charter on Human and Children's rights.
- To work with women and children to create awareness about their rights and to guide them to access their rights.

**UNIT – I**

**1. Definition and Evolution of Rights**

- Human rights
- Child rights
- Women's rights
- Charter
- Convention
- Policy.

**UNIT – II**

**1. Status of Indian Children and their rights**

- Demographic distribution
- Gender disparities (infanticide, feticide, girl child).
- Children in difficult circumstances (Children of prostitutes, child prostitutes, child labour, street children, refugee children and child victims of war).
- Children with special needs.
- 

**UNIT – III**

**1. Status of Women and their Rights**

- Status of women in India
- Women and human rights
- Forms of violation of women's rights
- Violence against women in home, workplaces and society.
- Sexual harassment, rape
- Health and nutrition based deprivations
- Crime against women
- Political discrimination

## **UNIT – IV**

### **1. Classification of Human Rights**

- Moral rights
- Legal rights
- Civil and political rights
- Social emotional and cultural rights
- Environmental and developmental rights.

**Internal marks -Will be based on assignments related to four units (20 Marks)**

## **References**

1. Butterworth, D. and Fulmer, A. (1993). Conflict, Control Power. Perth : Child and Family Consultants.
2. Bruner, T. (1986). Actual mind minds- possible words. London : Harvard University Press.
3. Digumarti, B.R., Digumati, P.L. (1998). International Encyclopedia of Women (Vol. 1). New Delhi: Discovery.
4. D'Souza, C. and Menon, J. Understanding Human Rights. (Series 1-4). Bombay: Research and Documentation Centre, St. Pius College.
5. Dreze, Jean and Sen, Amartya (1989). Hunger and Public Action, U.K., Oxford University Press.
6. National Institute of Public Cooperation and Child development (1993). A Statistics on Children in India Packet Book 1993, New Delhi.
7. Government of Indian ((1994), Ministry of Finance, Economic Survey 1993-94, New Delhi.

**HUMAN DEVELOPMENT  
SEMESTER – III**

**3RP**

**Research Project (Design)**

**Marks:**

**Internal Assessment: 25**

**Refer Direction (Appendix B)**

**HUMAN DEVELOPMENT**  
**SEMESTER – IV**  
**PAPER 13**  
**Core 12**

**4T1**

**GUIDANCE, COUNSELLING AND PSYCHOTHERAPEUTICS**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical : 80**

**Internal Assessment: 20**

**Objectives**

- To understand the need for guidance & counselling
- To introduce the basic concepts in guidance, counseling & therapy.
- To discuss the processes involved in counseling.

**UNIT – I**

**1. Constructs of guidance, counseling & therapy**

- Basic difference
- Guidance & counseling needs of individuals & families.
- Goals of Counselling

**2. Process of counselling**

- Stages in the counseling process
- Counselling skills
- Pitfalls & problems

**UNIT – II**

**1. Models of Counselling**

- Psychodynamic model
- Behaviour model
- Client centered model

**2. Adlers model of counseling**

- Eclectic model of counseling
- Qualities of a counsellor

**UNIT – III**

**1. Psychotherapies – Meaning & types**

Supportive – Reassurance, Educational guidance & ventilation

Reconstructive - Psychoanalysis

**2. Reeducation**

Behaviour modification

Cognitive Therapy

Hypnosis

Psychodrama

**UNIT – IV**

1. Play therapy

Group therapy

Family therapy

Marital therapy  
TA

## **2.Skills training**

Stress management  
Self management  
Positive thinking  
Study skills, communication skills & decision making skills  
Leadership.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

**4P1**

<b>Total Marks : 100</b>	<b>PRACTICAL CORE 12</b>
<b>Marks: 80</b>	<b>Internal Assessment: 20</b>

### **Practicals**

1. Interactions with practicing counsellors and therapists through visits to schools, clinics, women's centers and hospitals etc.
2. Learn about the counselling process- role play mock sessions etc.
3. Conducting workshops on study skills communication skills & decision making skills and Positive thinking
4. Use of simple psychological diagnostic tests i.e. 4/5 tests. VSMS, BKT, DST, EMS & Adjustment Inventory.
5. File to be maintained.

### **Practical Exam**

1. Counselling to be demonstrated in mock setup (20)
2. Psychological testing (20)
3. Viva (20)
4. File (20)

### **References:**

1. Burnard, P.(1999). Counselling skills training. New Delhi: Viva Books.
2. Manthei, R. (1997). Counselling: The skills of finding solutions to problems. London: Routledge.
3. Nicolson, D. & Ayers, H. (1995). Individual Counselling: Therapy and practice. London: David Fulton.

**HUMAN DEVELOPMENT**  
**SEMESTER – IV**  
**PAPER 14**  
**Core 13**

**4T2**

**MENTAL HEALTH IN DEVELOPMENTAL PERSPECTIVE**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To understand the importance of mental health at different stages in life.
- To develop skills for promoting mental health across the life span.
- To identify mental health issues in the community and sensitizing its members.
- To develop skills of organizing school mental health programme.

**Unit I : Mental Health**

- Definition, concept and importance of holistic health, well-being and happiness.
- National mental health policy of India (1982).
- Community mental health: needs and programmes.
- Infancy
- Implication of attachment and bonding for mental health; deprivation syndrome.
- Malnutrition and effect on growth and behaviour.
- Intervention with families and professionals from allied fields.

**Unit II : Early Childhood Years**

- Mental health needs: safety, security, relationships, autonomy and self concept, nutrition and health.
- Behaviour difficulties, manifested at this stage, e.g. feeding problem, aggression, withdrawal, problems related to early schooling and formal leaving.
- Intervention work with children, families, teachers and other significant adults.
- Middle Childhood
- Mental health needs: recognition, appreciation, friendships and industry.
- School related problem e.g. discipline, truancy, fears and phobias, learning difficulties and disabilities.
- Maladjustment at home and school.
- Providing guidance to children, parents, teachers, peers and school administration.

**Unit III : Adolescence**

Mental health needs: sense of identity, autonomy, individualism/ familism.

- Problems related to physical appearance, development and relationships.
- Problems related to sexuality.
- Authority- adolescent conflicts (e.g. parents, school authority, grandparents).
- Guidance and counselling of adolescents, parents and other significant adults, school personnel.
- School mental health programmes
- Need for mental health programmes for identification and intervention.
- Improving school climate.

- Importance of sensitizing and involving administrators and teachers in mental health aspects of children.
- Orienting teachers to attend to developmental behaviour problems in the classroom, to make referrals wherever necessary.

#### **Unit IV : Adulthood**

Mental health problems in the community:

- Life events that cause stress, e.g. separation due to death, migration etc.
- Substances abuse addiction.
- Violence and sexual abuse.
- Management of stress- counseling, training in relaxation, yoga, meditation.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

#### **References**

1. Barry, P.D. (1990) Mental Health and Mental Illness. (4<sup>th</sup> ed.) Philadelphia: J.B. Lippincott Co.
2. Bono, E. de. (1991) Handbook for the Positive Revolution: Penguin Publications.
3. Carter, F. & Cheesman, P. (1988). Anxiety in childhood & adolescence – encouraging self- help through relaxation training. London: Croom Helm.
4. Goleman, D. (1996). Emotional Intelligence. N.Y. : Bantam Books.
5. Gopalkrishnan, N. (1994). Mental health and You. Mumbai: Popular Prakashan.
6. Govt. of India. Ministry of Health & family Welfare. (1982). National Mental health program for India
7. Kapur, M. (1995). Mental Health of Indian Children. New Delhi : Sage Publications

**HUMAN DEVELOPMENT**  
**SEMESTER – IV**  
**PAPER 15**  
**Elective 2**  
**MEDIA IN HUMAN DEVELOPMENT**

**4T3a**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives:**

- Understand the Role of media in Human development
- Understand the process of making Audio-Visual Materials
- Develop ability in producing various media materials
- Have a sound knowledge base for the relevance and applicability of the various media used in human communication and their complimentary role towards each other.

**Contents**

**UNIT : I**

Theories and types role of Media-, various types of media for communication. Various constraints in the use of media. Criteria in selection and use of various media, role of media- in communication empowerment of women, development of children and youth, in the development and protection of environment in promotion of human rights, Ethics in human development – role of print and electronic media; Media in the lives of modern children.

**UNIT II :**

Communications systems-Concepts, Functions and Significance, Interpersonal, Organizational, public and Mass Communications, Elements, Characteristics and Scope of Mass Communication.

Mass Communication-Models and Theories- Role of Gatekeepers and opinion Leaders.

Visual Communication-Elements of Visual Design-Colour, Line, Form, Texture, Space

Principle of Visual design-Rhythm, Harmony, Proportion, Balance and Emphasis, Visual Composition and Editing.

**UNIT III :**

Media Systems, Trends-Concepts, Scope and Relevance of Media in Society, Functions, Reach and influence of Media

Media Scene in India, Issues in Reaching Out to Target Groups, Contemporary Issues in Media- Women and Media, Human Rights and Media, Consumerism and Media

Historical background-Nature, Characteristics, Advantages and Limitations, and Future Prospects of media

**UNIT IV:**

Media Systems- Techniques: Traditional Media-Role in Enhancing Cultural Heritage, Co-existence with Modern Media Systems and Applicability in Education and Entertainment-Puppetry, Folk Songs, Folk Theatre, fairs.

Print Media- Books, Newspapers, Magazines, Leaflets and Pamphlets Electronic media-Radio, Television, Video, Computer Based Technologies.

Outdoor Media-Exhibition, Fairs and Kiosks

Media Planning and Scheduling-Selection of Media on the Basis of Suitability, Reach, Impact, Frequency and Cost

Introduction to Ethics in Mass Media, Freedom of Speech, Expression and Social responsibility  
Political and Government Controls on the Media.

**Internal marks - Will be based on assignments related to four units (20 Marks)**

**References:**

1. Calvert, S.L., & Joprden, A.B.(Eds.)(2001). Children in the digital age. Journal of Applied Developmental Psychology,22,3-5.
2. Calvert, S.L., & Joprden, A.B., & Cocking, R.R.(2002). Children in the digital age(pp.3-33). Westport, CT7 Praeger.
3. Calvert, S.L., & kotler, J.A. (2003). Lessons from children's television: Impact of the Children's Television Act on children's learning. Special issue of the Journal of Applied Developmental Psychology, 24 ,275-335.Also published online via Science Direct: <http://authors.elsevier.com/sd/article/S0193397303000601>.
4. Calvert, S.L., & Mahler, B.A., Zehnder , S. M. Jenkins, A., & Lee, M. (2003). Gender presentation and self- expression. Journal of Applied Developmental Psychology, 24, 627-644. Also published online via Science Direct: <http://authors.elsevier.com/sd/article/S0193397303001114>.
5. Calvert, S.L., & Tan, S.L.(1994). Impact of virtual reality on young adults' physiological arousal and aggressive thoughts: Interaction versus observation. In P. M. Greenfield, & Rodney R. Cocking (Eds.) , Effects of interactive entertainment technologies on development. Journal of Applied Developmental Psychology, 15, 125-139. Reprinted in P.M. Greenfield, & R.R. Cocking (Eds.) (1996). Interacting with video (pp.59-85). Norwood, NJ7 Ablex.
6. Cocking, R.R., & Renninger, K.A. (Eds.)(1993). The development and meaning of psychological distance. Hillsdale 7 Erlbaum.
7. Greenfield, P. M. (1993). Representational competence in shared symbol systems: Electronic Media from radio to video games. In R. R. Cocking, & K. A. Renninger(Eds.) , The development and meaning of psychological distance(pp.161-183). Hillsadale7 Erlbaum.
8. Greenfield., P. M. Camaioni, L., Ercolani, P., Weiss, L., Lauber, B., & Perucchini, P. (1994). Cognitive socialization by computer games in two cultures: Inductive discovery or mastery of an iconic code? In P.M. Greenfield, & Rodney R. Cocking Cocking (Eds.) , Effects of interactive entertainment technologies on development. Journal of Applied Developmental Psychology, 15, 59-85. Reprinted in P.M. Greenfield, & R.R. Cocking (Eds.) (1996). Interacting with video. Norwood, NJ7 Ablex.

**HUMAN DEVELOPMENT**  
**SEMESTER – IV**  
**PAPER 15**  
**Elective 2**  
**CURRICULUM FOR ECCE**

**4T3b**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To realize the importance of early years and why childhood matters.
- To understand the need for curriculum planning in early years and developing understanding of ECCE curriculum models and approaches.
- To develop understanding of current trends, issues, researches, theories and practices of ECCE programmes.
- To understand theories of play, value of play and its implication for ECCE programmes.
- To enable students to:
  - Plan programmes for various ECCE setting and implement the same.
  - Supervise participants in ECCE laboratory settings
  - Monitor and evaluate different ECCE programmes.

**Unit I : Early Childhood matters**

- The need and importance of Early Child Development (ECD) and Early Childhood Care and Education (ECCE).
- Determinants of Child Survival and Development.
- Ensuring quality and effectiveness in ECD programmes.
- Provision of equity and access to programmes.
- Diversity in programme conceptualization, training and implementation.

Contributions of Indian educators and its implications for Programme Planning in Indian Context  
Christian Missionaries, Arundales  
Indian innovations of western Theories; Gijubhai Badheka Tarabhai Modak

**Unit II : ECCE curriculum and intervention models and innovative programmes and approaches across countries.**

programmes and approaches be studied with reference to

- Theoretical concepts
- Programme content
- Learning environment
- Role of teacher
- Role of Learner and parents

**Unit III :Contemporary theories, practices and policies in ECCE.**

Current research and trends in ECCE.

Role of parents and community in Early Child Development (ECD)  
Programmes

- Developing sensitivity to cultures and traditions of community
- Methods and strategies for parent and community
- Reasons for involvement and needs assessment

- Effective use of involvement to monitor and enhance programme quality.

Understanding importance and value of play. Theories of play and their implications for planning ECCE programmes.

#### **Unit IV : Planning ECCE programmes.**

Issues and concerns related to ECCE/ ECD Programme

- Coverage of populations, reaching the unreached
- Gender equality and equity
- Quality and sustainability
- Training of personnel
- Accreditation

#### **The need and role of advocacy for quality and ECCE programmes**

- Consultancy and advocacy among ECD professionals
- Advocacy role with NGOs Government institutions, national and International organizations/ agencies, policy planners and me

International organizations/ agencies, policy planners and me

#### **Internal Assessment :**

**(20 Marks)**

1. Observations in various ECCE setting e.g. day care, pre-schools, primary schools, ECCE centres, anganwadis etc.
2. Planning programmes for various ECCE settings
3. Implementing planned programmes in specific settings.
4. Supervising, monitoring and evaluating ECCE programmes in different settings.

#### **References:**

1. Agrawal, S.P. & Kanta, N. (1990). Child Education in India. New Delhi: Concept Pub. Co.
2. Anderson, R.H. & Shane. H.G. (1971). As the twig is bent. Boston: Houghton Mifflin.
3. Balsara, M. (1996). New education policy and development challenge, New Delhi: Kanishka.
4. Brewer, J.A. (1998). Introduction to Early Childhood Education Preschool through primary grades, Boston : Allyn and Bacon.
5. Bruner, J. (1972). Poverty and Childhood. In the Relevance of Education London : Allen & Unwin.
6. Buch, M.B. (Ed.) (1991). Fourth Survey of Research in Education. Vol. I-II 1983-88, New Delhi: NCERT.
7. Caldwell, B.M. & Ricciuti, H.W.(Eds.) (1983). Review of child development research (Vol. 3), Chicago : University of Chicago Press.
8. Colvin, R.W. (1974). Preschools education . N.Y. : Soringer.
9. Erickson, S.C. (1985). The essence of good teaching. Sanfrancisco: Jossey Bass.
10. Evans, E.E. (1974). Contemporary influence in early childhood education. New York : Holt, Rinehart & Winston.
11. Frost, J.L. (1968). Early Childhood education rediscovered: readings New York : Holt Rinehart & Winston.
12. Frost, J.L. (1973). Revisiting Early Childhood Education. New York : Holt Rinehart & Winston.
13. Frost, J.L. (Eds.) (1970). The disadvantaged child. Boston Mass : Houghton Mifflin.
14. Gills, S. Childcare Programs in India: Changing Trends. In Ghosh R & Zaachariah M (Eds.) (1987) Education & Process of change. New Delhi : Sage.

15. Grewal, J.S. (1984). Early Childhood Education: Foundations and Practice. Agra : national Psych. Corop.
16. Gupta. R.M. & Coxhead, P. (1990). Intervention with children. London: Routledge.
17. Hethrington, E.M. (1975). Review of child development research (Vol. 5), Chicago, University of Chicago Press.
18. Saunders, R. (1984). Piagetian persepective for preschools: A thinking book for teachers. N.Y. : Prentice Hall.
19. Kumar K. (1991). Political agenda of education. New Delhi: Sage.
20. Mohanty, J. (1988). Recent trends in Indian education. New Delhi : Deep & Deep.
21. Mohite, P. ECCE: Emerging issues in Research in Saraswati Ts and Baljit Kaur (Eds.) (1983). Human Development and Family Studies in India: An agenda for Research and Policy, New Delhi : SAGE.
22. Murlidharan, R. and Kaul, V. ECCE : Current status and problems in Saeaswathi TS and Baljit Kaur (Eds.) (1993). Human Development and Family Studies in India : An agenda for Research and Policy, New Delhi : Sage.
23. Larosa, R. (1986) Becoming a parent : Bevecrly Hills: SAGE.
24. NIR-Janiv, N. (1982). Early Childhood Education : An international Perspective. N.Y.: Plenum Press.
25. Nirjaniv, S.E., Spodek B and Kheg D.C. (1982) . Early Childhood Education: An International Perspective. New York : Plenum.
26. Rao, V.K. and Khurshid-ul- Islam, S. (Eds.) (1997) . Early Childhood care and Education, New Delhi : Commonwealth Publications House.
27. Spodeck, B. (1973). Early Child hood Education N.J.: Prentice Hall.
28. Sponsellor D (Ed.)1974). Play as learning medium. Washington, D.C.: NAEYC.
29. Swaminathan, M.(ed.) (1998). The first five years : A critical perspective on early childhood care and education in India. New Delhi: Sage.

**HUMAN DEVELOPMENT  
SEMESTER – IV  
PAPER 16**

**4T4a**

**FOUNDATION 2**

**Marks: Theory: 80**

**Internal Assessment: 20**

**HUMAN DEVELOPMENT**  
**SEMESTER – IV**  
**PAPER 16**  
**Core 14**  
**CARE OF THE ELDERLY**

**4T4b**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

- To enable students to become aware sensitized to issues to care of the elderly .
- To enable students to understand the theoretical perspective of the aging process.
- To develop skills for organizing activities for the elderly.

**Unit I : Introduction**

- Emergence and scope of gerontology and elderly care.
- Historical perspective, demographic trends in India.
- Concept of aging and problems: Social, medical, psychological problems, occupational etc.

Theoretical perspectives

- Theories: Disengagement theory, Activity theory, Human development theory, Continuity theory, Age stratification theory, Labeling theory

**Unit II : Aging Process**

- Biological and physiological aspects; Psychological aspects; Social aspects; Social status, retired status, single status, economic status, security, guide and teacher, social adjustment and recognition;
- Spiritual aspects: Karma theory and religion;
- Economic aspects.

Adjustment Patterns and Changing Lifestyles in Old Age

- Family patterns in later life: Changing roles and the aging family; Conjugal: Husband- Wife relations in old age; Sexual adjustment;
- Retirement years and marital adjustment;
- Intergenerational family relations; Grand parenthood; Widowhood/ singlehood; Alternative lifestyle; Second marriage in the later life.

**Unit III : Work, leisure and retirement patterns**

- Work- Meaning of work, individual motivation; Leisure; Retirement- benefits freedom of retirees, fear change in personal and social life, problems like- sense of loss, women retirees, awareness, use of authority, social worth;
- Attitude towards retirement: Poverty, poor health, retirement and suicide, abandonment, liberation and diachronic solidarity.

**Unit IV : Death Dying and Bereavement**

- Impact of death on society ; Attitude towards death; Denial and thoughts of death; bereavement, grief and social setting.

Services and programs for the Aged

- Categories of services: Housing , Health, leisure time activities; institution for the aged day care centers; economic programmes; Re-engagement (after retirement); Retirement pension, death cum retirement gratuity, provident fund, health measures. Insurance scheme, investment & taxation and property.

**Internal Assessment :****(20 Marks)**

1. Visit to and report of old centres/homes.
2. Organise recreational activities in home for the aged
3. Prepare case studies on any two inmates.
4. Arranging special service/ counselling activities for the aged with the help of resource person, if necessary e.g. yoga, lectures etc.
5. Term papers, presentation, debates on issues and perspective related to different aspects of the senior citizen's life.

**References:**

1. Aiken, L.R. (1978). The psychology of later life, Philadelphia: WB Saunders company.
2. Bergmann, Klaus (1972). Aged: Their understanding and care, London: Wolfe Pub.
3. Binstock, R.H. and E. Shanes (eds) (1986). Handbook of aging and social sciences. New York: V.N. Reinhold Co.
4. Blau, Zana Smith (1983). Old age in a changing society, New York: New View Prints.
5. Bose, A.B. and K.D. Gangrade (1988). Aging in India: Problems and Potentials. New Delhi: Abhinav Pub.
6. Chowdhry Paul D. (1992). Aging and the aged. New Delhi: Inter India Pub.
7. Cook Alicia Skinner (1983). Contemporary Perspectives on Adult Development & Aging. New York: Macmillian.
8. Cox Harold (1984). Later life: The reality of aging. New Jersey: Prentice Hall Inc.
9. Desai, K.G. (1985). Problems of the retired people in greater Bombay: TISS, Series No. 27.
10. Ghosh, B. (1988) Conterporary Social Problem in India, Bombay: Himalaya Pub.
11. Homban, D. (1978). Social Challenge of Aging. London : Groom Helm.
12. Johnson Elizabeth (1982). Growing old: Social problem of Aging. New York : Holt Rinehart and Winston.
13. Skennedy Carroll (1983). Human Development. New York: Macmillan.
14. Kimmel Douglas (1974). Adulthood and Aging. New York: Wiley.
15. Mishra Saraswati (1987). Social Adjustment of Old Age. Delhi : B.R. pub. Corp.
16. Pinkston, P.H. and N.K. Linsk (1984). Care of the Elderly : A family approach. New York : Pergamon Press.
17. Schiamberg Lawrence, B. (1985). Human Development, New York: Macmillan.
18. Sharma, M.L. & T.M. Dak (1987). Aging in India: Challenge for the Society. Delhi : Janta Pub.

**HUMAN DEVELOPMENT  
SEMESTER – IV**

**4RP**

**RESEARCH PROJECT- (VIVA-VOCE)**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Refer Direction (Appendix B)**

**HUMAN DEVELOPMENT  
SEMESTER – IV**

**4SI**

**Seminar 3**

**RESEARCH PROJECT-- SEMINAR**

**Marks:**

**Internal Assessment: 25**

# **FACULTY OF HOME SCIENCE**

**SCHEME AND SYLLABUS**

**FOR**

**M.Sc. HOME SCIENCE**

**TEXTILE AND CLOTHING**

**CHOICE BASED CREDIT SYSTEM**

**SEMESTER PATTERN**

**2016-2017**

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**NAGPUR**

**MAHARASHTRA**

**INDIA**

### **M.Sc. Home Science (Textile and Clothing)**

<b>Paper</b>	<b>SubjectCode</b>	<b>Name of Paper</b>	<b>Marks</b>	<b>Credits</b>	
<b>Semester – I</b>					
<b>Paper 1 (Core 1)</b>	<b>1T1</b>	Textile Testing and Quality Control	<b>100</b>	25	
<b>Paper 2 (Core 2)</b>	<b>1T2</b>	Advanced Pattern Making & Construction Techniques	<b>100</b>		
<b>Paper 3 (Core 3)</b>	<b>1T3</b>	Textile Science	<b>100</b>		
<b>Paper 4 (Core 4)</b>	<b>1T4</b>	Research Methods and Statistics – I	<b>100</b>		
<b>Practical</b>					
<b>Practical Core 1</b>	<b>1P1</b>	Textile Testing and Quality Control	<b>100</b>	25	
<b>Practical Core 2</b>	<b>1P2</b>	Advanced Pattern Making & Construction Techniques	<b>100</b>		
<b>Seminar 1</b>	<b>1S1</b>	Current Trends & Issues in Textile & Clothing - I	<b>25</b>		
<b>Semester – II</b>					
<b>Paper 5 (Core 5)</b>	<b>2T1</b>	Advanced Draping	<b>100</b>	25	
<b>Paper 6 (Core 6)</b>	<b>2T2</b>	Advanced Textile Designing	<b>100</b>		
<b>Paper 7 (Core 7)</b>	<b>2T3</b>	Grading	<b>100</b>		
<b>Paper 8 (Core 8)</b>	<b>2T4</b>	Research Methods and Statistics – II	<b>100</b>		
<b>Practical</b>					
<b>Practical Core 5</b>	<b>2P1</b>	Advanced Draping	<b>100</b>	25	
<b>Practical Core 6</b>	<b>2P2</b>	Advanced Textile Designing	<b>100</b>		
<b>Seminar 2</b>	<b>2S1</b>	Current Trends & Issues in Textile & Clothing - II	<b>25</b>		
<b>Semester – III</b>					
<b>Paper 9 (Core 9)</b>	<b>3T1</b>	Fashion Designing	<b>100</b>	25	
<b>Core 10</b>	<b>3RP</b>	Research Project (Design)	<b>125</b>		
<b>Paper 10 (Elective 1)</b>	<b>3T2a</b>	Programme Designing and Evaluation in Textile& Clothing	<b>100</b>		
	<b>3T2b</b>	Textile Chemistry	<b>100</b>		
<b>Paper 11 (Foundation 1/Core 11)</b>	<b>3T3a / 3T3b</b>	Foundation 1*/ Textile & Apparel Merchandising	<b>100</b>	25	
<b>Practical</b>					
<b>Practical Core 9</b>	<b>3P1</b>	Fashion Designing	<b>100</b>		
<b>Sessional Elective 1</b>	<b>3Ses1a</b>	Programme Designing and Evaluation in Textile& Clothing	<b>50</b>		
	<b>3Ses1b</b>	Textile Chemistry	<b>50</b>		
<b>Seminar 3</b>	<b>3S1</b>	Seminar	<b>50</b>	25	
<b>Semester – IV</b>					
<b>Paper 12 (Core 12)</b>	<b>4T1</b>	Entrepreneurship Development in Textile & Clothing	<b>100</b>	25	
<b>Core 13</b>	<b>4RP</b>	Research Project (Viva-Voce)	<b>125</b>		
<b>Paper 13 (Elective 2)</b>	<b>4T2a</b>	Care for Textile & Clothing	<b>100</b>		
	<b>4T2b</b>	Textiles at Home	<b>100</b>		
<b>Paper 14 (Foundation 2/Core 14)</b>	<b>4T3a/ 4T3b</b>	Foundation 2*/ Training & Skill Development	<b>100</b>	25	
<b>Practical</b>					
<b>Practical Core 12</b>	<b>4P1</b>	Entrepreneurship Development in Textile & Clothing	<b>100</b>		
<b>Sessional Elective 2</b>	<b>4Ses 1a</b>	Care for Textile & Clothing	<b>50</b>		
	<b>4Ses 1b</b>	Textile at Home	<b>50</b>		
<b>Seminar 4</b>	<b>4S1</b>	Seminar	<b>50</b>		
<b>Total</b>				<b>2500</b>	
				<b>100</b>	

# **TEXTILE AND CLOTHING**

**1T1**

## **SEMESTER – I**

### **PAPER 1**

#### **CORE 1**

#### **TEXTILE TESTING & QUALITY CONTROL**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical: 80**

**Internal Assessment: 20**

#### **Objectives:**

- 1 To acquire knowledge of various physical properties of textiles.
- 2 To develop an understanding of utility of different physical testing equipment.
- 3 To develop an understanding of the principals involved in different testing method of textiles.

#### **Content – Theory**

#### **UNIT –I**

- 1 Introduction, objectives, importance of standards, different types of standard based on established science. Introduction to international bodies such as I.S.I. and A.S.T.M.
- 2 Selection of textile material for research based on textile testing methods. Random Sampling procedure for determination of properties of fibers, yarn and fabric.

#### **UNIT –II**

- 3 Fabric dimensions and properties Fabric thickness - measurement of thickness of fabrics.  
Fabric weight per unit area and per unit length, crimp of yard in fabric crimp and fabric properties faults in fabric measurements of crimp percentage.
- 4 Measurement of air permeability, air permeability of fabrics, fabric drape. Drape meter crease resistance and crease recovery, abrasion testing of abrasion resistance. Different Color fastness tests.

#### **UNIT –III**

##### **5 Fiber Testing-**

Definition, objective and methods of testing staple length, mean length. Short fiber percentage e. Fineness, maturity, tensile strength and elongation at break interpretation of results.

##### **6 Yarn Testing-**

Definition, objective method of testing, to test-count denier twist, diameter, tensile strength, elongation at break, stress strain curves, elastic recovery, yearn appearance, even-ness, interpretation of results.

## **UNIT – IV**

### **7      Fabric Testing:**

Pilling of fabric, pilling tester assessment of pilling.

Flammability some definitions and terms used relating to flammability, flame proof material, factors affecting flame resistance.

### **8      Water and fabric relationship:**

Water repellent wetting of fabric in rain method of testing spray and shrinkage test.

**Practical-1**  
**TEXTILE TESTING & QUALITY CONTROL**  
**Practical Subject Code- 1P 1**

**Periods: 8hr per week**

**Marks: 80Practical and 20 Internal**

**Practical:**

- 1      Identification of textile fibers by microscope , burning and chemical test.
- 2      Quantitative estimation of mixtures of blends.
- 3      Besley's Yarn Count Balance.
- 4      Crease Recovery Tester.
- 5      Twist Tester.
- 6      Abrasion Resistance Tester.
- 7      Pilling Tester.
- 8      Stiffness Tester.
- 9      Bursting Strength Tester.
- 10     Determination of shrinkage and different colorfastness tests.

**References :**

- 1      J. E. Booth- Principle of Textile Testing – Meanness Butterwroths London.
- 2      Grower & Hamley – Handbook of Textile Testing and quality control wileg.
- 3      John H. Skiptle – Textile Testing – Chemical Publishing Co. Inc. Brooklyn, New York.
- 4      ISI Specifications.
- 5      A.S.T.M. Standards.
- 6      Here J.W.S. and Paters P.H. The Physical Testing of Textile Fibres. The Textile Institute Heinmann 1975

**TEXTILE AND CLOTHING  
SEMESTER – I  
PAPER 2  
CORE 2**

**1T2**

**ADVANCE PATTERN MAKING & CONSTRUCTION TECHNIQUES**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Practical: 80**

**Internal Assessment: 20**

**Internal Assessment: 20**

**Objectives :**

- 1 To enable students to select design and draft patterns for various garment based on body measurements.
- 2 To gain experience in handling of different fabrics and advanced construction techniques.
- 3 To develop understanding of the relation of the pattern and garment to the body measurement.

**Content – Theory**

**Unit –I**

- 1 Introduction to pattern making, tools and equipment used for pattern making. Importance of body measurements & standard body measurement charts.
- 2 Different types of sewing machines, preparation of fabric of cutting, layouts of different type of garment, working with different fabrics.

**UNIT – II**

- 3 Study of shaping devices, methods of dart manipulation such as slash & spread method and Pivot method.
- 4 Working with patterns -

Reading pattern envelope understanding pattern markings, Different Pattern Making methods such as,

i)Drafting (ii) Draping (iii) Flat Patterns (iv) Use of commercial patterns.

**UNIT-III**

- 5 Pattern alteration, lengthening and shortening patterns, making bust, shoulder, crotch length alteration, increasing and decreasing waistline and hipline, neckline and sleeve alteration.

- 6 Basic Stitches- Hand Stitches-tacking stitches. Working & making up stitches-Quick slip stitch, Overcast stitch, Lockstitch, finishing touches interfacings and linings.

## **UNIT – IV**

7 Study of fasteners, pocket, plackets, hem finish, trimming and decoration, applying collars, sleeves, types of sleeves.

8 Costing-

- a) Method of costing
- b) Element cost for fabric
- c) Calculating cost for a fabric
- d) Methods of project evaluation

### **Semester- I Practical - 2**

### **ADVANCE PATTERN MAKING & CONSTRUCTION TECHNIQUES**

**Practical Subject Code -1P 2**

**Periods: 8hr per week**

**Marks: 80 Practical and 20 Internal**

#### **Practical :**

1 Designing cutting and stitching of following garments

- 1 Party wear(Any one garment )
- 2 House coat / night suit with shawl collar.
- 3 Skirt with jacket & top
- 4 Trousers

2 Preparation of resource book on high fashion fabric.

#### **References :**

- 1 Doling Kindrsley, The complete book of sewing.
- 2 Erwin Mable D. Practical Dress Design, New ork. Man Milan Co. 1964
- 3 Gerry Cookline, Garments-Technology for Fashion Designers.
- 4 Juverk W.B. Easy Cutting.
- 5 Ireland Patric : Basic Fashion Design, London, B.T. Bastsford Ltd., 1972
- 6 Reader Digest- Complete guide to sewing, Reader's Digest Association, 1982
- 7 Strickland Getrude, A Tailoring Manual. New York, Mac Milan, 1976
- 8 Singers Sewing Book
- 9 Zarpekar K.R. System of cutting Bombya, Zarpekar Tailoring College.

**TEXTILE AND CLOTHING**  
**SEMESTER – I**  
**PAPER 3**  
**CORE 3**  
**TEXTILE SCIENCE**

**1T3**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives**

1. To enable student to study the essential and desirable properties of textile fibre.
2. To acquire the knowledge of different type of fibers and yarns.
3. To gain knowledge of weaving
4. To understand the significance of Non-woven-bonded fabrics.

**UNIT -I**

1- Introduction to Textiles- Textile fibers its-classification, essential and desirable-properties of textile fibers, natural fibers-cultivation, physical & chemical properties of Man-made fibers-manufacturing process, physical & chemical properties.

**UNIT-II**

2- Study of new fibers- Lycra, lyocel, ultra fine fibers, , photo adoptive fibers, intelligent fibers, nano fibers & medical fibers. Brief study of manufacturing, physical & chemical properties.Brief study of yarns- Manufacturing process, Types of yarns, simple yarn, ply yarn-novelty and fancy yarns, types of textured yarns.

**UNIT-III**

3- Weaving introduction – Passage of material through power loom- primary, secondary and auxiliary motions .Shuttle less looms – air jet looms- water jet looms-rapier looms-projectile looms, basic principles and operations in weaving .Knitting introduction-weft knitting & warp knitting-basic principles and operations.

**UNIT-IV**

4-Non woven- Bonded fabrics , felt fabrics, laminated fabrics, decorative fabrics-braiding-netting, laces, crocheting & tatting, industrial textiles- Geo textiles ,medical, nano textiles, smart textiles.

**REFERENCES-**

- 1 Fiber to fabric, Begnard P. Corbman, McGrawHillInternatinaleditins.
- 2 Principles of weaving-R.Marks& A. T. C. Robinson.
- 3 Knitting technology-D.B. Ajronkar
- 4 Bonded Fabrics-J.B. Kolker, Shirely Institute U.K
- 5 Non-Woven manufacture-NN. Banerjee
- 6 Industrial Application of Textiles-K.I. Floyd & H.M. Taylor, Textile Institute, Manchester.

**TEXTILE AND CLOTHING  
SEMESTER – I  
PAPER 4  
CORE 4**

**1T4**

**RESEARCH METHODS AND STATISTICS-I**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives:**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents**

**UNIT I**

- Definition of research
- Objectives of research
- Scope of research in home science
- Types of research
- Anthropological and epidemiological research
- Research process
- Defining the research problem
- Formulation of research hypotheses
- Research design
  - Meaning
  - Important concepts relating to research design
  - Different research designs
  - Important experimental designs

**UNIT II**

- Literature search
  - Referencing
  - Abstracting
  - Computer search
  - Bibliography

- Measurement and scaling
      - Classification of measurement scales
      - Goodness of measurement scales
      - Scaling techniques
  - Questionnaire designing
      - Criteria for questionnaire designing
      - Questionnaire design procedure
  - Data collection
      - Collection of primary data
      - Collection of secondary data
- UNIT III**
- Concept of statistics
    - Scope of statistics
    - Classification and tabulation of data
      - Introduction, meaning and objectives of classification
      - Types of classification
      - Formation of discrete frequency distribution
      - Formation of continuous frequency distribution
      - Tabulation of data
      - Parts of a table
      - General rules for tabulation
      - Types of tables
    - Diagrammatic and graphic presentation
      - Significance of diagrams and graphs
      - General rules for constructing diagrams and graphs
      - Types of diagrams
      - Graphs
      - Graphs of frequency distributions
    - Measure of central tendency
      - Mean
      - Median
      - Mode

## **UNITIV**

### Measures of dispersion

- o Range
- o Quartile deviation
- o Mean deviation
- o Standard deviation

### Concept of normal distribution curve and probability

- o The meaning and importance of normal distribution
- o Measurement of normal probability distribution
- o Skewness
- o Kurtosis

### Correlationanalysis

- o Significance of the study of correlation
- o Types of correlation
- o Methods of studying correlation
  - □ □ Scatter diagram method
  - □ □ Graphic method
  - □ □ Karl Pearson's coefficient of correlation
  - □ □ Rank method
  - □ □ Method of least squares

### Regression analysis

- o Types of regression models
- o Assumptions for a simple linear regression model
- o Parameters of simple linear regression model
- o Methods to determine regression coefficients
  - □ □ Method of normal equations
  - □ □ Deviations method
- o Assumptions in multiple linear regression
- o Estimating parameters of multiple regression model
  - □ □ Least squares method

---

## **REFERENCES:**

1. Bernard Ostle. Statistics in Research.

2. Best J. W. (1983): Research Education, Prentice Hall, New Delhi.
3. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee
4. Business statistics by J. K. Sharma, Pearson Education
5. C.R. Kothari. Research Methodology (Methods & Techniques)
6. Daryab Singh. Principles of Statistics, Atlantic Publishers & Distributors.
7. Devdas R.P. (1971): Jamdnppi or Research Methodology, Shri Ramakrishna Mission Vidyalaya.
8. Dody, J.T. (1967): An Introduction to Social Research, Appleton Center.
9. Fredrick, Lamson, Whiteney. The Elements of Research.
10. Garret H.: Statistics in Education and Psychology.
11. Good, Carter, Scales and Douglas. Methods of Research.
12. Gupta S. P. (1970): Statistical Methods. S. Chand New Delhi.
13. M.H. Gopal. Introduction to Research Methodology for Social Sciences.
14. Philips, B.S. (1977): Social Research Strategy and Tactics, Mae Milan.
15. Research Methodology – Concepts and Cases, byChawla, Deepak &SondhiNeena
16. Shukla, M.C. and Gulshan S.S. (1970): Statistics Theory and Practice, S. Chand New Delhi.
17. Sinha S.L.L. Statistics in Psychology and Education, Anmol Publication Pvt. Ltd., New Delhi.
18. Statistics by Andy Field, SAGE Publication
19. Young, P. V. and Schmid, C,F. (1968): Scientific Social Survey and Research , Prentice Hall, New Delhi

**TEXTILE AND CLOTHING  
SEMESTER – I  
Seminar1**

**1S1**

**CURENT TRENDS AND ISSUES IN TEXTILE AND CLOTHING-I**

**Periods: 2hr/week**

**Internal Assessment: 25**

**Current Trends and Issues in Textile and Clothing will have seminar presentation and carry internal marks.**

**TEXTILE AND CLOTHING**  
**SEMESTER – II**  
**PAPER 5**  
**CORE 5**  
**ADVANCE DRAPING**

**2T1**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical Marks : 80**

**Internal Assessment: 20**

**Objectives:**

- 1 To teach students in detail the principles of draping fabric on the dress form for pattern making.
- 2 To develop an understanding to design in three dimension with the understanding of design/ pattern.
- 3 To apply art principles of design in creating dreams designing and selecting suitable fabric particular design.

**Content – Theory**

**UNIT-I**

**1 Fashion Illustration-**

Aspect of fashion, good fashion illustration, design research and sources of ideas-films, T.V., painting, historic costume etc. Changes and development in fashion.

**2 Fashion Drawing- I**

Basic figure drawing for men, women and children, anatomy, facial features, movements. basic garment shapes, quick sketching and interpretation of appeared design .finished drawing.

**UNIT –II**

**3- Fashion Drawing-II-** Study of shaping devices such as gathers, pleats darts, yokes, pockets, cowls, princess line, sleeves, collars etc.

Fashion accessories- Shoes, headgear, hand bags, neck wears, other accessories.

Advertising and Sales promotion-Brand, standard, labeling, Fashion Show, Exhibition, Display etc.

**UNIT – III**

4- Preparation of adhesive dress form. Equipment needed, grain, preparation of fabric for draping, draping steps.

Seam allowances marking and tracing. Making basic front and back skirt, sleeve block, bodice block front & back by draping on the dress form.

- 1 Draping on the dress form – dart manipulation, pleats, darts, tucks and gathers. Neckline variation, armhole variation, waistline variation. The princess waist, yokes, basic cowls and variation.

## **UNIT-IV**

5-Draping of Skirts- Flared, Skirt, gored skirt, pleated skirt, hip yoke skirt.

Draping of collars- Mandarain collar, band collars, convertible collar, peterpan collar, shawl collar, Chinese collar

Draping of sleeves-Basic sleeve, dolman sleeve, raglan sleeve, kimono sleeve.

**Practical Core 5**  
**ADVANCE DRAPING**  
**Practical Subject Code: 2P1**

**Periods:8hrs/week**

**Marks:80 Practical and 20 Internal**

**Practical :**

- 1 Sketches with various patterns and styles in garment on basic croquis for men, women and children such as- skirt/ blouse, frocks, swim suit, height wear, sportswear, summer wear, salwarr kameez.
- 2 Creating and constructing new styles in following garment by draping method. (i) Skirts (ii) Blouse or Top (iii) Jacket (iv)Evening Dress (v) Salwer Kameez.

**References:**

- 1 Drake Micholas, Fashion Illustration today.
- 2 KojiroKamagai Children Fashion Illustration Dec. 1990.
- 3 KojiroKamagai, Fashion Illustratin @ L. Expressing Texture 1988
- 4 Hllihouse M.S. and Mansfield E.A. Dress Design- Draping and Flat Pattern London U.S.A. Haughton Meffin Co.

**TEXTILE AND CLOTHING  
SEMESTER – II  
PAPER 6  
CORE 6**

**2T2**

**ADVANCE TEXTILE DESIGNING**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Practical Marks : 80**

**Objectives:**

- 1 To develop skills in textile design.
- 2 To train students in printing and dying methods.

**Content-Theory**

**UNIT-I**

1-Classification of different types of yarn, fabric weaves-Jacquard, swivel, lappet, figure and dobby weave. Methods of weave representation, repeat of weave drafts, rawing in weaving plan, lifting plan, peg plan, relation between weave draft. Prepare a peg plan for basic weave and its variation.,

**UNIT -II**

2- Preparation of cloth for printing , printing preparation of printing paste, ingredients used and their functions, different types of thickeners used in printing, general principles of printing. Study of machinery used for printing such as table, roller stencil, flat bed screen, rotary screen faults and remedies in painting. Styles of printing and their fixation methods Styles of printing and their fixation methods

**UNIT-III**

3-Basic concept of dye and pigment. Classification of dyes. Influence of pre-treatment on dying proportion, classification of direct dye, principles and method of application of Direct dye. Faults and remedies in direct dyeing, various after treatment to improve fastness of direct dyed fabric.

Important step involved in reactive, vat, dyes and sulphur dyes, faults and remedies.

**UNIT-IV**

4-Dyeing of wool and silk with basic and acid dye , cotton with vat & naphthol dye ,dyeing with natural dyes (vegetable dye) faults and remedies, after treatments.

Different methods of dyeing fiber, ,yarn and piece dyeing. Dyeing of blends, cross dyeing & union dyeing.

**Practical Core 6**  
**ADVANCE TEXTILE DESIGNING**  
**Practical Subject Code -2P2**

**Periods: 8hrs/week**

**Marks: 80Practical Theory and 20 Internal**

- 1 Application of dyes and variation of shade. Direct dye for cotton, dyeing of viscose rayon, silk and wool , manmade fibres,vat dye for cotton.
- 2 Analysis of fabric- identification of different weave, fabric count.
- 3 Construction of sample of basic weave and figure weave on loom.
- 4 Preparation of samples of different type of printing block, screen, batik stencil, tie and dye.
- 5 Drawing and painting of different types of design for saree, dress material, bed cover, curtain etc.

**References :**

- 1 Birrel V. Textile Arts, harper & Brothers New York, 1958.
- 2 Bharbaiya : Batik for beginners author Baroda.
- 3 Clarke W. :An Introduction to Textile Printing.
- 4 Phyllis ToraTora- Understanding textiles.
- 5 Shenai V. A. History of Textile Design.
- 6 Shenai V. A. Principles and practice of dyeing.
- 7 Watson : Textile design and colour, universal publishing corporation.
- 8 Storey J. Mannual of dyes and fabric.
- 9 Russ S. S. Fabric printing by hand studio visata Ltd., London 1964.

**TEXTILE AND CLOTHING  
SEMESTER – II  
PAPER 7  
CORE 7  
GRADING**

**2T3**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives:**

1. To teach students in detail the principles of grading for pattern.
2. To develop an understanding the terminology and techniques of pattern grading.
3. To apply computerized grading with the help of software.

**Content – Theory**

**UNIT-I**

1- Concept and Principles of Grading.

Basic Size Charts – studying size charts, identify growth areas , size increments and their application for grading.

Grading Terminology – Zero point, cardinal points, cardinal lines , types of grading.

**UNIT –II**

2-Techniques of pattern grading :- The draft grade or Nested grade, the track grade.

Advantages and disadvantages of these techniques, instructions for grading.

Commercial pattern envelope

Envelope front – illustration front and profile view of garments , pattern name, pattern number, type of size, .Envelope back – illustration of back view of garments , suggested fabric, size charts, notions and trimmings .Inside the envelope – construction , guide sheet, graded pattern sheets(Tissue pattern) calculation of material required.

**UNIT – III**

3-Application of grading techniques for basic drafts.

Children's basic blocks–Bodice, sleeve.

Women's basic blocks – Bodice , sleeve , skirt.

Men's basic blocks – Bodice , sleeve , trouser.

Pattern grading

Developing patterns by adaptation method with variation in garment

Children's wear, Women's wear ,Men's wear – Three garments each.

## **UNIT-IV**

4-Fashion read, layout and lay marking for different garments with a different textured fabric and different printed fabric.

Fashion reading and garment including sketch, pattern, garment name size range pattern pieces , fabric widths, specific garment details ,accessories used fabric recommendation and garment costing.

Introduction to computer grading.

### **References :**

1. Patrictaylor J.,martyshobenM,"Grading for the fashion industry" Stanley Thomas (Publishers) Ltd.1990
2. HandrodJack.,"Professional pattern grading for women's,Men's and Children's apparel",redendo bench
3. StruinPamela,"Pattern Drafting for Dress Making"Augustan Delhi 1995
4. Martin M.Shoben and JenetP.Ward,"Pattern Cutting and Make for Outer wear"Butter worth heinmannLtd,Oxford 1987
5. Aldrich Winifrd,"Metric Pattern cutting"Blackwell science, London,1995
6. Designing Patterns – A Fresh Approach to Pattern Cutting,Hilary C Cambell
7. Principles of Flat Pattern Design(3<sup>rd</sup> edition) Nora M MacDonald, USA 2001
8. Metric Pattern Cutting for Children wear /women's wear /men's wear – Winifred Aldrich,Blackwell Science ,Om Book Services,New Delhi.
9. Pattern Grading for children's cloth, women's cloth, Men's cloths – Gerry Cooklin, Blackwell Science ,Om Book Services,New Delhi.
10. Figure types and size ranges – Debbie,Ammgioella,BevenlyBerk.
11. The NIFT Book of Grading and sizing – Vol.I and II.

**Semester II****Core Paper -8****RESEARCH METHODS AND STATISTICS-II****Subject Code -2T-4****Marks: Theory: 80****Internal Assessment: 20****Objectives**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents****UNIT I**

- Sampling considerations
  - o Sampling concepts
  - o Sampling vs non-sampling error
  - o Probability sampling design
  - o Non-probability sampling design
  - o Determination of sample size

- Estimation and confidence intervals
  - o Point estimation
  - o Interval estimation

- Hypothesis testing
  - o Rationale for hypothesis testing
  - o A general procedure for hypothesis testing
  - o One-tailed and two-tailed tests
  - o Errors in hypothesis testing

**UNIT II**

- Students 't' test for small samples for
  - o Testing differences in proportions
  - o Testing differences in means

- Large sample test (C. R. Test) for testing significance of difference between mean of two groups
- Analysis of variance
  - One way ANOVA
  - Two way ANOVA

### **UNIT III**

- Chi-square test
  - Chi-square distribution
  - Chi-square test statistic
  - Application of chi-square test
    - Equal probability type
    - Normal distribution type
    - 2 X 2 contingency tables type
    - Chisquare test of independence
- Participatory rapid assessment
- Participatory learning assessment

### **Unit IV**

- The writing process
  - Getting started
  - Use outline as a starting device
  - Drafting
  - Reflecting
  - Re-reading
    - Checking organization
    - Checking headings
    - Checking content
    - Checking clarity
    - Checking grammar
- Parts of dissertation/Research report/article
  - Abstract
  - Introduction
  - Review of literature

- o Materials and methods
  - o Results and discussion
  - o Summary and conclusion
  - o Bibliography
  - o Recommendation
- Computer applications in data analysis
- o Use of MS-Office for research
  - o Graphic representation
  - o Use of SPSS for data analysis

## **REFERENCES:**

1. Bernard Ostle Statistics in Research.
2. Best J. W. (1983) : Research Education, Prentice Hall, New Delhi..
3. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee
4. Business statistics by J. K. Sharma, Pearson Education
5. C.R. Kothari : Research Methodology (Methods & Techniques)
6. Daryab Singh Principles of Statistics, Atlantic Publishers & Distributors.
7. Devdas R.P. (197 1): JamdnppiOf Research Methodology, Shri Ramakrishna Mission Vidyayala.
8. Dody, J. T. (1967): An Introduction To Social Research, AppletonCenter.
9. Fredrick, Lamson, Whiteney: The Elements of Research.
10. Garrett, H. : Statistics In Education And Psychology.
11. Good, Carter, Scales and Douglas: Methods of Research.
12. Gupta S.P. (1970): Statistical Methods, S. Chand Company, New Delhi.
13. M.H.Gopal : Introduction to Research Methodology for Social Sciences.
14. Philips, B.S.( 1977): Social Research Strategy And Tactics, Mae Millan.
15. Research Methodology – Concepts and Cases, byChawla, Deepak &SondhiNeena
16. Shukla, M.C. And Gulshan S.S. (1970): Statistics Theory And Practice, S. Chand New Delhi.
17. Sinha S.L. L Statistics In Psychology And Education, Anmol Publications Pvt. Ltd., New Delhi.
18. Statistics by Andy Field, SAGE Publication
19. Young, P.V. And Schmid, C.F. (1968) : Scientific Social Survey And Research, Prentice Hall, New Delhi.

**TEXTILE AND CLOTHING  
SEMESTER – II  
Seminar 2**

**2S1**

**CURRENT TRENDS AND ISSUES IN TEXTILE AND CLOTHING-II**

**Periods: 2hr/week**

**Internal Assessment: 25**

Current Trends and Issues in Textile and Clothing will have seminar presentation and carry internal marks.

**TEXTILE AND CLOTHING  
SEMESTER – III  
PAPER 9  
CORE 9  
FASHION DESIGNING**

**3T1**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Practical Marks : 80**

**Internal Assessment: 20**

**Objectives:**

1. To gain knowledge about fashion sketching.
2. To develop an understanding structural and decorative design.
3. To apply art principle of design in creating dress designing and selecting suitable fabric for particular design

**UNIT – I**

1-Fashion sketching- Introduction, Drawing. Aspects of drawing. Tools, Differences between normal and fashion figures. Human proportion- Head .The unit of measurement, average proportion .Method of determining an individual proportion -proportion of the womens figure. The balance like eight head theory, sketching of different fashion figures, basic garment shape and accessories.

**UNIT-II**

2-Design - definition, types - structural and decorative design and their requirements, .Elements of design line, form, shape, colour and texture. Principles of design, balance rhythm, emphasis, harmony and proportion .Applications of principles and elements of design in dress.

**UNIT-III**

3-Colour - Definition, colour theories - prang colour chart and munsel system. Dimensions of colour hue value and intensity & colour harmonies – Design, principles applied to colour in dress design.

4-Methods of Dress Making - Home made, tailor made and readymade garments. Merits and demerits. factors affecting selection of clothing - choice of clothing, accessories to express individuality and distinction in appearance. Applications of basic and principles in achieving pleasing personality

**UNIT-IV**

5-Dress design- Standards for judging costume - Aesthetic requirements for dress suitability to the individuals, factors in personality - planning a wardrobe, requirements for health and modesty .Planning of dressing, selection of material, texture, pattern, and colour. Suggestion for person who have unusual problems in dress. Trimmings and decorations used in Dress. Adjuncts of dress- hats, hair dressing, shoes etc.,

**Semester –III**

**Practical-5**  
**FASHION DESIGNING**

**Practical Subject Code: 3P1**

**Periods: 8hrs per week**

**Marks: 80 Practical and 20 Internal**

- 1 Eight head theory lay figure sketching. Drawing different fashion figures poses for garment and accessory displays.
2. Drawing and preparing samples for the following:
3. Application of principles of design in dress designing.
4. Prang colour chart, Value chart , Intensity chart, Standard color harmonies

Development - developing textile design suitable for over spot borders of all design for accessories and garments

5. Preparing samples for surface trimmings.
6. Drawing diagrams for fashion designing for the persons problems in who have unusual dress.
7. Planning wardrobes for different age groups.
8. A report on visit to fashion show and window displays and fashion industries.

**REFERENCES :**

1. **Fashion Sketch Book Written& Illustrated by BinaAbling**, Fair child publications. New York.
- 2."**Inside the Fashion Business**" 4ih edition by Jeanntte.A.Jaranow, Mirianr.Guerreiro and Beatrice Judelle, Macmillan publishing company, New York.
- 3.Mary Mathews, "**Practical clothing construction**". Part II Cosmic press, Madras.
- 4.Mr.Jimsoy and Hariet "**Art and Fashion in clothing solution**", Iowa state, University Press, Iowa,

**TEXTILE AND CLOTHING  
SEMESTER – III**

**3RP**

**CORE 10**

**RESEARCH PROJECT (DESIGN)**

**Periods: 5hr/week**

**External Assessment: 75**

**Internal Assessment: 50**

**Marks : 125**

Note : See the Guidelines in Appendix B in the Direction.

**TEXTILE AND CLOTHING**

**3T2a**

**SEMESTER – III**

**PAPER 10**

**ELECTIVE -1**

**PROGRAMME DESIGNING AND**

**EVALUATION IN TEXTILE AND CLOTHING**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Sessional Marks : 50**

**3Ses1a**

**Objectives:-**

After completing this course students will be able to-

- Understand the process of program designing.
- Develop ability in planning programmes related to textile and clothing.

**Content/Theory**

**Unit-I :** Programme Planning-Meaning, and importance.

- Pre-requisite of developing plan.
- Programme planning processes. Implementation:-
- Aspects of Execution.
- Factors responsible for the successful conduction of a programme.

**Unit-II :** Evaluation, Follow up and Documentation Evaluation

- Meaning and purpose of Evaluation.
- Types and tools of evaluation. Follow up

- Need for follow up.
- Methods of follow up documentation
- Need for reporting and recording.
- Aspects to be covered.

**Unit-III** Training Programme on Dyeing and Printing

- Developing skills through above training
- Developing New Shades in dyeing
- Quality Control and Testing

**Unit-IV:-** Skill development programme in-

- Embroidery techniques/Garment
- Designing / sewing techniques.
- Management Information System (MIS)
- Organization of exhibitions and fashion shows.

**Semester –III**

**Elective Paper- 1**

**PROGRAMME DESIGNING AND EVALUATION IN TEXTILE AND CLOTHING**

**Sessional - 1**

**Internal Assessment (Sessional)**

**Subject Code 3Ses1a**

**Period: 4hr per week:**

**Marks: 50**

1. Design consumer awareness/skill development/capacity building programme.
2. Implementation, Evaluation and follow up of the programme.
3. Visit ongoing programme.

4 . Write reports of a foresaid programmes.

**References :-**

- 1) Albrecsht, H. et. al. (1989). Rural Development Series Agricultural Extension Vol. I & II. Basic Concepts and Methods, Wiley Eastern Limited, New Delhi.
- 2) Chaubey, B.K. (1979). A Handbook of Extension Education, JyotiPrakashan; Allahabad.
- 3) Dahama, O.P. and Bhatnagar, O.P. (1987). Education and Communication for development. Oxford and IBH Publishing Co., Pvt. Ltd., New Delhi.
- 4) Extension Education in Community Development. (1961). Ministry of Food and Agriculture. Government of India, New Delhi.
- 5) Pankajam, G. (2000). Extension -Third Dimension of Education, Gyan Publishing House; New Delhi.
- 6) Ray G.L. (1999). Extension Communication and Management. NayaProkashi, Calcutta.

**TEXTILE AND CLOTHING  
SEMESTER – III  
PAPER 10  
ELECTIVE -1  
TEXTILE CHEMISTRY**

**3T2b**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Sessional Marks : 50**

**3Ses 1b**

**Objectives:**

- 1 To acquire the advanced knowledge of different kinds of natural and man made fibre.
- 2 To increase awareness of the students regarding the chemistry of cellulose, protein and synthetic fiber.

**Content-Theory**

**UNIT – I**

- 1 Classification to textile fibers.

Polymer Chemistry - Polymerization process, Functionality : Linear and cross linked polymer. Condensation and addition polymers. Polymerization techniques, Characteristics of Fibre, Forming Polymers, Melt, Pry & Wet Spinning.

- 2 Fiber Structure, Formation and arrangement of Crystalline and Amorphous region in fiber and their influence on various properties of fibres - Essential properties of fiber and general properties of fiber.

**UNIT –II**

- 1 Chemistry of cellulose fibers-Molecular structure of cellulose L.S. and CS. of cotton. Capillary Structure of cellulose, swelling, reaction of cellulose, oxy cellulose and hydro cellulose.
- 2 Chemical properties and reaction of cellulose, mercerization, esterification and etherification. Process, treatment with liquid ammonia. Manufacture properties and uses of regenerated cellulose fibers, viscose rayon and cupramonium rayon, highwet \ modulus rayon, polynosic fibers, cellulose, acetates rayon's.

**UNIT-III**

- 1 Protein fiber - molecular structure of protein. Microscopic view of wool and silk. Physical chemical and thermal properties of wool and silk degumming and weighing of silk, felting of wool, shrink proofing of wool.
- 2 Synthetic fibers: Nylon, Polyester, Acetate, acrylic, their molecular structure, microscopic view. Physical, Chemical and Thermal properties. Blends - properties uses and analysis.

## **UNIT – IV**

- 1 Dye Stuff Chemistry. Colour theory difference between a coloured compound and a dye.  
Suitable for textiles.
- 2 Classification of dyes. Azoic, Aniline black. Acid, Basic, Mordant, Disperse, Vat, Reactive, direct, pigment. Brief, introduction about chemical constitution, properties methods of application and suitability of various dyes to different fibers and their blends.

**Semester-III  
Sessional- 1  
TEXTILE CHEMISTRY  
Subject Code: 3Ses 1b**

**Period:4hr per week:**

**Marks: 50**

- 1 Preparation of different dyes.
- 2 Preparation of different types of detergents Preparation of optical brightness
- 3 Preparation of Bleaches.

### **References :**

- 1 Cookett, S. R. & Hilton K.A. Basic Chemistry of Textile 2 Hatsuch Bruce, E. Textile Chemistry in Laboratory.
- 3 Hatsuch Bruce B. Introduction to Textile Chemistry
- 4 Howard L. Needles, Textile Fibers, Dyes, Finishes and Processes.
- 5 Moncrieff R. W. Man made fibers.
- 6 M.D. Pottemand Corbman, B.P. Fiber to Fabric.
- 7 Peter R.H. Textile Chemistry Vol. I The Chemistry of fibers. R.Mishra S. P.

A text book of Fabric science and technology .New Age International.

**Semester III  
FOUNDATION – 1  
Paper 11  
Subject Code: 3T3a**

**Semester –III**

**Foundation Paper-1**

**TEXTILE AND CLOTHING  
SEMESTER – III  
PAPER 11  
CORE-11**

**3T3b**

**TEXTILE AND APPAREL MERCHANDISING**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives :**

1. To increase awareness of the students regarding merchandising.
2. To know the importance of LC amendments.
3. To acquire the advanced knowledge of Boutique.

**UNIT-I**

1-Introduction to Merchandising, Understanding fashion Merchandising , Scope of Merchandising, Fashion merchandising terminology, Role of Merchandiser)

Types of Merchandising - Export House – manufacturer- Buying house. Buying Agency Selection of Buyer's & Buying Agency.

**UNIT-II**

2-Pre-buying Activity, Fabric types, properties and Behavior, selection of Fabric, Garment construction. Quality requirements, quality problems, Merchandiser's role after production, Delivery date extension, transport delays - Natural calamities. Importance of LC amendments

**UNIT-III**

3-Knowledge of Fashion Trends, Brands and Designers, Introduction to International designers.Business opportunities and avenues.Interdepartmental relationship for merchandiser.Boutique handling.

**UNIT-IV**

4-Marketing analysis - Advertising and Media Planning, Fashion shows and other events, industry tour and Project Role play, Surveys and organizing of exhibitions-Visual Merchandising.

**REFERENCES:**

- 1 Fashion Design and Product Development, Harold Carr and John Pomeroy, Black well Science Inc, Cambridge (1992)
- 2 Fashion Marketing, Mike Easey, Oxford University press, WynfordDrve, Don Mills, Ontario (1995)
- 3 Introduction to Fashion, Patrick John, B T Batsford Ltd, Ireland, Fullham road, London (1992).
- 4 Fashion From Concepts to Consumer, Stephens Frings, PrenticeHall,7<sup>th</sup> Edition 2002.
- 5 Marketing Management, Philip Kotler, Prentice Hall, 7th Edition 1996.

<b>3S1</b>	<b>SEMINAR-3</b>
<b>Marks: 50</b>	

**Contents : Any one of the following. Report to be submitted.**

- 1 Arranging fashion shows in the institute
- 2 Documentation Fashion Brands, & textile brands and textile symbols.
- 3 Organizing Exhibitions.

**SEMESTER – IV**

**PAPER 12**

**CORE 12**

**ENTREPRENEURSHIP DEVELOPMENT IN TEXTILE & CLOTHING**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Practical Marks : 80**

**Internal Assessment: 20**

**Internal Assessment: 20**

**Learning Objectives :-**

- To promote entrepreneurship skills among student
- To understand the process and procedure of setting up small enterprises.
- To develop management skills for entrepreneurship developments.

**Content/Theory**

**UNIT-I-**

1-Entrepreneurship - Definition, concept and Characteristics.

- Government policies towards promotion of entrepreneurship.

**UNIT-II-**

2-Agencies for development of entrepreneurship. Role of SSI, MIDC and NSIC, Banks and voluntary organizations.

- Personal Effectiveness - factors affecting entrepreneur's role, effective communication skill, achievement motivation, goal orientation psychological barriers to self-employment, creativity, assertiveness and quick response.

**UNIT -III**

3-Importance of textile industry in Indian Economy-problems and prospects of textile industry. National Textile Policy.

**UNIT- IV**

4-Principles marketing and merchandising for the domestic, and export Market, export policy of India.

**Semester-IV**

**Practical –Core 12**

**ENTREPRENEURSHIP DEVELOPMENT IN TEXTILE AND  
CLOTHING**

**Practical Subject Code – 4P1**

**Periods:8hrs per week**

**Marks: 80 Practical and 20 Internal**

**Practicals :-**

**(1) Related Experience :-**

- Visit to small scale industry.
- Visit Agencies that finance SSI.

**(2) Project:-Survey of local market to know needs of consumer-**

- Formation of project proposal.
- Report on visits.

**3) Practical: Preparation of Articles based on following-**

Dyeing, printing, embroidery. Garment manufacturing, soaps, detergents, stain removers.

Minimum two articles from the above are to be prepared and organize exhibition-cum-sale of the prepared products.

**References :-**

- 1) Akhauri, M.M.P. (1990), Entrepreneurship for Women in India, NIESBUD, New Delhi.
- 2) Patel, V.C. (1987), Women Entrepreneurship - Developing New Entrepreneurs, Ahmedabad EB  
11.
- 3) Hisrich, R.D. and Peters M.P. (1995), Entrepreneurship - Starting, developing and managing a new enterprise, INC USA.

**TEXTILE AND CLOTHING  
SEMESTER – IV**

**4RP**

**CORE 13  
RESEARCH PROJECT (VIVA VOCE)**

**Periods : 5hr/week**

**External Assessment: 75**

**Internal Assessment: 50**

**Marks : 125**

**Note : See the Guidelines in Appendix B in the Direction.**

**TEXTILE AND CLOTHING  
SEMESTER – IV  
PAPER 13  
Elective : 2  
CARE FOR TEXTILE & CLOTHING**

**4T2a**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Sessionals : 50**

**4 Ses 1a**

**Objectives :**

- 1 To acquire knowledge various methods used for care for textile and clothing .
- 2 To developed an understanding of utility of different equipments used in care of textile.
- 3 To develop an understanding of the principles involved in care for textile and clothing.

**Content – Theory**

**UNIT - I**

1-Water- types- soft water-hard water- purification of water. Soaps-types– manufacturing – properties. Detergents-types -properties.

**UNIT-II**

2-Laundering – objects – methods - laundering of white - coloured, cotton, silk, wool, Synthetic fabrics, lace materials, carpets. Clothing storing- mending - darning- seasonal care.

**UNIT-III**

3-Dry cleaning - chemicals used - sequence - method - commercial dry cleaning. Washing machines – types - working principle.

Ironing and pressing - hot air, steam, permanent pressing, thumble drier –hydro extractor - working principle.

## **UNIT-IV**

4-Stain - classification – removal of known and unknown stains - rules in removing fresh and old stains. Stain removers - grease solvents – absorbents - washing soda - borax.

## Care labels – importance- symbols - uses.

## REFERENCES

1. Fabric care- Noemio. D'Souza.
  2. Fundamentals of textiles and their care- Susheela.Dhantyaggi,
  3. House hold textiles and laundry work- Durga.D
  4. Textiles fiber to fabric- Bernard.P.Carbman, MC Graw gill international Edition.

**Semester IV  
Elective Paper - 2  
Sessional - 3**

**Care for Textile and Clothing  
Subject Code- 4 Ses 1a**

Periods; 4hrs/week

Marks- 50 Internal

- 1- Conduct a survey based on care for textiles and clotting among homemakers
  - 2- Study on stain removal in detail
  - 3- Study on different laundering methods
  - 4- Different modern washing machines available in the market
  - 5- Different modern techniques used in dry cleaning

**TEXTILE AND CLOTHING  
SEMESTER – IV  
PAPER 13  
Elective : 2**

**4T2b**

**TEXTILES AT HOME**

**Periods:60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Sessionals : 50**

**4 Ses 1 b**

**Objectives :**

- 1 To acquire knowledge of textiles used in home furnishing and at home.
- 2 To develop an understanding of utility of textiles at home.
- 3 To develop an understanding of the principles involved in textiles at home.

**Content – Theory**

**UNIT- I**

1-Introduction to home textiles, definition, types of home textiles, factors influencing selection of home textiles, recent trends in home textiles

2-Floor and wall coverings – definition, types of floor covering –hard, soft and resilient floor coverings and uses and care and maintenance of floor coverings .Wall covering- definition, uses, care and maintenance of wall coverings.

**UNIT-II**

3-Door and window treatments –definition and parts of door and windows, curtains and draperies –definition and materials used for curtains and draperies .Types of Curtains –draw, tailored, pleated, café, three tier curtains. Types of Draperies – swags. Accessories- rods hook, rails, racks, curtain tape pins.

**UNIT- III**

4-Soft furnishings for living and bedlinen. Introduction to living and bedroom linens, types- sofa, sofa covers, wall hangings, cushion, cushion covers, upholsteries, bolster and bolster covers, bedsheets, , blanket covers, comfort and comfort covers, bed spreads, mattress and mattress covers, pillow and pillow covers, pads, uses and care.

**UNIT- IV**

5-Soft furnishings for kitchen and dining ,types of kitchen linens – kitchen towel, aprons, dish cloth, fridge, grinder and mixie covers, mittens, fridge holders –their uses and care. Types of dining- table mat, dish/pot holders, cutlery holder, fruit baskets, hand towels-uses and care. Bathroom linens – types, uses and care.

## **References**

- 1.-CherylMendelson, Home Comforts-the arts and science of keeping home, published by Scriber, New York,2005.
2. Hanylyn octopus, Cushions and Pillows- professional skills –made easy, Octopus publishing group, New York,2001.
3. Magi Mc McCormick Gordon, The ultimate sewing Book 200 sewing ideas for you and your home, Collins and Brown,London,2002.
4. Anne van Wagner Childs Leisure Arts- Inc., Sew no more Home Décor,Arkansas,U.S.A,1993.
5. Mary Mulasi, Garments with style, Chiton Book Company,Pennsylvania,1995.
- 6.RhodaJ.Murphy, House Beautiful-A seasonal guide to decorating with fabric, Quadrille publishing Ltd, New York,1997.
- 7.Art and craft of fabric decoration-Juliet Bawden, published in London,1994.

**Semester -IV  
Elective Paper – 2  
Sessional  
Textile at Home  
Subject Code- 4 Ses1b**

Periods: 4hrs/week

Marks – 50 Internal

1. Types of home textile available in the market.
2. Prepare a portfolio for any one room by using different textile materials
3. Types of draperies and curtains.
4. Prepare different articles. .

**TEXTILE AND CLOTHING  
SEMESTER – IV  
PAPER 14  
FOUNDATION 2**

**4T3a**

**Marks: Theory: 80**

**Internal Assessment: 20**

**TEXTILE AND CLOTHING**  
**SEMESTER – IV**  
**PAPER 14**  
**CORE 14**  
**TRAINING AND SKILL DEVELOPMENT**

**4T3b**

**Periods: 60hr/15hr per units**

**Marks: Theory: 80**

**Internal Assessment: 20**

**Objectives :**

- 1 To acquire knowledge of various methods of training used for skill developed.
- 2 To develop an understanding of utility of training and skill development..
- 3 To develop an understanding of the principles involved in training and skill development.

**Content – Theory**

**UNIT -I**

1-Training and Learning: Concept of learning and types of learning, factors affecting learning among adults; Types and methods of learning; Concept and goals of training - self-development, action learning, transformation and organizational development, enhancing organizational effectives, team spirit.

**UNIT -II**

2--Training Methodologies: Current trends in training methodologies, organizational development approach, competency based training, participatory training methodologies - aspects, advantages, limitations, implications for training process; Outline of training Administration; Budget and records.

Trainer & Trainee Interface: Roles of a trainer, counselor, coach, facilitator, teacher and expert; Competencies of a trainer; Trainer-trainee perceptions.

**UNIT-III**

3-Training Process: Different phases of training, conceptual models of training, systems approach to training: inputs, process, outputs; Training Strategy and Designs: training need assessment, planning training programmes, organizational environment, Training facilities and other resources; Training methods and interaction styles: classification of training methods, their importance, use and Limitations-selecting, appropriate methods to suit situations and circumstances; Evaluation: meaning, purpose, elements of evaluation and tools for evaluation.

**4-UNIT -IV**

Organizational factors and training: Working climate, leadership, values, mechanics of

change. Developing organizational structures for facilitating micro and macro level interventions for facilitating development.

### **References :**

- 1.RameshwariPandya , (3 July 2011) “Education Training and Skill Development In India” Publisher – New Century Publications.
2. SantoshMehrotra , (13 Oct. 2014) “ India’s Skills Challenge” Publisher – Oxford University Press.  
Publisher – Oxford University Press.

### **Semester IV**

<b>4S1</b>	<b>SEMINAR-4</b>
<b>Marks: 50</b>	

**Contents : Any one of the following. Report to be submitted.**

- i.- Designing training programmes for different developmental goals
- ii- Developing training lectures and material for specific trainings
- iii-. Evaluating training programmes
- iv-. Visit to training and development organization

# **FACULTY OF HOME SCIENCE**

**SCHEME AND SYLLABUS**

**FOR**

**M.Sc. HOME SCIENCE**

**EXTENSION EDUCATION**

**CHOICE BASED CREDIT SYSTEM**

**SEMESTER PATTERN**

**2016-2017**

**RASHTRASANT TUKADOJI MAHARAJ**

**NAGPUR UNIVERSITY**

**NAGPUR**

**MAHARASHTRA**

**INDIA**

## **M.Sc. Home Science (EXTENSION EDUCATION)**

Choice Based Credit System Semester Pattern

Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur (M. S.), India

Paper	SubjectCode	Name of Paper	Marks	Credits	
<b>Semester – I</b>					
Paper 1 (Core 1)	1T1	Communication Technology	100	25	
Paper 2 (Core 2)	1T2	Community Health	100		
Paper 3 (Core 3)	1T3	Socio Economic Environment	100		
Paper 4 (Core 4)	1T4	Research Methods and Statistics – I	100		
<b>Practical</b>					
Practical Core 1	1P1	Communication Technology	100	25	
Practical Core 2	1P2	Community Health	100		
Seminar 1	1S1	Current Trends & Issues in Home Science Extension- I	25		
<b>Semester – II</b>					
Paper 5 (Core 5)	2T1	Media Technology for Communication	100	25	
Paper 6 (Core 6)	2T2	Nutrition Education	100		
Paper 7 (Core 7)	2T3	Women and Development	100		
Paper 8 (Core 8)	2T4	Research Methods and Statistics – II	100		
<b>Practical</b>					
Practical Core 5	2P1	Media Technology for Communication	100	25	
Practical Core 6	2P2	Nutrition Education	100		
Seminar 2	2S1	Current Trends & Issues in Home Science Extension - II	25		
<b>Semester – III</b>					
Paper 9 (Core 9)	3T1	Non Formal Education	100	25	
Paper 10 (Core 10)	3T2	Diffusion of Innovations	100		
Paper 11 (Elective 1)	3T3a	Programme Planning in Extension	100		
	3T3b	Rural Development and Extension Services			
Paper 12 (Foundation 1/Core 11)	3T4a/ 3T4b	Foundation 1*/ Human Rights of Women and Children	100		
<b>Practical</b>					
Practical Core 9	3P1	Non Formal Education	100	25	
Practical Core 10	3P2	Diffusion of Innovations	100		
	3RP	Research Project ( Design)	025		
<b>Semester – IV</b>					
Paper 13 (Core 12)	4T1	Distance Education	100	25	
Paper 14 (Core 13)	4T2	Adoption of Innovations	100		
Paper 15 (Elective 2)	4T3a	Programme Building in Extension	100		
	4T3b	Media For Distance Education			
Paper 16 (Foundation 2/Core 14)	4T4a/ 4T4b/	Foundation 2*/ Environmental Education	100		
<b>Practical</b>					
Practical Core 12	4P1	Distance Education	100	25	
Research Project	4RP	Research Project and Viva voce	100		
	4S1	Research Project Seminar	25		
<b>Total</b>				<b>2500</b>	
<b>Total</b>				<b>100</b>	

**SEMESTER - I**  
**Core Paper - 1**  
**COMMUNICATION TECHNOLOGY**  
**Subject Code : 1T1**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment	: 20 Marks

**Objectives :**

1. To develop understanding about the concept of communication systems.
2. To understand the theories of communication.
3. To study the types of Media and their features.

**Content - Theory**

**UNIT - I COMMUNICATION AND THEORIES**

1. Definition, Principles of communication, Types of communication, Communication process (elements) Problems in communication with reference to elements.
2. Theories of communication, Nature & function of Mass communication, Government Policies on Mass Media in India.

**UNIT - II MEDIA INVOLVED IN COMMUNICATION**

3. Classification of Media – Print Media, Non-Print Media & traditional Media. Comparison of Media, Media planning & Scheduling, Selection of Media on the basis of suitability, reach, impact, frequency and cost.
4. Print Media – Study of house journals, press release, news reports circulars, bulletins.

**UNIT - III**

5. Electronic Media – (a) Television – history, Technical information & basic production techniques, Programme formats. Television as an effective medium in rural life (b) Radio – Technical information & basic production techniques, programme formats.
6. Traditional Media – Puppets, folk songs, folk dances & dramas. Role of traditional media in rural life.

**UNIT - IV PUBLIC RELATIONS & MEDIA FOR SOCIAL CHANGE**

7. Need for Public relations, Prospects of Advertisements, Campaign & Propaganda for effective communication.
8. Role of Media in social change. Development communication – planning, organization, administration and evaluation of development communication programmes.

**References :**

1. Mass Communication - Kewal, J. Kumar, Jaico Publishers.
2. News Reporting and Edition - K. M. Srivastava, Sterling Publishers.
3. Mass Communication and Journalism in India - D. S. Mehta, Allied Publishers.
4. Principles of Journalism - Prathakar Padhy, Popular Publications.
5. Management of Advertisement -
6. Basic Journalism
7. Public Relation - Principles, Cases & Problems - H. Frazier Moore & Frank. B. Kalupa. Surjeet Publications, Delhi.
8. Public Relation in Action - Prof. K. R. Balan & Dr. C. S. Rayadu, Castle Books Pvt. Ltd., New Delhi.
9. Media of Mass Communication - Vivian J. (1991).
10. The dynamics of mass communication - Joseph D. (1993).

**SEMESTER - I**  
**PRACTICAL CORE – I**  
**COMMUNICATION TECHNOLOGY**  
**Subject Code : 1 P1**

Periods : 8 hours/ Week	Practical : 80 Marks
	Internal Assessment : 20 Marks

**Practicals :**

1. Preparation of Script of Radio
2. Preparation of Script for Reporting.
3. Preparation of house journals.
4. Preparation of Press release / newspaper / press conference.
5. Preparation of script for reporting and documentaries.

**Internal Assessment :**

1. Assignment on communication media.

**SEMESTER - I**  
**Core Paper -2**  
**COMMUNITY HEALTH**  
**Subject Code : 1T2**

Periods : 30 hours	Theory : 80 Marks
	Internal Assessment : 20 Marks

**Objectives :**

1. To comprehend the meaning of community health.
2. To develop understanding regarding community health care and its needs.
3. To develop understanding regarding family planning services in India & its different methods.

**Content - Theory**

**UNIT I – COMMUNITY HEALTH**

1. Concept and importance of community health, objectives of health services, health programme in India. Different agencies involved in health system research, evaluation of health services.
2. Relationship of nutritional epidemiology and community nutrition with health, education, agriculture, economics & sociology.

**UNIT II – NUTRITION FOR NATIONAL DEVELOPMENT**

1. Food production in India – Production of food stuffs in India, trends in food production, food available for consumption, food balanced sheet, food expenditure pattern.
2. Food and Nutrition policy and its implementation with respect to supplementary feeding programme, public distribution system and emergencies [famine, Earthquake, Floods, Drought]

**UNIT III – CHILD HEALTH**

1. Growth and physical development of Indian children – Importance of balance diet, malnutrition and its causes, malnutrition and its impact on physical, mental and National development.
2. Protein energy Malnutrition, Iron deficiency Anaemia, Vitamin A deficiency, Iodine deficiency and other deficiencies.

**UNIT IV – INDICATORS TO ASSES HEALTH STATUS**

1. Crude death rate, causes for low death rate, Prental mortality, Birth rate, causes for high birth rate,

- Natural reproduction rate, Gross reproduction rate, Maternal mortality rate, Infant mortality rate, Pre-school death rate, Life expectancy at birth.
2. Methods of Nutritional Assessment : clinical examination, Anthropometry Assessment of Dietary intake, collection and Assessment of Data.

**References :**

1. Nutrition and preventive health care – Mary Alice Caliendo, Macmillan Publishing Company.
2. Applied Nutrition – R Rajalakshmi, Oxford and IBH Publishing Co., Patna.
3. Modern Home – Science – An outline of Extension, Scientific Book Co., Patna.
4. Primary Health Care – Vol. 1-3 Dutt P. R. Gandhigram Institute of Rural Health & Family Welfare Trust, Ambathuria (1993).
5. Park K. “Preventive and Social Medicine”. Banarsidas Bahnot Publishers, Jabalpur.
6. The management of Nutrition In Major Emergencies, (2002) : WHO Published by AITBS Publishers, New Delhi.

**SEMESTER - I**  
**PRACTICAL CORE – 2**  
**COMMUNITY HEALTH**  
**Practical Subject Code : 1 P2**

Periods : 8 hours / week	Practical	: 80 Marks
Internal Assessment : 20 Marks		

**Practicals :**

1. Practice of preparing and standardizing low cost weaning foods.
2. Preparing low cost supplementary foods.
3. Developing portion rich recipes from locally available food stuff.
4. Developing iron rich recipes from locally available food stuff.
5. Visit to ongoing public health nutrition programmes, day Care Centres.
6. Planning and implementation of Nutrition and Health programme for community.

**Internal Assessment (Any Two)**

1. Report writing on assessment of nutritional status of balwadi children.
2. Report writing on visit to public health centre.
3. Diet surveys – 24 hour recall, food frequency and weightment of food.

**SEMESTER - I**  
**Core Paper-3**  
**SOCIO ECONOMIC ENVIRONMENT**  
**Subject Code : 1T3**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment :	20 Marks

**Objectives :**

1. To enable students to understand different types of communities in India.
2. To develop understanding of the factors contributing to changes in communities.
3. To get acquainted with rural / urban / tribal problems and ongoing development programmes.

**Content - Theory**

**UNIT I - COMMUNITY DEVELOPMENT**

1. Meaning, concept and characteristics of a community, Community Development processes  
(a) Extension Education (b) Community Organisation.
2. Structure of different communities - Rural, Urban, Tribal. Scope of Community Development.

**UNIT II - RURAL DEVELOPMENT AND RURAL PROBLEMS**

3. Meaning, definition of rural development, characteristics of rural societies in India. Differences between rural and urban societies in India.
4. Rural problems - Educational, Employment, Agricultural, Health and Sanitation, Nutrition and Communication.

**UNIT III - URBAN SOCIOLOGY**

5. Nature and scope of urban sociology, Differences between modern and medieval urban areas, cultural aspects of urban life, social consequences of urbanisation.
6. Urban social problems - causes of urban social problems, Lack of unity, Class struggle, Lack of social security, family disorganisation, breakdown of cultural barriers.

**UNIT IV - TRIBAL DEVELOPMENT**

7. Historical background of races in India, classification of tribes of India, Tribal culture with emphasis of family system, religion and marriage.
8. Social Change and Tribal Welfare. Factors causing social change. Factors inhibiting and opposing social change among tribal's. Efforts made by Government and other agencies for tribal's - ITDP programme for tribal development.

**References :**

1. Handbook of Social Welfare, Atmaram - Sons, Chaudhari P. A.
2. Society - An introductory Analysis - Mac Iver & Page, Macmillan India Ltd.
3. Tyranny of the Household - D. Jain & N. Banerjee, Vikas Publishers.
4. Sociology - J. L. Kachroo, Bookline Publishers, New Delhi.
5. Introduction to Sociology - V. B. Sahdeva Kitab Mahal.
6. Status of women - Dr. Rekhadevi Raju, Dastane Ramchandra & Co., Pune. Indian Rural Policies - M. B. Nanavathy & Anja.
7. Urban Sociology - 4th Edition, Dr. Vatsalyan Kedarnath, Ramnath, Meerut.

**SEMESTER - I**  
**Core Paper- 4**  
**RESEARCH METHODS AND STATISTICS - I**  
**Subject Code : 1 T4**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment	: 20 Marks

**Objectives:**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

**Contents**

**UNIT I**

- Definition of research
- Objectives of research
- Scope of research in home science
- Types of research
- Anthropological and epidemiological research
- Research process
- Defining the research problem
- Formulation of research hypotheses
- Research design
  - Meaning
  - Important concepts relating to research design
  - Different research designs
  - Important experimental designs

**UNIT II**

- Literature search
  - Referencing
  - Abstracting
  - Computer search

- Bibliography
- Measurement and scaling
  - Classification of measurement scales
  - Goodness of measurement scales
  - Scaling techniques
- Questionnaire designing
  - Criteria for questionnaire designing
  - Questionnaire design procedure
- Data collection
  - Collection of primary data
  - Collection of secondary data

### **UNIT III**

- Concept of statistics
- Scope of statistics
- Classification and tabulation of data
  - Introduction, meaning and objectives of classification
  - Types of classification
  - Formation of discrete frequency distribution
  - Formation of continuous frequency distribution
  - Tabulation of data
  - Parts of a table
  - General rules for tabulation
  - Types of tables
- Diagrammatic and graphic presentation
  - Significance of diagrams and graphs
  - General rules for constructing diagrams and graphs
  - Types of diagrams
  - Graphs
  - Graphs of frequency distributions
- Measure of central tendency
  - Mean
  - Median
  - Mode

## **UNITIV**

- Measures of dispersion
  - Range
  - Quartile deviation
  - Mean deviation
  - Standard deviation
- Concept of normal distribution curve and probability
  - The meaning and importance of normal distribution
  - Measurement of normal probability distribution
  - Skewness
  - Kurtosis
- Correlation analysis
  - Significance of the study of correlation
  - Types of correlation
  - Methods of studying correlation
    - Scatter diagram method
    - Graphic method
    - Karl Pearson's coefficient of correlation
    - Rank method
    - Method of least squares
- Regression analysis
  - Types of regression models
  - Assumptions for a simple linear regression model
  - Parameters of simple linear regression model
  - Methods to determine regression coefficients
    - Method of normal equations
    - Deviations method
  - Assumptions in multiple linear regression
  - Estimating parameters of multiple regression model
    - Least squares method

---

## **REFERENCES:**

20. Bernard Ostle. Statistics in Research.
21. Best J. W. (1983): Research Education, Prentice Hall, New Delhi.

- 3.Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee
4. Business statistics by J. K. Sharma, Pearson Education
1. C.R. Kothari. Research Methodology (Methods & Techniques)
  2. Daryab Singh. Principles of Statistics, Atlantic Publishers & Distributors.
  3. Devdas R.P. (1971): Jamdnppi or Research Methodology, Shri Ramakrishna Mission Vidyalaya.
  4. Dody, J.T. (1967): An Introduction to Social Research, Appleton Center.
  5. Fredrick, Lamson, Whiteney. The Elements of Research.
  6. Garret H.: Statistics in Education and Psychology.
  7. Good, Carter, Scales and Douglas. Methods of Research.
  8. Gupta S. P. (1970): Statistical Methods. S. Chand New Delhi.
  9. M.H. Gopal. Introduction to Research Methodology for Social Sciences.
  10. Philips, B.S. (1977): Social Research Strategy and Tactics, Mae Milan.
  11. Research Methodology – Concepts and Cases, byChawla, Deepak &SondhiNeena
  12. Shukla, M.C. and Gulshan S.S. (1970): Statistics Theory and Practice, S. Chand New Delhi.
  13. Sinha S.L.L. Statistics in Psychology and Education, Anmol Publication Pvt. Ltd., New Delhi.
  14. Statistics by Andy Field, SAGE Publication
  15. Young, P. V. and Schmid, C.F. (1968): Scientific Social Survey and Research , Prentice Hall, New Delhi.
-

**SEMESTER - I  
SEMINAR – I**

**CURRENT TRENDS AND ISSUES IN HOME SCIENCE EXTENSION  
Subject Code : 1 S1**

Periods : 2 hours per week

Marks : 25 Internal

Current Trends and Issues will have seminar presentation and carry internal marks.

**SEMESTER - II**  
**Core Paper - 5**  
**MEDIA TECHNOLOGY FOR COMMUNICATION**  
**Subject Code : 2 T1**

Periods : 30 hours	Theory : 80 Marks
	Internal Assessment : 20 Marks

**Objectives :**

1. To develop understanding of communication media.
2. To enhance the versatility of the students in selection and use of media.
3. To comprehend the concept of mass media and its applications and use.

**THEORY - CONTENT**

**UNIT I - MASS MEDIA**

1. Meaning, Objectives of Mass Media, Characteristics of Mass Media.
2. New developments in the field of Mass Media, use of Mass Media in the field of education, Limitations of Mass Media.

**UNIT II - MEDIA FOR SOCIAL CHANGE**

3. Role of Media for social change, Development Communication Planning, Organisation, administration and evaluation of development communication programmes.
4. New avenues for development communication - Literacy, Women and Development, Human Rights, Environment, Research and Feedback.

**UNIT III - APPLICATION OF COMPUTERS**

5. Introduction to basic computers, Applications & Advantages of Computers in different spheres of Communication Technology with special reference the Audio, Video & Print Media.
6. Use of computers, Multi Media, Satellite Broadcasting and Internal in Education.

**UNIT IV - APPLICATION OF MEDIA TECHNOLOGY**

7. Communication Systems - E-mail, Fax, Voice Mail, Electronic Meeting System like Audio Conferencing, Video Conferencing & Computer Conferencing.
8. Communication for Extension Education. Agencies, Government, Semi - Government, Non -Government, Private and Corporate. Agencies like Film Division, NFDC, DAVP, DD & IGNOU for communication.

**References :**

1. T. V. in India - Changes and Challenges - Gopal Saxena, Vikas Publications.
2. Fundamentals of information technology - Alexis and Mathews Leon Press, Channai & Vikas Publishing House Pvt. Ltd., New Delhi.
3. Information Technology Concepts - Dr. Madhulika Jain, Shashank and Satish Jain, BPB Publications, Delhi.
4. Intercultural Communication Theory - Current Perspectives - William B. Gudykurst, Sage Publications, Delhi.
5. Management of Advertisement -
6. Basic Journalism
7. Public Relation - Principles, Cases & Problems - H. Frazier Moore & Frank. B. Kalupa. Surjeet Publications, Delhi.
8. Public relation in action – Prof. K. R. Balan & Dr. C. S. Rayadu, Castle Books Pvt. Ltd., New Delhi.
9. Media of Mass Communication – Vivian, J. (1991).
10. The dynamics of mass communication – Joseph D. (1993).

**SEMESTER - II**  
**PRACTICAL CORE - 5**  
**MEDIA TECHNOLOGY FOR COMMUNICATION**  
**Subject Code : 2 P1**

Periods : 8 hours / Weeks	Practical : 80 Marks
	Internal Assessment : 20 Marks

**PRACTICALS :**

1. Power Point Presentation on any Home Science aspect.
2. Preparation of Report on E-mail system.
3. Report on visit to Film Division / R. D.
4. Preparation of Video Conference.
5. Report on visit to Private Agency in the field of Communication.

**INTERNAL ASSESSMENT**

- \* Study report on Evaluation of any one Mass Media.

**SEMESTER - II**  
**Core Paper– 6**  
**NUTRITION EDUCATION**  
**Subject Code : 2T2**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment	: 20 Marks

**Objectives :**

1. To understand National, State and Local nutritional problems.
2. To appreciate national and international contribution towards nutritional improvement in India.
3. Be familiar with various approaches to nutrition and health interventions, programmes and policies.
4. To develop understanding the scope of family planning, services in India and the different methods of family planning.

**Theory – Content**

**UNIT – I**

1. Scope of Nutrition Education, Techniques of Motivation, Steps in Planning conducting and evaluating nutrition and Health.
2. Methods of Imparting nutrition education to the community – selection, preparation and use of audio visual aids in Nutrition Education Programme.
3. Monitoring and Evaluation of Effectiveness of Nutrition and Health Education programme.

**UNIT – II**

1. Role of National, International and Voluntary Agencies : NIN, ICMR, ICAR, CFTRI, FAO, WHO, UNICEF, CARE.
2. ICDS, MID – Day Meal programme, Balwadi Nutrition Programme, Special Nutrition Programme.

**UNIT – III**

1. Communicable diseases : Surveillance & treatment control of communicable diseases in emergencies – Role of immunization and sanitation.
2. Organization of nutritional surveillance & individual screening.

**UNIT – IV**

1. Family Planning & Family Planning Methods Definition, Scope of Family Planning Services, Health aspects of family planning, National family welfare programme.
2. Detailed study of various contraceptive methods, vaccines, National Immunization Schedule.

**References :**

1. Nutrition problems of India – Shukla P. K. Prentice Hall, New Delhi.
2. Text Book of Human Nutrition – Banerji M. S. Rao N. P. and Reddy V., Oxford & IBM Publishing Co., New Delhi.
3. Essentials of food & Nutrition Vol. II, M. S. Swaminathan, BAPPCO.
4. Proceedings of Nutrition Society of India NIM Hyderabad.
5. Technical Reports of WHO.
6. Food & Nutrition Board, National Plan of Action on Nutrition, Department of Women and Child Development, Ministry of HRD, Govt. of India.

**SEMESTER - II**  
**PRACTICAL CORE – 6**  
**NUTRITION EDUCATION**  
**Subject Code : 2P2**

Periods : 8 Hrs per week	Practical : 80 Marks
	Internal Assessment : 20 Marks

**Practicals :**

1. Practice of preparing low cost diets for pregnant and lactating women.
2. Practice of preparing low cost diets for pre-school and adolescent girls.
3. Taking anthropometric measurement of balwadi children and BMR calculation.
4. Preparation of teaching aids – Poster / Charts / Slogans.
5. Preparation of tools for nutritional surveys.

**Internal Assessment**

Report writing on any nutrition programme.

**SEMESTER - II**  
**Core Paper – 7**  
**WOMEN AND DEVELOPMENT**  
**Subject Code : 2 T3**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment	: 20 Marks

**Content Theory**

**UNIT I : WOMEN STUDIES**

1. Concept of women's studies. Need for women's development. Scope of women's studies. Women's studies as an academic discipline.
2. Women's movements – Pre independent, Post independent & current women's movements.

**UNIT II – PERSPECTIVES IN WOMEN'S DEVELOPMENT**

3. Consequences of gender differences, Sexual division of Labour & its implication (a) discrimination, (b) invisibility, (c) devaluation.
4. Concepts related to gender differences – Patriarchy, Caste, Class culture, gender and education, economic empowerment and gender.

**UNIT III – WOMEN & EDUCATION**

5. Relevance of women's education in India, Education for women's equality, Legal literacy on personal & family Laws, role of family courts & legal and centres.
6. Government efforts for women's development through education – National Literacy Mission, Sarva Shiksha Abhyan.

**UNIT IV – WOMEN & HEALTH & ISSUES OF WOMEN IN INDIA**

7. Health as a social issue, Gender as a determinant of health, forms of discrimination, Sex ratio in India. Role of WHO & UNICEF in improving health status of women.
8. Problems & issues related to women child marriage, Female foeticide and female infanticide, female mortality, discrimination of nutrition & health care, socialization of girl child.

**References :**

1. Principles of sociology – K. Singh, Prakashan Kendra.
2. Women studies – N. Jayapalan.
3. Rural sociology in India – A. R. Desai, Popular Prakashan Pvt. Ltd.
4. Social problem of India – E. Chandran, Cosmos Bookline Pvt. Ltd., New Delhi.
5. Country Report (1995) : Department of women and child.
6. Woman in a changing society – Anjana Maitra – Sinha, Ashish Publishing House, New Delhi.

7. Indian Women Today – Tradition, Modernity & Challenge, Vol. I. Edited by Uma Shankar Jha, Premlata Pujari, Kanishka Publishers Distributors, New Delhi.

**SEMESTER - II**  
**Core Paper– 8**  
**RESEARCH METHODS AND STATISTICS - II**  
**Subject Code : 2 T4**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment	: 20 Marks

### **Objectives**

- To understand the significance and research methodology in Home Science research.
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate technique for the measurement scale and design.

### **Contents**

#### **UNIT I**

- Sampling considerations
  - Sampling concepts
  - Sampling vs non-sampling error
  - Probability sampling design
  - Non-probability sampling design
  - Determination of sample size
- Estimation and confidence intervals
  - Point estimation
  - Interval estimation
- Hypothesis testing
  - Rationale for hypothesis testing
  - A general procedure for hypothesis testing
  - One-tailed and two-tailed tests
  - Errors in hypothesis testing

#### **UNIT II**

- Students ‘t’ test for small samples for
  - Testing differences in proportions
  - Testing differences in means

- Large sample test (C. R. Test) for testing significance of difference between mean of two groups
- Analysis of variance
  - One way ANOVA
  - Two way ANOVA

### **UNIT III**

- Chi-square test
  - Chi-square distribution
  - Chi-square test statistic
  - Application of chi-square test
    - Equal probability type
    - Normal distribution type
    - 2 X 2 contingency tables type
    - Chi-square test of independence
- Participatory rapid assessment
- Participatory learning assessment

### **Unit IV**

- The writing process
  - Getting started
  - Use outline as a starting device
  - Drafting
  - Reflecting
  - Re-reading
    - Checking organization
    - Checking headings
    - Checking content
    - Checking clarity
    - Checking grammar
- Parts of dissertation/Research report/article
  - Abstract
  - Introduction
  - Review of literature
  - Materials and methods

- Results and discussion
  - Summary and conclusion
  - Bibliography
  - Recommendation
  - Computer applications in data analysis
    - Use of MS-Office for research
    - Graphic representation
    - Use of SPSS for data analysis
- 

## **REFERENCES:**

1. Bernard Ostle Statistics in Research.
2. Best J. W. (1983) : Research Education, Prentice Hall, New Delhi..
3. Biostatistics, A Manual of Statistical Methods for use in Health, Nutrition and Anthropology, Editor- K VisweswaraRao, Jaypee
4. Business statistics by J. K. Sharma, Pearson Education
5. C.R. Kothari : Research Methodology (Methods & Techniques)
6. Daryab Singh Principles of Statistics, Atlantic Publishers & Distributors.
7. Devdas R.P. (197 1): JamdnppiOf Research Methodology, Shri Ramakrishna Mission Vidyayala.
8. Dody, J. T. (1967): An Introduction To Social Research, AppletonCenter.
9. Fredrick, Lamson, Whiteney: The Elements of Research.
10. Garrett, H. : Statistics In Education And Psychology.
11. Good, Carter, Scales and Douglas: Methods of Research.
12. Gupta S.P. (1970): Statistical Methods, S. Chand Company, New Delhi.
13. M.H.Gopal : Introduction to Research Methodology for Social Sciences.
14. Philips, B.S.( 1977): Social Research Strategy And Tactics, Mae Millan.
15. Research Methodology – Concepts and Cases, byChawla, Deepak &SondhiNeena
16. Shukla, M.C. And Gulshan S.S. (1970): Statistics Theory And Practice, S. Chand New Delhi.
17. Sinha S.L. L Statistics In Psychology And Education, Anmol Publications Pvt. Ltd., New Delhi.
18. Statistics by Andy Field, SAGE Publication
19. Young, P.V. And Schmid, C.F. (1968) : Scientific Social Survey And Research, Prentice Hall, New Delhi.

**SEMESTER - II**  
**SEMINAR – 2**  
**CURRENT TRENDS AND ISSUES IN HOME SCIENCE EXTENSION -II**  
**Subject Code : 2 S1**

Periods : 2 hours per week

Marks : 25 Internal

Current Trends and Issues will have seminar presentation and carry internal marks.

**SEMESTER - III**  
**Core Paper - 9**  
**NON FORMAL EDUCATION**  
**Subject Code : 3 T1**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment	: 20 Marks

**Objectives :**

1. To develop concept of Non - Formal Education.
2. To understand the need for Non - Formal Education for National Development.
3. To develop ability to plan Non - Formal Education Programmes.
4. To Develop knowledge of Adult Education.

**CONTENT - THEORY**

**UNIT I - CONCEPT OF NFE**

1. Meaning, Scope, Difference between formal & Non - Formal Education, Inadequacy of Formal Education in India, Significance of NFE in India.
2. Characteristics of NFE, Principles, Objectives of NFE, clientele of NFE, New Education Policy and NFE.

**UNIT II - PLANNING OF NFE PROGRAMMES**

3. Techniques of Community Study :- Subject Matter for NFE, Physical aspect like place, seating arrangements, lighting, ventilation, publicity for NFE programmes.
4. Characteristics of Learners :- Socio - Economic, Psychological (Personality, attitude, motivation, self concept).

**UNIT III - NFE METHODOLOGY, EVALUATION**

5. Methods of NFE, Role of Media in NFE, Materials for NFE. Selection of appropriate methods for evaluation of NFE programmes.
6. Training of NFE functionaries - Need of training, types o training, training content, methods and plan.

**UNIT IV - ADULT EDUCATION**

7. Meaning, Objectives, Purposes of Adult Education, Adult Education in pre and post independence era. Role of Government, NGOs and Universities in the field of Adult Education.
8. Media for Adult Education – Media classification, - electronic, print and folk media. Detailed study of Media.

**References :**

1. A Book of education for Beginners - Bhatia and Bharti, Kalyani Publishers, New Delhi.
2. The New Education Policy in India - Shukla P. D., Sterling Publishers Private Limited, New Delhi.
3. Adult and Non-formal Education - Jagannath Mohanty, Deep and Deep Publications, F-159, Rajouri Gardan, New Delhi.
4. Adult Education - Principles, Practice and Prospects - C. L., Kundu, Sterling Publishers.

**SEMESTER - III**  
**PRACTICAL CORE - 9**  
**NON FORMAL EDUCATION**  
**Subject Code : 3 P1**

Periods : 8 hours / week	Practical : 80 Marks
	Internal Assessment : 20 Marks

**PRACTICALS :**

1. Conducting a class for NFE learners using print media.
2. Conducting a class for NFE learners using folk media - puppets / street plays.
3. Report of an evaluation study of adult education programme.
4. Report of training programme in NFE.

**INTERNAL ASSESSMENT**

Assignment of NFE in the National Scenario.

**SEMESTER - III**  
**Core Paper - 10**  
**DIFFUSION OF INNOVATIONS**  
**Subject Code : 3 T2**

Periods : 30 hours	Theory : 80 Marks
	Internal Assessment : 20 Marks

**Objectives :**

1. To develop understanding regarding core elements of diffusion and status of diffusion.
2. To understand attributes of innovation and generation of innovation.
3. TO study innovation decision process and diffusion networks.
4. To develop an understanding regarding opinion leaders and change agents and consequences of innovation.

**UNIT - I ELEMENTS AND STATUS OF DIFFUSION**

1. Meaning of diffusion, core elements of diffusion - innovation, communication channels, time and social system.
2. Status of diffusion, History of diffusion research, Rise of diffusion - Early Sociology, Rural Sociology, Education, Public health communication, Marketing and Geography.

**UNIT - II ATTRIBUTES AND GENERATION OF INNOVATION**

3. Meaning of Innovation, Attributes of Innovation - relative advantage, Compatibility, Complexity, Triability, Observability, renovation.
4. Generation of Innovation, Innovation development process - selecting a problem, basic & applied research, development, commercialization, diffusion, adoption & consequences.

**UNIT - III INNOVATION - DECISION PROCESS AND DIFFUSION NETWORKS**

5. Model of Innovation - decision process - knowledge stage, persuasion stage, decision stage, implementation stage, confirmation stage, communication channels in innovation - decision process.
6. Diffusion Networks, Model of communication flow, homophily, heterophily, social learning theory.

**UNIT - IV CHANGE AGENTS, OPINION LEADERS & CONSEQUENCES OF INNOVATION**

7. The change Agents, Role of change agents, Factors in change agent success, Opinion leaders, use of opinion leaders, Characteristics of opinion leaders.

8. Consequences of Innovation, Model for studying consequences, classification of studying consequences, equality in consequences of innovation.

**References :**

1. Diffusion of innovations – Everett M. Rogers, III Ed., The Free Press, Mac. Millan Publishing Co., New York.
2. Innovation diffusion – A New Perspective – Lawrence A Brown, Methuen and Co. Ltd., New York.
3. Communication in Organisations – Everett. M. Rogers and Rekha Agarwala Rogers. The Free Press, Mac. Millan Publishing Co., New York.

**SEMESTER - III**  
**PRACTICAL CORE - 10**  
**DIFFUSION OF INNOVATIONS**  
**Subject Code : 3 P2**

Periods : 8 hours/ Week	Practical : 80 Marks
	Internal Assessment : 20 Marks

1. Report to a visit to an area to study the role of change agents in diffusion of innovations
2. Report on a study on the role of Mass Media in diffusion of innovations.
3. Report on visit to an area to study new technologies adopted by rural people.
4. Report on visit to an area to study the barriers to adoption of innovation.
5. Power Point Presentation on any aspect of diffusion of innovations.

**SEMESTER - III**  
**ELECTIVE – 1**  
**Paper 11**  
**PROGRAMME PLANNING IN EXTENSION**  
**Subject Code : 3 T 3a**

Periods : 30 hours	Theory	: 80 Marks
	Internal Assessment	: 20 Marks

**Objectives :**

1. To understand the concept of programme planning.
2. To understand the need for plan of work.
3. To understand concept of administration & co-ordination.

**Content - Theory**

**UNIT I – PROGRAMME PLANNING AND PLAN OF WORK**

1. Meaning, Basic principles used in educational planning, programme projection.
2. Concept of plan of work elements of plan of work, steps in developing a plan of work.

**UNIT II – ADMINISTRATION OF PROGRAMMES**

3. Community organization process, partnership between Government and Societal organization  
Central Social Welfare Board, State Social Welfare Board & National Human Rights Commission.
4. Personnel administration – types of recruitment, Methods to maintain efficiency of personnel.

**UNIT III – CO-ORDINATION FOR DEVELOPMENT PROGRAMME**

5. Important aspects of co-ordination, requirements of team work, Importance of co-ordination, difficulties of team work at administrative levels and their solutions.
6. Drawbacks in planned programmes and their solutions.

**UNIT IV – EXTENSION PROGRAMME SUPERVISION**

7. Different approaches in supervision, Practical application of Human Skills to Extension Supervision.
8. Principles of supervision, Characteristics desirable in extension supervisors.

**References :**

1. Extension Education – Dr. Adivi Reddy.
2. Agriculture extension in community development – Dr. J. G. Garg.
3. Introductory rural sociology – Dr. J. B. Chitamber.
4. Social change in India – Kuppuswamy.

**SEMESTER - III****ELECTIVE – I****Paper 11****RURAL DEVELOPMENT AND EXTENSION SERVICES****Subject Code : 3T3b**

Periods : 30 hours	Theory : 80 Marks
Internal Assessment : 20 Marks	

**Objectives :**

1. To understand the aspects of community.
2. To understand the factors of rural development.
3. To study the role of people's participation in rural development.

**Content - Theory****UNIT I – RURAL DEVELOPMENT AND ITS OBJECTIVES**

Meaning, Objectives of rural development aspects of Community for rural development – Physical

conditions, Economic structure, Human Resources, Cultural Patterns.

**UNIT II – FACTORS OF RURAL DEVELOPMENT**

Factors contributing to Rural Development – Resources, Organisations Infrastructure, the People (People in Rural Development Participation of people in rural development)

**UNIT III – INSTITUTIONS FOR RURAL DEVELOPMENT**

Meaning, Economic Institutions, Social Institutions, Barriers & Stimulants to change.

**UNIT IV – EXTENSION SERVICES FOR RURAL DEVELOPMENT**

Concept of extension, Need for Extension, Role of Universities as Extension Centres.

**References :**

1. New Approaches to Rural Development – E. D. Setty, Anmol Publications Pvt. Ltd., New Delhi (2002).
2. Handbook of Social Welfare – Atmaram & Sons – Chandhari, P.A.
3. Rural Sociology in India – A. R. Desai, Popular Prakashan Pvt. Ltd.
4. Social Problems in India – E. Chandran, Cosmos Bookline Pvt. Ltd., New Delhi

**SEMESTER – III  
PAPER 12  
FOUNDATION – I  
Subject Code : 3 T4a**

**Refer Direction**

**SEMESTER - III**  
**PAPER 12**  
**HUMAN RIGHTS OF WOMEN AND CHILDREN**  
**Subject Code : 3 T4b**

Periods : 30 hours	Theory : 80 Marks
	Internal Assessment : 20 Marks

**Objectives :**

1. To understand the need for human rights.
2. To understand the types of violence against women.
3. To study the strategies of women empowerment in India.
4. To comprehend the areas where children's rights are violated.
5. To develop understanding of the right to privacy of women in mass media.

**Content Theory :**

**UNIT I – HUMAN RIGHTS COMMISSION & LAWS**

1. Introduction, Historical development of Human rights, Human Rights Commission of India.
2. Need of Human Rights Commission its functions. Laws related to rights of women and children.

**UNIT II – VIOLATION OF RIGHTS OF WOMEN**

3. Cases of dowry, Females foeticide and female infanticide, Education, Child Marriage.
4. Domestic Violence towards women, Rape, Sexual Harassment at Workplace.

**UNIT III – WOMEN EMPOWERMENT**

5. Right to privacy in mass media – Portrayal of women in Mass Media – Print and Electronic Media.
6. Strategies to women empowerment in India, Laws & Articles to protect women's Human Rights.

**UNIT IV – CHILDREN'S RIGHTS & GOVERNMENT POLICIES**

7. Rights of children regarding education, Health & Nutrition, Child Labour, Child Abuse & Exploitation & Child Trafficking.
8. Government Policies & Suggestions for Child Safety from Society, Home & School.

**References :**

1. Introduction to Human Rights & Duties – Dr. J. Shastry. Prof. & Head Dept. of Law, University of Pune, University of Pune Press, Pune.

2. Annual Report 1993 – 94 ‘National Human Rights Commission’.
3. Protection of Human Rights Act – 1993.
4. Women’s Human Rights & Abortion – 2008.
5. Department of Women & Child Development, Annual Report, 2005 – 06, Government of India – Ministry of Women & Child.

**SEMESTER – III**  
**RESEARCH Project (DESIGN)**  
**Subject Code : 3 RRP**

Periods : 2 hours per week

Marks : 25 Internal

**Note :** See the Guidelines in Appendix B in the Direction.

**SEMESTER - IV**

**CORE – 12**  
**Paper-13**  
**DISTANCE EDUCATION**  
**Subject Code : 4 T1**

Periods : 30 hours	Theory : 80 Marks
	Internal Assessment : 20 Marks

**Objectives :**

1. To understand the need of distance education for National Development.
2. To develop understanding regarding curriculum development.
3. To comprehend the different programmes of distance education.
4. If develop understanding regarding methods & concept of guidance and counseling.

**Content - Theory**

**UNIT I – DISTANCE EDUCATION**

1. History of Distance Education, Objectives, Philosophy and need for Distance Education. Concept of Distance Education.
2. Media available in Distance Education, Criteria in selection of Media, Features of different media.

**UNIT II – QUALITY ASSURANCE IN DISTANCE EDUCATION, DISTANCE EDUCATION PROGRAMMES.**

3. Factors affecting quality of distance education – learners enrolled, size of curriculum, duration of courses, technology choice, student support.
4. Distance Education – a democratic alternative. Distance Education Council, Maharashtra Open Universities, IGNOU, Importance of Study centers.

**UNIT III – CURRICULUM DEVELOPMENT & BARRIERS IN DISTANCE LEARNING**

5. Approaches to curriculum development, Process of curriculum development – formulating educational objectives, criteria for content selection, organizing content, selecting learning experiences, evaluating the curriculum, development try out.
6. Barriers in distance learning – Learners barriers, Faculty barriers, organizational barriers.

**UNIT IV – GUIDANCE AND COUNSELLING IN NFE.**

7. Meaning of guidance, Principles and Objectives of Guidance, types of guidance and methods of guidance.
8. Meaning of counseling, characteristics of counseling, aims & objectives of counseling, travels of counseling., Principles of counseling, Types of counseling.

**References :**

1. Curriculum Planning - ES - 331 - Curriculum and Instruction, Published by Prof. S. B. Menon, School of Education, IGNOU, New Delhi.
2. Educational Vocational Guidance and Counseling - J. C. Agrawal, Doaba House Book Sellers and Publisher, 1688 Nai Sarak, Delhi - 110006.
3. Extension Education in Colleges and universities in India - Rajesh, Student Aid Publication, B-76, Ashok Vihar Phase - IV, Delhi.
4. Fundamental of Guidance & Counselling - D. Naik, Adhyayan Publishers & Distributors, Delhi.
5. Distance education for National Development - S. K. Pameer Selvam, APH Publishing Corporation, New Delhi.
6. Reflections on Distance Education for India - P. Renga Ramanujam, Manak Publications (P) Ltd., New Delhi.

**SEMESTER - IV**  
**PRACTICAL CORE – 12**  
**DISTANCE EDUCATION**  
**Subject Code : 4 P1**

Periods : 8 hours per week	Practical : 80 Marks
	Internal Assessment : 20 Marks

**Practical :**

1. Visit to a study centre to familiarise.
2. Formulating a model, curriculum for distance education.
3. Preparing communication print media for distance education.
4. Preparing electronic media for distance education.

**Internal Assessment**

Submission of report on visit to IGNOU / YCMOU

**SEMESTER - IV**  
**CORE – 13**  
**Paper 14**

## **ADOPTION OF INNOVATIONS**

### **Subject Code : 4 T2**

Periods : 30 hours	Theory : 80 Marks
Internal Assessment : 20 Marks	

#### **Objectives :**

1. To develop understanding regarding Adoption process and rate of adoption.
2. To understand Motivation and Adoption.
3. To study Adopter categories and characteristics of Adopters.
4. To develop understanding regarding barriers to adoption.

#### **UNIT - I ADOPTION PROCESS AND RATE OF ADOPTION**

1. Adoption - meaning of adoption of Innovation Adoption process - Awareness, Interest, Evaluation, Trial, Adoption.
2. Rate of Adoption, Factors affecting rate of adoption, Research on the Attributes of Innovation.

#### **UNIT - II MOTIVATION AND ADOPTION**

3. Meaning of motivation, Type of motives, Functions of Motivation, Principles of Motivation.
4. Motivation and Adoption, Factors responsible for Adoption of Innovation - Cost, Utility, Group Action, Divisibility, Peer Pressure.

#### **UNIT - III CATEGORY AND CHARACTERISTICS OF ADOPTERS**

5. Classifying Adopter categories on the basis of Innovativeness, Adopter categories as Ideal Type - Innovators, early Adopters, Early Majority, Late Majority and Laggards.
6. Characteristics of Adopter categories - Socio-economic characteristics, Personality Variables, Communication Behavior.

#### **UNIT - IV BARRIERS TO ADOPTION**

7. Barriers to adoption - Lack of vision, Lack of Leadership, Lack of Money, Lack of Infrastructures, Risk in valued, Cultural & traditional Barrier, Lack of Government Support.
8. Role of Government, Semi Government Non Government agencies to overcome Barriers to Technology Adoption.

#### **References :**

1. Communication strategies - A Guide to agriculture change agents - Herbert. F. Lionberger and Paul H. Gwin., The Interstate Printers and Publishers. Inc. D. Awille, Illinois, U.S.A.

2. Education and communication for development - O. P. Dahama and O. P. Bhatnager  
Oxford  
Publishing Co., New Delhi.
3. An Introduction to Extension Education - S. V. Supe, Oxford and IBH Publishing Co.,  
New Delhi.

**SEMESTER – IV**  
**ELECTIVE – 2**  
**Paper 15**  
**PROGRAMME BUILDING IN EXTENSION**  
**Subject Code : 4 T3a**

Periods : 30 hours

Theory

: 80 Marks

**Objectives :**

1. To understand the importance of working with groups & their principles.
2. To comprehend the people's role in programme planning.
3. To understand the need for training of personnel for programme building.
4. To understand the need for evaluation of extension programmes.

**Content – Theory**

**UNIT I – GROUP MOBILISATION & METHODS**

1. Groups in rural communities – Nature of groups, Types of groups, Groups in rural communities, Principles of working with groups.
2. Need for people's participation in programme planning.

**UNIT II – TRAINING & LEADERSHIP DEVELOPMENT**

3. Leadership – Definition, Roles of Leadership, Selection of professional & lay leaders.
4. Need for training, principles of training, objectives of training, content of training, method of leadership training.

**UNIT III – EVALUATION OF EXTENTION PROGRAMMES**

5. Evaluation of progress – importance, Need for evaluation, three stages of attainment – bench mark, interim & final stage, Six keys to evaluation of extension work.
6. Collection of information for evaluation – Methods of drawing samples, Measuring devices.

**UNIT IV – FOLLOW UP & DOCUMENTATION DEFINITION OF FOLLOWUP**

7. Need for follow-up & reconsideration, follow-up programme design.
8. Meaning of documentation, Importance & Need for documentation, Method of documentation of development programme.

**References :**

1. Education and communication development – Dahama and Bhatnager.
2. The changing pattern of family in India – Thomas and Devanandam.
3. Extension communication and Management – Roy, G. L., Prakash, Calcutta (1999).
4. Evaluation Management in Training & Development, Virmani & Seth P., Vision, New Delhi.

**SEMESTER – IV  
ELECTIVE – 2  
Paper 15  
MEDIA FOR DISTANCE EDUCATION  
Subject Code : 4 T3b**

**Objectives :**

1. To understand the different media in distance education.
2. To study the agencies involved in communication for distance education.
3. To understand the role of ICT in communication.

**UNIT I – MEDIA IN DISTANCE LEARNING.**

Media in Distance Education, Criteria in selection of Media, Features of different Media.

**UNIT II – COMMUNICATION FOR DISTANCE EDUCATION**

Agencies involved in communication for distance education – Government, Non-government, Private & Corporate agencies like Films Division, Doordarshan, IGNOU & DAVP

**UNIT III – APPROACHES FOR INSTRUCTION**

Approaches – Self instruction, print materials, audio-visual cassettes, Audio-Visual programmes transmitted through Doordarshan & Radio.

**UNIT IV – ICT IN COMMUNICATION**

Verbal Communication – soft skills for effective verbal communication, public – speaking.  
Non verbal communication – writing techniques, teleconferencing – audio, video, computer.

**References :**

1. Media Teaching & Open Learning – Dr. S. R. Sharma, Mangal Deep Publications, Jaipur.
2. Educational Technology for Distance Education – Satish Rastogi, Rawat Publications, Jaipur & New Delhi.
3. Distance Education for National Development – S. K. Paneer Selvam, APH Publishing Corporation, New Delhi.
4. Reflections on Distance Education for India – P. Rangamanujam, Manak Publications (P.) Ltd., New Delhi

**SEMESTER - IV  
FOUNDATION – 2  
Paper 16**

**Refer Direction**

**SEMESTER - IV**  
**Core 14**  
**Paper 16**  
**ENVIRONMENTAL EDUCATION**  
**Subject Code : 4 T4b**

Periods : 30 hours	Theory : 80 Marks
	Internal Assessment : 20 Marks

**Objectives :**

1. To understand the importance of environment.
2. To learn the need for sustaining a good environment.
3. To understand the consequences of urbanization.
4. To acquire knowledge on rural reconstruction & labour saving technology.
5. To understand Indian laws framed for environmental protection.

### **Content - Theory**

#### **UNIT - I INTRODUCTION**

1. Meaning of environmental education, need & importance, challenges for India.
2. Need for sustainable development, Methods for sustainable development. Factors in environmental change – agricultural, forestry, urbanization, tourism.

#### **UNIT - II ENVIRONMENTAL ISSUES & INDIAN LAW**

3. Departments Involved in protecting environment – Forestry department, tourism department, Department of drinking water & Sanitation.
4. Labour saving technologies – solar energy in India, smokeless oven, wind energy, biogas.

#### **UNIT - III WASTE MANAGEMENT**

5. Types of waste – solid & liquid. Need for waste management.
6. Effects of waste on environment – rural sanitation, garbage disposal.

#### **UNIT - IV IMPACT OF WASTE ON HEALTH**

7. Impact of human beings – birth defect & reproductive disorders, cancers.
8. Government policies to regulate waste management.

#### **References :**

1. Guidelines on Solid & Liquid Waste Management in Rural Areas – Nirmal Bharat Abhiyan  
Ministry of Drinking Water & Sanitation – 2012.
2. People's Perspective on Sanitation, Fresh Water Action Network in India, 2011.
3. Singh K. M., Meena M. S., Water Policy in India – A Review, March, 2013.
4. Prasad P. M., 2005 'Environmental Protection' – Role of Regulatory System in India.

### **SEMESTER – IV**

### **RESEARCH PROJECT**

### **RESEARCH PROJECT & VIVA VOCE**

### **Subject Code : 4 RP**

Periods : 8 hours per week

Marks : 80

Internal Assessment : 20 Marks

**Note :** See the Guidelines in Appendix B in the Direction.

**SEMESTER – IV**  
**SEMINAR - 3**  
**RESEARCH PROJECT SEMINAR**  
**Subject Code : 4S1**

Periods : 2 hours per week

Marks : 25

**Note :** See the Guidelines in Appendix B in the Direction.





**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY NAGPUR  
FACULTY OF HOME SCIENCE**

**DIRECTION No. 77 of 2016**

**DIRECTION GOVERNING THE EXAMINATION LEADING TO  
POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY  
(SEMESTER PATTERN)**

**(Issued under section 14(8) of the Maharashtra University Act 1994)**

Whereas the Maharashtra Universities act No. XXXV of 1994 has come into force with effect from 22<sup>nd</sup> July, 1994 and was amended from time to time.

**AND**

WHEREAS, the University Grants Commission, New Delhi vide letter No.D.O.No.F-2/2008/(XI Plan), dated 31<sup>st</sup> January 2008 regarding new initiatives under the XI Plan – Academic reforms in the University has suggested for improving quality of higher education and to initiate the academic reform at the earliest,

**AND**

Whereas the Task Force in Textile and clothing in the Faculty of Home Science at its meeting held on 25/08/2016, have recommended for starting of semester pattern and prepared the syllabus and scheme of examination for P.G Diploma in Fashion Technology, commensurate with the governing guidelines.

**AND**

Whereas the Coordinator, Faculty of Home Science concurred with the recommendations of the Task Force in Textile and Clothing in the Faculty of Home science vide her observations dated 25/08/2016

**AND**

Whereas, the new draft direction and scheme of examination as per semester pattern is to be implemented from the academic session 2016-2017 for P.G Diploma in Fashion Technology which is to be regulated by this direction and as such there is no existence and framing of an ordinance for the above examination

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Academic Council on 7-10- 2016 under section 14(7) of Maharashtra University Act 1994.

**AND**

WHEREAS the Hon'ble Vice-Chancellor has accepted the syllabus along with draft direction on the behalf of Management Council under section 14(7) of Maharashtra University Act 1994.

**AND**

Whereas, the framing of an ordinance as required under provision of Act is a time consuming process, now therefore, I, Dr. Siddharthavinayaka P. Kane, the Vice Chancellor of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers vested under Section 14(8) of the Act do hereby issue the following Direction.

This Direction may be called "Direction relating to examinations leading to the Degree of – P.G. Diploma in Fashion Technology in the Faculty of Home Science (Choice based Credit System).

1. The direction shall come into force from the date of its issue by Hon'ble Vice Chancellor and shall remain in force till the relevant ordinance comes into being in accordance with the provisions of the Act.
2. The duration of the course P.G. Diploma in Fashion technology shall be of One and half years consisting of three semester with University examinations at the end of each semester namely:
  - a. P.G. Diploma in Fashion technology Semester I Exam.
  - b. P.G. Diploma in Fashion technology Semester II Exam.
  - c. P.G. Diploma in Fashion technology Semester III Exam.
3. The theory examination of Semester-I, , and II shall be conducted by the University and shall be held separately at the end of each semester at such places and dates as may be decided and notified by the University and shall be held as per the schedule given in Table below.

Sr. No.	Name of the examination	Main Examination	Supplementary Examination
1	Semester I & III	Winter	Summer
2	Semester II	Summer	Winter

4. The examinations shall be held at such places and dates which are notified by the University.

## **ELIGIBILITY TO THE COURSE:**

5. Subject to the compliance of the provisions of this direction and any other ordinances in force from time to time, an applicant for admission to the examination shall have passed.

Graduate in any discipline, or any other equivalent examination from any recognized University in India or abroad/ three year diploma course in fashion design, garment technology, fashion technology/Dress Designing, Dress Making after 12<sup>th</sup> std(10+2) from any recognized University/Board

### **6 a) P.G. Diploma in Fashion Technology Semester-I Examination**

Students who have fulfilled the eligibility criteria as mentioned in Section 5 have been admitted to this course P.G. Diploma in Fashion technology in Semester I.

- b) The ATKT rules for admission for Course (Theory and Practical as separate passing head) shall be as given in the following table-

Admission to Semester	Candidate should have passed in all the subjects of the following examination of R.T.M. Nagpur University	Candidate should have passed at least two third of the passing heads of the following examinations
Semester I	As provided in the para 6 of the direction	-----
Semester II	-----	-----
Semester III	For regular students	Semester I and II taken together

- 6(c) The duration of the course leading to the P.G. diploma in Fashion technology in the Faculty of Home Science shall be of iv semester (One and half years)The examination pattern will be as follows.
- i) **Semester Examination** The examination shall be held twice every year for Part I and Part II at the places and on the dates prescribed by the university.
  - ii) **Viva -Voce Examination**-The Viva-Voce shall be held at the end of part fourth semester on completion of Research Project for which external examiner shall be appointed for conduction of Viva –Voce on such date as fixed by the university.
  - iii) **Internship:-The internship of two week shall be completed after the completion of first year academic session during vacation** Evaluation of two week internship report will be conducted at the college level.
- 7) Without prejudice to other provisions of Ordinance no. 6 relating to the examination in general, provisions of Para 5, 8, 9, 10, 26, 31 and 32 of the said ordinance shall apply to every student admitted to this course.

- 8) The fees for the tuition, examination, laboratory and other fees shall be as prescribed by the university from time to time.
- 9)
  - (a) The scope of the subjects shall be as prescribed in the syllabus.
  - (b) The medium of instruction and examination shall be in English
  - (c) Examinee shall have option to write answer in English /Marathi/Hindi
- 10) The number of papers and maximum marks assigned to each paper and minimum marks/grade, an examinee must obtain in order to pass the examination shall be as prescribed in Appendix-I, Appendix-II, Appendix-III appended with this direction.
- 11) The examinee at each of the examination shall have option of not being declared successful at the examination in case he/she does not secure a minimum of grade equivalent to 55% marks at the examination. This option will have to be exercised every time the application is submitted to any of the examinations. Once this option is exercised, the option shall be binding on the examinee and it shall not be evoked in under any circumstances.
- 12) The classification of the examinee successful at the semester and examinations and at the end of final semester examination shall be as per the rules and regulations of credit based semester pattern as prescribed in appendix, appended with this direction.
- 13) The provisions of direction no. 3 of 2007 for the award of grace marks for passing an examination, securing higher grade in subject(s) as updated from time to time shall apply to the examination under this direction.
- 14) The names of the successful examinee passing the examination as a whole in the minimum prescribed period and obtaining prescribed number of places securing the grades equivalent to first and second division shall be arranged in order of merit as provided in ordinance 6 relating to examination in general.
- 15) The unsuccessful candidate failing in scoring passing marks in sessional/internal assessment shall be allowed to appear for internal/ sessional examination and college should send the marks to University before the commencement subsequent semester examination.
- 16) No candidate shall be admitted to an examination under this direction, if he/she has already passed the same examination of this university or of any other university.
- 17) Examinee successful at the final examination shall on payment of the prescribed fees, will be entitled for the award of the degree in the prescribed form signed by the Vice-Chancellor.

- 18) This course is based on credit based semester System and therefore, it will be also regulated by guidelines and regulation given in appendices which are part of this direction.
- 19) With the issuance of this Direction, the Direction No. 32 of 2016, governing the examinations leading to award of P G Diploma in Fashion Technology in the Faculty of Home Science shall stand repealed.
- 20) I, further, direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevant Ordinance comes into being, in accordance with the provisions of the Maharashtra Universities Act, 1994.

Sd/

(Dr S.P. Kane)

Hon'ble Vice-Chancellor

Date :7/10/2016

Nagpur





**Examination leading to Post graduate Diploma in Fashion Technology**  
**Scheme of Teaching and examination under semester pattern Choice Based**

**Appendix I**

S. N o	SUBJECT CODE	Theory/Practical	Teaching Scheme (Hrs/week)			Credits	ExamDuration	Examination Scheme				
			Theory	Practica l	Total			Max Marks	External Marks	Internal Marks	Total Marks	Minimum Passing marks
1	1T1	Core I – Fashion Illustration	4	--	4	4	3	80	20	100	50	--
2	1T2	Core II - Pattern Making	4	--	4	4	3	80	20	100	50	--
3	1T3	Core III- Textile Studies	4	--	4	4	3	80	20	100	50	--
4	1T4	Core IV - History of Fashion	4	--	4	4	3	80	20	100	50	--
5	1P1	Core I Practical - Fashion Illustration	---	8	8	4	6	80	20	100	--	50
6	1P2	Core II Practical - Pattern Making	---	8	8	4	6	80	20	100	--	50
7	1S1	Fashion communication skills (SEMINAR)		2	2	1	--	--	25	25	--	13
	<b>Total</b>		<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	--	<b>480</b>	<b>145</b>	<b>625</b>	<b>200</b>	<b>113</b>

**Note:**

- 1.Minimum passing marks in each head (Theory [External + Internal] will be 50 %).
- 2.Separate passing in Practical [External + Internal] and seminar will be 50 %.

## Appendix-II

SEMESTER-I I		P.G. DIPLOMA IN FASHION TECHNOLOGY										
S. N o	SUBJECT CODE	Theory/Practical	Teaching Scheme (Hrs/week)			Credits	Examination Scheme					
			Theory	Practica l	Total		Exam Duration	Max Marks		Total Mark S	Minimum Passing marks	
								External Mark s	Internal Marks		T	P
1	2T1	Core I – CAD in Fashion	4	--	4	4	3	80	20	100	50	--
2	2T2	Core II - Grading	4	--	4	4	3	80	20	100	50	--
3	2T3	Core III- Weaving & Knitting Technology	4	--	4	4	3	80	20	100	50	--
4	2T4	Core IV –History of World Costume	4	--	4	4	3	80	20	100	50	--
5	2P1	Core I Practical - CAD in Fashion	---	8	8	4	6	80	20	100	--	50
6	2P2	Core II Practical - Grading	---	8	8	4	6	80	20	100	--	50
7	2S1	(Portfolio )Fashion Photography	--	2	2	1	--	--	25	25	--	13
	<b>Total</b>		<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>---</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>200</b>	<b>113</b>

Note:

1. Minimum passing marks in each head (Theory [External + Internal] will be 50 %).
2. Separate passing in Practical [External +Internal] and seminar will be 50 %.

## Appendix-III

SEMESTER-I V			P.G. DIPLOMA IN FASHION TECHNOLOGY									
S. N o	SUBJECT CODE	Theory/Practical	Teaching Scheme (Hrs/week)			Credits	Exam Duration	Examination Scheme			Total Mark S	Minimum Passing marks
			Theory	Practica l	Total			Max Marks	External Marks	Internal Marks		
1	3P1	Internship	---	-		--	-	-	100	100	--	50
2	3P2	Research Project, Research Project viva	6	10	16	11	---	100 <b>50</b>	---	150	--	50 25
3	3S3	Research seminar	---	2	2	1	--	--	50	50	---	25
	<b>Total</b>		<b>6</b>	<b>12</b>	<b>18</b>	<b>12</b>	<b>---</b>	<b>150</b>	<b>150</b>	<b>300</b>		<b>150</b>

**Note:**

1. Minimum passing marks in each head (Theory [External + Internal] will be 50 %).
2. Separate passing in Practical [External + Internal] and seminar will be 50 %.
3. Four weeks Internship is compulsory

## **Project Work Scheme**

### **Guidelines for the Students, Supervisors and Examiners**

Every student is required to carry out **Project Work** (semester IV) on a related research topic of the subject /course. It must be an original work. On the basis of this work, student must submit the Project Report (typed and properly bound) in two copies at least one month prior to commencement of the final Practical Examination of Semester IV. The project report shall comprise of Introduction, Review of literature and Methodology, Results ,Discussion, Summary, Conclusions and References along with the declaration by the candidate that the work is original and not submitted to any University or Organization for award of the degree and certificate by the supervisor and forwarded through Head/Course-coordinator/Director of the Department/Centre or the Principal of the College.

The supervisors for the Experimental project work shall be from the following. A person selected by the duly constituted selection committee in the relevant subject and approved by the University, exclusively for P. G. Course.

#### **OR**

A person selected by the duly constituted selection committee of the University approved by the University and appointed as a full time regular teacher with Masters Degree at U. G. Level in the relevant subject and having at least 10 years teaching experience.

#### **OR**

A person selected by the duly constituted selection committee of the University approved by the University and appointed as a full time regular teacher with Ph. D. Degree at U. G. Level in the relevant subject and having at least 5 years teaching experience.

## **Appendix-V**

### **General Rules and Regulations**

#### **A) Pattern of Question Paper**

1. There will be four units in each paper.

2. Question paper will consist of five questions.
3. Four questions will be on four units.
4. Fifth question will be from each of the four units having equal weightage.
5. Maximum marks of each paper will be 100.
6. Each paper will be of 3 hours duration.

**B) Absorption scheme for failure students of the credit based semester pattern:**

- a) While switching over to semester Based Credit System, the failure students of annual system will be given **Five** chances to clear the examination.
- b) The candidates who have cleared first and second semester of the Credit Based Semester Pattern examination in the concerned subject shall get admission to Third Semester directly. However, candidates who are allowed to keep term will not be eligible for admission to Third Semester of the Credit Based System unless they clear all the papers and practical of first and second semester of the Credit Based System Pattern examination as per the clause (a)

**D) Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA)**

- 1) On clearing a paper, based on cumulative score (out of 100) in that paper, a student will be given grade point average (GPA) (Maximum of 10 and minimum of 5) for that paper on the following basis.

Score (out of 100)	Grade	Grade Point Average (out of 10)
90 to 100	O: Outstanding	10
80 to 89	A: Very Good	09
70 to 79	B: Good	08
60 to 69	C: Average	07
55 to 59	D: Satisfactory	06
<b>50 to 54</b>	E: Pass	05
<b>Below 49</b>	F: Fail	00 or fail

- 2) On clearing all the papers in a semester, a student will be allotted a **Semester Grade Point Average (SGPA)** for that particular semester. As the pattern given above does

not have differential weights for papers, the SGPA of a student for a particular semester will be the average of the GPA's for all the papers.

CGPA	Equivalent class / division
9.00 to 10.00	First class (out standing)
8.00 to 8.99	First class (excellent)
7.00 to 7.99	First class with distinction
6 to 6.99	First class
5 to 5.99	Higher Second class
Below 5.00	Fail

- 3) A student will be allotted a **Cumulative Grade Point Average (CGPA)** after clearing all the four semesters. Again as there is no differential weight system for semesters, the CGPA of a student will be the average of the four SGPA's of that student.

The CGPA can be converted to the usual / conventional divisions in the following way.

- a. A student failed to score minimum **50%** marks in each head of passing and in aggregate shall be given F grade.
  - b. Student with F grade in a course would be granted credit for that course but not the grade for that course.
  - c. Grade points earned in each paper shall be calculated as – Grade points obtained (vide above table) x Credits for the paper.
  - d. The formula for GPA will be based on Average. The final GPA will not be printed unless a student passes courses equivalent to minimum 100 Credits.
- 4) While declaring the result, the existing relevant ordinances are applicable. For verification and revaluation existing rules will be applicable.
- 5) The candidate may take all the examinations as per the provisions of ATKT simultaneously but his/her result of final semester shall not be declared unless he/she is declared successful at lower examinations.
- 6) If an examinee failed to pass the post graduate programme within five successive years (for four semesters degree) from the date of his / her first admission to particular post graduate programme he/ she shall be declared as "Not Fit for the Course (NFC)" and

he/ she will not be allowed to appear further for any previous examination of the course.

- 7) The final result of students admitted through lateral admission to semester III, shall be based on the result of IIIrd, and IV th semester together
- 8) The computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of an examinee shall be given below:
  - a. The marks will be given in all examinations which will include the college assessment marks, and the total marks for each Theory/ Practical shall be converted into Grades as per above table. SGPA shall be calculated based on Grade Points corresponding to Grade as given in above table and the credits allotted to respective Theory / Practical shown in the scheme for respective semester.
  - b. SGPA shall be computed for every semester and CGPA shall be computed only in IV semester (for four semester degree). The CGPA of IV shall be calculated based on SGPA of all four semesters as per following computation:

$$\text{SGPA} = \frac{C_1 \times G_1 + C_2 \times G_2 + \dots + C_n \times G_n}{C_1 + C_2 + \dots + C_n}$$

Where  $C_1$  = Credit of individual Theory / Practical

$G_1$  = Corresponding Grade Point obtained in the Respective Theory/ Practical

$$\text{CGP} = \frac{(SGPA) I \times (Cr) I + (SGPA) II \times (Cr) II + (SGPA) III \times (Cr) III + (SGPA) IV \times (Cr) IV}{(Cr) I + (Cr) II + (Cr) III + (Cr) IV}$$

Where,  $(SGPA) I$  = SGPA of I Semester;  $(Cr) I$  = Total Credits for I Semester;

$(SGPA) II$  = SGPA of II Semester;  $(Cr) II$  = Total Credits for II Semester;

$(SGPA) III$  = SGPA of III Semester;  $(Cr) III$  = Total Credits for III

Semester;  $(SGPA) IV$  = SGPA of IV Semester;  $(Cr) IV$  = Total Credits for IV Semester

**POST GRADUATE  
DIPLOMA IN  
FASHION  
TECHNOLOGY  
SEMESTER- I**

# **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER I**

## **CORE I-FASHION ILLUSTRATION 1T1**

**External: 80Marks (Theory)**

**Internal: 20 Marks**

### **Objectives:**

The workable skills, practice and proper guidance will be given to student through different medias and techniques to master and explore the ideas they have visualized. This being the specialized branch of figure drawing the student will be taught to draw according to fashion conventions- elongation, idealization and beautification in a simplified and sketchy manner. To evolve the budding fashion designers of future who will shape the fashion by putting up the ideas they need to communicate on paper.

### **UNIT I :**

- Elements & Principles of design - Line, Shape, Space, Texture and Form, Colour & Characteristics of Colour , Colour Mixtures, Colour Harmonies , Rhythm, Balance, Emphasis Proportion & Harmony.
- Design – Definition – Types of Design: Structural and Decorative .
- Drawing of Garment Details - Collars, Sleeves, Cuffs, Pockets, Neck lines, Skirts , Shirts , Trousers.
- Silhouettes – Shift, A-line, Tent, Yoke, Empire, High waist, Sheath, Low or drop waist, Tunic, Princesses, Blouson, Mermaid, Trumpet, Ballroom, Pegged

### **UNIT II :**

- Drawing of Body Parts - Nose, Ear, Lips, Face, Hands, Arms, Feet, Legs and Hairstyles.
- Female Figures - Normal figure , Eight head, Ten head , Twelve head. Front, Back, ¾th & Profile View.
- Drawing of Fashion Figures Male, Female & Children (Boy & Girl)
- Drawing of S, Z & T Female figures.

### **UNIT III :**

- Illustrating Draping on female Fashion Figure – Swim wear, Gown , A-Line Dress, Coat, Pant & Jacket.
- Technical illustration & Stylized illustrations
- Illustrating Indian & Western costumes on male & female croqui.
- Fashion Arts – Body Art & Pop Art.

### **UNIT IV:**

- Fashion Accessories –Bags , Hats, Foot wear , Eyewear & Jewellery .
- Rendering fashion figures using different medium.
- Planning a Colour story.

- Periodic fashion illustration

**Internal marks -will be based on assignments related to four units**

### **References:**

1. “Fashion Design” by Janice G. Ellinwood.
2. “Fashion Rendering with Color” by Bina Abling, Fairchild Publication.
3. “Fashion Color Harmony” by Hibeaki, Rockford Publication.
4. “Fashion and color” by Mary Garthe, Rockford Publication.
5. “Fashion Illustration” by Dr.Vijay Kakde, Blue Bird Publication (India) Ltd.
6. Color Harmony 2 by Bride M.Whelan, Rockford Publication.
7. Fashion Source Book by Kathryn Mckelvey, Blackwell Science Publication.
8. Encyclopedia of fashion details by Patrick John Ireland, Batsford Publication.
9. Heads by Nancy Riegelman, Pearson Education Publication.
10. Fashion Sketchbook by Abling, Fairchild Publication.

## **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER I**

### **Core II-PATTERN MAKING 1T2**

**External: 80 Marks(Theory)**

**Internal: 20 Marks**

#### **Objectives:**

To introduce students to the world of fashion design through patternmaking, to understand, appreciate and apply the concepts and principles in garment making ,to explain important skill that enable the designer to convert a design sketch into a three dimensional form, inculcate enhanced ability and sensitivity to flat pattern and initialize a design vocabulary an essential tool for practicing as designer.

#### **UNIT I :**

- Introduction to pattern making, 2. Methods of pattern designing a) Drafting b) Flat pattern
  - c) Draping
- Terminology, Apparel product development, cost sheet, pattern chart, design specification sheet.
- Dart, blending trueing & equalizing, styleline guides, fabric terms, pattern grain line, balance line terms.
- Standard ideal figure, pattern industry standards and standardization of sizes, landmark terms, symbol key HBL.
- Basic dress foundation (front & back of bodice and skirt) sleeve and its terminology.
- Pattern alteration

## **UNIT II :**

- Dart manipulation – definition, methods (slash and spread and pivot method), charting dart locations.
- Elements of fit, principles of fit (ease, grain line set and balance), evaluating fit at shoulders, bust, chest, neckline, armscye sleeves, waistline, hips, crotch/seat, methods of fit, why and how to fit, test fit.
- Layout and its types.
- Importance of notches, balance mark and grain lines.

## **UNIT III :**

- Designing with darts, tucks, pleats, flares and gathers.
- Development of stylelines – classic princess, arm-hole princess and panel in basic bodice.
- Creation of yokes, flanges, pin tucks and pleat tucks in basic bodice.
- Collar – Terminology classification and types basic shirt collar, peterpan, sailor, mandarin, roll.

## **UNIT IV :**

- Process of creation of cowl.
- Skirts – A-line, gathered, gored, pegged, godet.
- Sleeves – cap, puff, bell, leg-o-mutton, magyar, raglan, petal, umbrella.
- Pattern making for bias cut dress and kimono.

**Internal marks -will be based on assignments related to four units**

## **REFERENCES**

1. Cartis Irving E.,'Fundamentals principles of pattern making for misses and women's garments'New york FIT 1987
2. Handrod Jack .,'Profesional pattern gsrading for women's,men's and children's apparel',redendo bench Struin Pamela ,,"Pattern drafting for Dress Making"Augustan Delhi 1995
3. Martin M. Shoben and Janet P.ward,"Pattern cutting and Make for outerwear"Butter worth heinmann Ltd,Oxford 1987
4. Aldrich Winifred "Metric pattern Cutting",Blackwell science ,London,1995
5. Designing Patterns – A Fresh Approach to Pattern Cutting, Hilary CampbellStanley Thornes, UK 1986
6. The Art of Dress Modelling Shape within Shape, Lily Silberberg/MartinShobenUK1998
7. Fitting and Pattern Alteration, Elisabeth G Leichty/Della N Pottberg/Judith A Rashband, Fairchild
8. Principles of Flat Pattern Design (3rd edition) Nora M MacDonald, USA 2001

**POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY -**  
**SEMESTER I**  
**Core III- TEXTILE STUDIES**  
**1T3**

**External: 80 Marks(Theory)**

**Internal : 20 Marks**

**Objectives :-**

Textiles are an integral part of fashion, the knowledge of different processes of production and development of textiles will be imparted with a view to apply it for identification, recommendation and using the most appropriate textile in fashion. Extensive information on indigenous textiles (Printed, Painted & Dyed) of India will become a backbone for creation of innovation in fashion.

**UNIT I :**

- Classification of fibers -Natural and manmade, their origin and source.
- Properties and uses of natural (vegetable and animal) fibers - cotton, silk, wool, linen,
- Properties and uses of man made fibers.-Rayon, Acetate , Nylon ,polyester acrylic
- Flow chart for production processes of Natural and Man made fibres.

**UNIT II :**

- Flow chart of Conversion of fiber to yarn with details of process like Mixing ,
- blending,opening, cleaning, carding, combing, drawing, roving, spinning, yarn twisting
- Identification of fibers-Microscopic structure , burning test, chemical test.
- Fiber quality requirement for suitability of fabrics.
- Brief introduction to pre preparatory process for dyeing and printing

**UNIT III**

- Dyeing – theory of dyeing- classification of colorants – fastness properties of Dyes & Natural dyes properties
- Application Dyes on suitable material. Dyeing methods – fibre, yarn, hank and package.Fabric and garment dyeing
- Dyeing defects, causes and remedies
- Dyed- (Ikkat, patola, tie and dye) traditional textiles of India.

**UNIT IV :**

- Printing – ingredients – styles of printing – direct, discharge and resist. Stencil, block, flock, batik, transfer, foam, screen, and tie- dye printing.. Types of Printing machines
- Defects in Printed Goods ,their causes and remedies
- Brief history of printed, dyed and painted textiles of India ,
- Printed- (hand block printing-sanganeri) traditional textiles of India. ,Painted-(kalamkari.) & Madhubani traditional textiles of India.

**Internal marks -will be based on assignments related to four units**

## **REFERENCES**

1. Fibres & Yarns by Meenakshi Rastogi, Sonali Publications, New Delhi
2. World Textiles by John Gillow and Bryan sentence, Thames & Hudson publication.
3. Textile science by J.T. marsh, B.I. publications
4. Textile Science by E.P.G. Gohl, L.D. Vilensky, CBS publishers & distributors
5. Textile, Fibre to Fabrics by Potter M. D., McGraw-Hill, United States of America
6. Fashion & Textile design by Neelima, Sonali publication, New Delhi

## **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER I**

### **Core IV- HISTORY OF FASHION**

**1T4**

**External: 80Marks (Theory)**

**Internal : 20 Marks**

#### **Objectives:**

To familiarise students with the vocabulary, the concepts and the fashion, theories related to the history of clothing, to trace the development of indigenous clothing from ancient times to its present state, to understand the various influences that acted upon the indigenous clothing and to study the traditional costumes of different states of India.

#### **UNIT I :**

- **BASICS OF FASHION**
- Origin of Clothing and Factors influencing costume change
- Fashion Terminology, Classification of fashion, , fashion producers
- Style, Design, Taste, Classics, Trend, Fad, Ford, Fashion Look, Accessories, Fashion Trends, Fashion Season
- The Couturier, Haute Couture, Prêt-À-Porte, Fashion Direction, Fashion Editors, Line, Knockoffs, Avant Grade, Bridge
- Fashion Cycle and fashion flow chart
- Theories and Principles of Fashion-Theories of Fashion Adoption
- Study of fashion principles which concerns the history of fashion, the discrimination of fashion, or the techniques relating to fashion merchandizing.

#### **UNIT II :**

##### **History of Indian Costume.**

Pre Historic Era

- Vedic Period
- Maurya and Sunga Period

- Satvahana period
- Kushan period
- Gupta period
- Mughal

### **UNIT III :**

- **History of Western Costumes**
- Ancient Egypt
- Ancient Greek
- Ancient Rome
- Byzantine
- Renaissance
- Baroque
- Rococo
- History of fashion from 18th , 19<sup>th</sup> and 20<sup>th</sup> century

### **UNIT IV :**

#### **INDIAN FASHION IN 20<sup>TH</sup> CENTURY**

- Indian Fashion during British Raj Influence of British rule on Indian Fashion  
1930's fashion of long flared skirts in the west and its influence in India  
Independence movement and its influence in using Khadi  
Christian Dior's New Look of Pencil Slim Skirt and its influence in India
- Indian Fashion Post Independence and 50's
- Indian Fashion during 60's and 70's
- Late 1980's and Hi Boom Designer Wear
- **Internal marks -will be based on assignments related to four units**

#### **References:**

1. Historic Costumes by Katherine Morris Cester, Prentice Hall 2000.
2. Fashion from concept to Consumer by FringeG.S, Prentice Hall 1998
3. The costume & textiles India by Jamila Brij bhu Shan, Prentice Hall 2000.
4. Traditional Indian textiles by Fillow J and Bernard N, Thomas and Hudson, 1993
5. Fashion: A cultural history by Stede v. Berg Paris, 2nd edition 1998
6. Historical Fashion in detail the 17th & 18th centuries 1998 ian costumes
7. History of Fashion by Manmeet Sodhia Kalyani Publishers
8. Traditional Indian Textiles by Parul B. Abhishek Publications
9. Insiders Guide to South India by Brian Bell APA Publications
10. A celebration of style by Sharada Dwivedi AJSK Publications
11. Colourful Textiles of Rajasthan by Gulab Kothari Jaipur Printers

# **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY**

## **SEMESTER I**

### **CORE I PRACTICAL-FASHION ILLUSTRATION 1P1**

**External: 80Marks (Practical)**

**Internal: 20 Marks**

**Duration : 6 hrs.**

#### **CONTENT-**

- Preparing a portfolio of drawing , sketching , illustrating depicting , colouring, painting , and rendering the following suitably on A3 size sheets:-
- Basic drawing exercises on elements and principles of design.Structural and Decorative Designs one each. Difference between technical and stylized illustration
- S, Z, and T shape female figures.

#### **1. Fabric drapes and rendering-**

- Rendering different fabrics to study their fall, fold, drape etc.
- Woven, knits & non woven
- Print & plain.
- .

#### **2. Clothing composition on figure-**

- Combining various garment details like silhouettes, lengths, drapes, folds, motion & shadows etc. for various Fabrics detailing and understanding the way fabric falls onto body.

#### **3. Flat sketches-**

- Line drawing of different garments in 2D forms such as skirts, pants, blouses, shirts, dresses, jackets and sportswear.

#### **4. Accessory rendering (any 6 accessories)-**

- Drawing & rendering any 6 accessories in fashion used by Men & Women. Such as, Glares, Belts, Bags, Stoles, Jewellery and Foot wear.

#### **5. Clothing categories-**

- Drawing & Rendering various clothing categories

including their specifications with color, fall, fit, fabric, and proportion.

Such as, Casual wear, formal wear, ethnic wear, beach wear, lounge wear, functional wear (uniforms etc.)

## **ASSIGNMENTS-**

- 1) Study and rendering of different types of fabric like prints, stripes, Checks, fur, leather, animal skin, velvet, silk, wool, embroidered fabric etc.**
  - Students will render 1 or 2 samples on paper for each type of fabric specified above.
- 2) Draping and drawing the garment on the fashion figure with all the details of body as well as garment details.**
  - Students will render 10 fashion figure which will include figure as well as garment details.
- 3) Drawing technical flat sketches in 2D for easier understanding of the garment details.**
  - Students will draw 20 flat sketches specifying front and back.
- 4) Drawing and rendering fashion accessories like Glares, belts, bags, stoles, Jewellery, foot wear etc.**
  - Students will draw total 10 numbers of different Fashion Accessories.
- 5) Creating a Clothing Category by rendering any one garment from each category and combining with suitable accessories.**
  - Students will sketch and render one garment with all the details from each category of clothing.

## **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER I**

### **Core II Practical-Pattern Making 1P2**

**External: 80Marks (Practical)**

**Internal: 20 Marks**

**Duration : 6 hrs.**

**Flat pattern making, shell fit and test fit of the following :**

- Bodice front and back
- Skirt front and back
- Sleeve

Preparation of patterns (paper and muslin) of dart manipulation in one dart and two dart series by slash and spread and pivot method, checking the grain and fit of the pattern for the following darts

### **One dart series**

- Waist dart to shoulder dart
- Shoulder dart to waist dart
- Shoulder dart to side seam dart
- Waist dart to centre front dart
- Waist dart to arm scye dart
- Shoulder dart to neck dart

### **Two dart series**

- Waist dart to side seam dart
- Shoulder dart to neck dart
- Waist dart to neck dart
- Waist dart to shoulder tip dart
- Shoulder dart to French dart

### **Developing following garment patterns in fabric with given specifications**

- Style line top/blouse with one variation of collar and sleeve.
- Bias cut dress with cowl.
- Knee length strapless foundation
- Cocktail dress

### **PORTFOLIO DETAILS:**

- 1) Draped Basic Bodice Block- Front And Back
- 2) Draped bodice block with Dart Manipulation
- 3) Draped patterns with Neckline and Armhole variations
- 4) Draped Single Dart, Double Dart skirt
- 5) Draped Flared ,Gathered Skirt and Skirt With Yoke

### **Practical Exam- Total 80 marks**

**Portfolio in A3 size and 5 garments -30 marks Internal assesment**

**Draping marking cutting stitching finishing embellishment of Cocktail dress-50 marks**

**POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY -  
SEMESTER I  
FASHION COMMUNICATION SKILL  
SEMINAR  
1S1**

**Internal : 25 Marks**

**Objectives –**

To enable the students understand the fashion language & skills of communication for visualization of garment

**Module -I**

- Fashion & the communication process
- Meaning of fashion
- Communication of process
- The theories of fashion adaptation
- Need for promotion of fashion
- Need for the communication process

**Module -II**

- Communication Fashion communication- essentials of communication, objectives, barriers and purpose of effective communication.
- Types of communication- oral; written; gesture, needs ans functions.
- Bussiness letter-layout and importance along with drafting.
- Media and public relation in fashion communication.

**Module -III**

- Types of written communication
- Creative writing in fashion media
- Advertising Promotion of fashion communication
- Reporting events
- Scripting shows
- Critics of fashion

**Module- IV**

- Fashion presentation skills- importance of phonetics, interview, techniques, fashion dialogues, group discussions.
- Styling, body language and self presentation skill

- Basic French and Italian Language studies:, students would be taught basics of these languages aiding them understanding and speaking fashion its terms effectively.
- Fashion campaign ,brochure design, cover story, theme pavilion at fairs,Exhibition
- Public relation communication effectiveness, formal and informal communication ability, inter personal skills and rapport,
- Common fashion terminologies across the world.

## **Oral presentations**

Using their colleagues as an audience, participants practice making presentations to small workplace meetings. Both work and interview practice is videotaped and critiqued. Topics include summaries or commentaries on the news of the day and five minute talks on their career experience.

## **Fashion Dictionary**

It would contain Different areas fashion. – Silhouettes, Colors, Textiles(both knits and wovens), trimmings accessories.

## **References-**

1. Sharma-Business correspondence & report writing .
2. Prasad-group discussion & interview(With audio cassettes), Sashi Kumar-spoken English (with cassette),
3. W.R.Miler, "Basic Industrial Arts, Plastics, Graphic Arts, Powermechanics, Photography, McKnight Publishing Co., Illinios,1978
4. John Hedge, "Photography Course", John Hedge c1992.
5. Matthukutty M. Monippally "Business Communication" Macmillan Publishing Co. 1999
6. Houp, Kenneth.W & Thomas E.Pearsall , "Reporting Technical Information"., Macmillan Publishing Company, Inc

**POST GRADUATE  
DIPLOMA IN  
FASHION  
TECHNOLOGY  
SEMESTER- II**

# **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER II**

## **Core I-CAD IN FASHION 2T1**

**External: 80Marks (Theory)**

**Internal: 20 Marks**

### **Objectives**

In today's world of industrialization and globalization, the students will be exposed to the contemporary digital technology by use of software like photo shop, Adobe illustrator, Corel draw and Marvellous designer, in terms widen the scope of fashion industry to an un-imaginable extent through just "a click of a button". After practicing the various commands and tools of the software the students will be able to express the fashion ideas to the masses in a more simplified and systematic manner.

#### **UNIT I :**

- Introduction to photoshop – Defination of Layer, Colour Modes, RGB Colourmodel , CMYK Colour model , Pixles , Vector, Resolution, Main menu Bar.
- Basic Platforms and Tools- Selecting tools, Brush Tool, Advance tooling, Drawing with the pen tool. Application of Tools Layers, Rasterizing the layer.
- Working with Layer Styles- Layer style parameters, Image Editing Special effects
- File Formats- Saving the file in PSD , JPEG, EPS or DCS format , Exporting images.

#### **UNIT II :**

- Introduction Corel DRAW- Main menu Bar
- Tools of Corel DRAW- Text & line , Shapes and objects , Curves
- Special Effects , Color and Bitmaps , Tables ,
- Application of the tools for creating fashion figures in 6 different poses .

#### **UNIT III :**

- Adobe illustrator- Getting to know & Working in Illustrator
- Using drawing tools , Selection and Curves , Handling text, Transformations in illustrator.
- Working with lines & Brushes ,Colours, Compound paths , Masks.
- Using styles , Effects , Filters & Keyboard Shortcuts.

#### **UNIT IV :**

- Marvellous Designer – Introduction main menu bar with tools .
- Development of croqui, Creating garments for the developed croqui , Draping the croqui.

- Accessorizing the croqui , Creating suitable background, Stage designing .
- Display action of croqui on the stage and ramp walk.

**Internal marks -will be based on assignments related to four units**

**References-**

- 1.Learning Illustrator CS5 by Ramesh Bangia, Khanna Book publication company (P), Ltd. Delhi
2. Practical Photoshop by Ramhari Kolte, Paynoram Arts
3. Photoshop CS3 by Rajendra Mantri, Anubhav Publications
4. Learning Coreldraw X5 by Ramesh Bangia, Khanna Book Publishing

## **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER II**

### **CORE II-GRADING 2T2**

**External: 80 Marks(Theory)**

**Internal: 20 Marks**

#### **Objectives**

To gain knowledge of different grading techniques and their application on different apparel. To understand the sizing system and their use in readymade garment industry. To gain knowledge and skills of presenting and promoting a garment based on fashion reading. To apply knowledge of Pattern Grading while working in readymade garment industry.

#### **UNIT I :**

##### **Pattern Grading.**

- Concept, Importance and Principles of Pattern Grading.
- Grading Terminology-Cardinal Points, zero point, Balance, two dimensional. Three dimensional and suppression grading.
- Basic Size Charts – Studying size charts, identify growth areas, size increments and their application for grading.
- Grading Techniques - The draft or multisize or Nested grade , The track or single grade

#### **UNIT II**

- Selection and application of grading technique for different garment depending on their fit.
- Application of grading techniques for basic drafts of the following:
- Children's Basic Blocks – Bodice, sleeve.

- Women's Basic Blocks – Bodice sleeve, skirt.
- Men's Basic Blocks – Bodice, sleeve, trousers, collar.
- Computer Grading :Basic pattern, Production pattern, Marker maker, Pattern grader.
- Difference between Manual grading and computerized grading.

### **UNIT III :** **Fashion Reading**

- Fashion reading with sketch, pattern name, sex, size range, dimension of grading, pattern pieces, width of the fabric, specific details accessory used, cost of garment and recommended fabrics.
- Developing a graded pattern by adopting basic block with variation in garment selected.
- Lay marking for different fabrics for the evolved garment:

Textured fabric – Satin, Velvet, and Far, Turkish, Silk and any one fabric in trend.  
&

Printed fabric – Dots, stripers, plaids, checks floral, geometric, border, figure, unidirectional and multidirectional.

### **UNIT IV :** **Commercial pattern envelope.**

- Envelope front- Illustration of front and profile view of the garment with pattern name and pattern number.
- Construction guide sheet – stepwise procedure for joining the pattern pieces in order to assemble a garment, explanation of pattern markings (recommendation for suitable fabric, lining, interlining, interfacing, notions(fasteners & threads) decoration style and material.
- Envelope back – Illustration of back view of the garments, yardage chart and size chart.
- Graded pattern sheet – pattern number, pattern pieces, size range, cut number, grain line, seam line, notches, darts, tucks, pleats, pockets, yokes, belts, plackets and openings etc.

### **References-**

- 1) Martin Shoben/Janet P Ward, Pattern Cutting and Making up.
- 2) Winifred Aldrid, UK 1996 Fabric, Form and Pattern Cutting
- 3) Lily Silberberg/Martin Shoben, 1998,The Art of Dress Modelling (Video)
- 4) Pattern Cutting Level for Beginners Don Clarke published 1995 (Video)
- 5) Fashion Design on the Stand, Dawn Cloake, UK 1996
- 6) The Art of Fashion Draping, Connie Amaden-Crawford Fairchild Publication.
- 7) Metric Pattern Cutting for children wear/women's wear/Menwear – Winifred Aldrich, Black well Science, Om Book Services, New Delhi.

# **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER II**

## **CORE III- WEAVING & KNITTING TECHNOLOGY 2T3**

**External: 80 Marks(Theory)**

**Internal: 20 Marks**

### **Objectives**

The textile technology in the textile industry is changing fast, old machines are replaced with new ones, with the advent and inclusion of electronic systems and computer technology, this transformation is even more rapid just as fashion-fashion is incomplete without textiles, knitted textile are the latest craze in fashion clothing among the masses, to fulfill the needs and demands

of the fashion industry this subject has been included. Woven and knitted textiles technology given in the contents will impart students an understanding of the construction and properties of different (woven and knitted) textiles and their use within contemporary fashion.

### **UNIT I :**

- Flow chart for processes of conversion of yarn into fabric, i.e., weaving, knitting, non-woven. Identification of fabric samples (warp and weft direction)
- Different types of Fundamental weaves/ weaving designs – plain, satin, sateen, twill, basket, ribbed
- Elementary idea of the use of Dobby , Jacquard for derivatives of fundamental weave designs . Essential properties of fabric
- Comparative studies of the woven and knitted fabrics construction and advantages of each.

### **UNIT II :**

- Properties and uses of each of the weaves. , Study of normal defects in fabric and role of Quality control.
- Elementary idea of machinery used in woven, knitted and non woven fabrics.
- Non - woven - classification, punching the web, finishing. Characteristics of non woven fabrics
- Uses of non- wovens. Elementary idea of Decorative fabric, Decorative fabric construction- braiding, netting, lace.

### **UNIT III :**

- Knitted garments-introduction , Difference between woven and knitted structures
- Classification of knitted garments ,Weft knitted fabrics- plain, rib, purl, etc.
- Warp knitted fabrics- tricot, kitten raschel , crochet, Milanese knit, simplex
- Other knitted constructions- jacquard, pile, fleece, high pile, terry knit, velour knit.

#### **UNIT IV :**

- Fully cut knitted garments- knit type, uses , Fully fashioned knitted garments- knit type, uses
- Integral knitted garments- knit types, uses , Cut stitch shaped knitted garments - knit type, uses,
- Seam and stitches used in knitting , Machinery used for knitted garments-
- Quality control , Defects in knitted fabric

**Internal marks -will be based on assignments related to four units**

#### **Reference:**

1. Knitting Technology by KVP Singh Kalyani Publishers
2. Textiles- fiber to fabric by Bernard P. Corbman (McGraw- Hills)
3. Fabric Studies by KVP Singh (Kalyani Publishers)
4. Knitting Technology by Prof. D.B. Ajgaonkar, Universal publishing Corporation, Bombay
5. Weaving with the Rigid Needle Loom, Anne Field, 1980
6. Weaving Mechanism by Prof. N. N. Banerjee, Smt. T. Banerjee & Shri Apurba Banerjee, "Textile Book House".
7. Knitted Clothing Technology, Terry Brackenbury, Blackwell science, OM Book Service
8. Overshoot Weaving by Ellen Lewis Seltzman, Van Nostrand Reinhold Company, New York

# **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY -**

## **SEMESTER II**

### **CORE IV-HISTORY OF WORLD COSTUME**

#### **2T4**

**External: 80 Marks(Theory)**

**Internal: 20 Marks**

#### **Objectives**

To increase the student's understanding and appreciation of the Western World clothing from the ancient times to the modern and also to recognize the figure emphasis and silhouettes that developed within the chronology of each historical period and also to understand the traditional modes of clothing in Asian civilizations, with emphasis on certain communities.

#### **UNIT I :**

Ancient era costume

- Mesopotamian Costumes
- Egyptian Costumes
- Greek Costumes
- Roman Costumes

#### **UNIT II :**

Middle ages costume

- Byzantine Costume
- Age of Knights Costume
- Renaissance Period Costume
- Costume of Asia and Africa

#### **UNIT III :**

Modern era costumes

- Victorian Costume
- Edwardian Costume
- American Costume 18<sup>th</sup>-20<sup>th</sup> Century

- 20<sup>th</sup> Century Costumes and influences

#### **UNIT IV :**

Traditional costumes of asian countries

- Japanese and Chinese Costumes (emphasis on Geisha and Samurai Costume)
- Thai and Malaysian Costumes
- Costumes of Pakistan
- Costume of Sri Lanka

**Internal marks -will be based on assignments related to four units**

#### **References:**

- 1) Katherine Morris Cester," Historic Costumes", Prentice Hall 2000.
- 2) Stede v. Berg"Paris fashion:a cultural history"2nd edition 1998
- 3) Hart A north S V & A Museum" Historical Fashion in detail the 17th & 18th centuries" 1998 ian costume
- 4) History of Fashion by Manmeet Sodhia Kalyani Publishers
- 5) Ander son B. and Anderson C"costume design",Harcourt Brace 2nd Ed.,1999

## **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY - SEMESTER II**

### **CORE I(Practical)- CAD IN FASHION 2P1**

**External : 80 Marks(Practical)**

**Internal : 20 Marks**

**Duration : 6 hours**

- Design any five fashion accessories using adobe photo shop.
- Image editing of any one photograph using effects and filters in adobe photo shop.
- Create a garment design using basic platforms tools of adobe photo shop.
- Create a letter head , visiting card & envelope, with logo for an owner of a garment industry using corel draw .
- Design a CD cover and brochure for a fashion design institute in corel draw.
- Design a cover page for fashion magazine using corel draw .
- Using pen tool of corel draw create six different poses of fashion figures.
- Create a theme based poster banner, hoarding, invitation card, in Adobe illustrator.

- Compose a design suitable for T-Shirt in digital printing.
- Creating and presenting a theme based fashion show with minimum eight garments using marvelous designer
- Introduction to related software
- Internet search (Images, video clips, Designers fashion shows, fashion links )
- Software tool introduction
- Flashed croquie
- Fabric & print development
- Make a sample of Swatch
- Color board using Panton colors
- Portfolio used by fashion CAD
- Introduction to Grading
- Tools of grading
- Make a sample of grading ( Enlarge & reduce in sizes )
- Computers in garment industry
- Basics of computers &dedicated computers system CAD/e-fashion

# **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY**

## **SEMESTER II**

### **Core II PRACTICAL- GRADING 2P2**

**External : 80 Marks(Practical)**

**Internal : 20 Marks**

**Duration : 6 hours**

#### **Computer Grading**

- Preparation of basic pattern and its grading using a software.
- Application of computer grading on any one fashion garments of the following :
  - Children's wear
  - Women's wear
  - Men's wear

#### **Grading Portfolio**

- Application of grading by nested technique.
- Basic bodice block
- Basic sleeve block
- Basic skirt block
- Basic trouser block
- Application of grading by track/single technique.
- Basic bodice block
- Variations of sleeves - any two
- Variations of collars - any two
- Variations of skirts - any two
- Portfolio of fashion reading of two garments each in women's wear, children's wear and men's wear.
- Preparation of any one commercial pattern for pattern envelop with all the details.

# **POST GRADUATE DIPLOMA IN FASHION TECHNOLOGY -**

## **SEMESTER II**

### **FASHION PHOTOGRAPHY (Portfolio)**

**Internal : 25 Marks**

**2S1**

#### **OBJECTIVES**

To orient students to the photographic techniques and garment styling  
Students will give presentation related to fashion photography during seminar  
They will make Portfolio related to Fashion photography

#### **Module I**

##### **PHOTOGRAPHY**

- Introduction to fashion photography-The role of the fashion photographer  
Expressing yourself as a fashion photographer
- Applying the principles of photography
- Utilizing color

#### **Module II**

##### **STYLING**

- Portraiture- The difference between studio and on-location portrait photography  
How lighting affects a portrait-What kind of gear you need to shoot portraits  
How to interact with your clients- How to handle fidgety children during a session  
How to lay out your studio
- Significance of styling-Developing a style-Shooting fashion shows - Techniques in fashion photography- Marketing and branding yourself-Sourcing contacts  
Photographing models in the studio
- Texture and form

#### **Module III**

##### **ELEMENTS OF PHOTOGRAPHY**

- Lighting techniques-The different types of lighting-The reflection of light-Outdoor lighting – sunlight-Recommended equipment for outdoor lighting-  
Introduction to indoor lighting- Photographing indoors – the technical issues
- Capture fashion

- Creating mood

## Module IV

### SHOOTING MODEL PORTFOLIOS

- Preparation of a portfolio with 4 shoots based on theme- Hair and makeup - clothing- lighting- angle- post processing- final effect,
- **RELATED EXPERIENCE-** Shoot a portfolio based on an appropriate theme with at least 5 photographs.

**POST GRADUATE  
DIPLOMA IN  
FASHION  
TECHNOLOGY  
SEMESTER III**

**POST GRADUATE DIPLOMA IN FASHION  
TECHNOLOGY -  
SEMESTER III**

**INTERENSHIP  
3P1**

**Marks : 100**

- Three month internship in the Garment Industry, EOU textile mill , textile and garment printing unit, cottage industry, boutique, studio or production unit of a fashion designer, a retail outlet for garment or a brand of a garment or a brand of a garment and embroidery unit.
- The organization can be government, Semi government, Government Limited, public sector or a private firm.
- Detailed report of the internship along with organizations working nature, different departments its personnel , job undertaken, reference, observation, precaution, the products being manufactured, marketing, raw material and clients etc.
- The report should also include the work done by the student during her internship with special emphasis on skills learnt during the period
- The report should be accompanied with photographs and a certificate from the head of the organization.

**POST GRADUATE DIPLOMA IN FASHION  
TECHNOLOGY -**

**SEMESTER III  
RESEARCH  
PROJECT  
3P2**

**External : 150 Marks(Project 100 + viva 50)**

The Research Project will be made and presented with the following outline. Chapter 1 – Introduction(Aims, Objectives, Need & Scope of the study) Chapter 2 – Review of Literature  
Chapter 3 – Methodology

- Inspiration Board
- Mood Board
- Client board

Design Development Process – Garment – 1,2,3 & 4

- Illustration Sheet
- Selected design (colour illustration with details)
- Garment Flats
- Swatch Board
  
- Garment details
- Cost Sheet
- Story Board
- Photograph

▪ Embellishment Board

Chapter 4 – Result and discussion with Interpretation  
References & Webliography

**POST GRADUATE DIPLOMA IN FASHION  
TECHNOLOGY -**

**SEMESTER III  
Research Seminar  
3S3**

**Internal : 50**

The student will give seminar on current researches related to different areas of Fashion.

The students are expected to research and find suitable topics for the seminar. These will be presented to and approved by the department faculty. Only token guidance will be provided to the students to ensure that it remains primarily each student's own piece of work. The selection of topics must be guided by current trends in theory, research and application of appropriate design and technology. The student will be expected to collect the material, analyze and organize the information and present a critical review of the topic before the faculty for evaluation. The presentations will be followed by discussions. Subsequent to this, the student is expected to submit a final report on the seminar topic along with references.



(4)

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR**  
(Established by Government of Central Provinces Education Department by  
Notification No. 513 dated the 1<sup>st</sup> of August, 1923 & presently a State University  
governed by Maharashtra Public Universities Act, 2016)

**DIERCTION NO...16.OF 2020**

**ADMISSION AND EXAMINATIONS LEADING TO THE AWARD OF DEGREE OF  
MASTER OF FASHION DESIGN (CHOICE BASED CREDIT SYSTEM)  
(SEMESTER PATTERN) DIRECTION 2020.**

**Whereas**, The Maharashtra Public Universities Act, 2016 (hereinafter ‘Act’) (VI of 2017) has come into force from 1<sup>st</sup> March 2017 and the same has been made applicable to Rashtrasant Tukadoji Maharaj Nagpur University (hereinafter “the University”);

AND

**Whereas**, the University has issued Direction No. 15 of 2017 dealing with the composition of the four faculties created by the Act, where under the existing different faculties of the University have been merged into the four new faculties created by the Act, by which the subjects of Fashion Design have been included in the faculty of Science and Technology;

AND

**Whereas**, the University has issued Direction No. 10 of 2019 prescribing “conditions for conduct of undergraduate and post graduate examinations based on credit based/choice based credit system, in all faculties”;

AND

**WHEREAS**, the Special task committees in various subjects of home science, including in the subject of Fashion Design, in their meetings held on 25<sup>th</sup> April 2019 considered and accepted the scheme of subjects, syllabi and scheme of examinations of the Master of Fashion Design;

AND

**WHEREAS**, the Dean of the Faculty of Science and Technology considered and approved the proposal of the Special task committees in various subjects of home science including fashion design, in the Faculty of Science and Technology, and recommended to the Vice-Chancellor to accept the syllabus and the Scheme of examinations for the course of Master of Fashion

(5)

design on 4<sup>th</sup> April 2019, under section 12 (8) of the Act on behalf of the Academic Council and the Management council;

AND

**Whereas**, Direction No.76 of 2016 entitled "Direction governing the examination leading to the degree of Master of Fashion Design (Choice Based Credit System)", has lapsed by virtue of the provisions of the proviso to section 12 (8) of the Act (VI of 2017) necessitating issuance of a fresh Direction incorporating the provisions of the said (lapsed) Direction with suitable modifications necessitated by the Direction No.10 of 2019 and decisions taken by special task committee and approved by Dean of the faculty of science and technology;

Now, therefore, I, Dr. Murlidhar G.Chandekar, Vice- Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers conferred upon me under provision of section 12(8) of the Maharashtra Public Universities Act, 2016, do hereby issue following Directions;

1. This Direction shall be called " Admission and Examinations leading to the award of Degree of Master of Fashion Design (Choice Based Credit System) (Semester Pattern) Direction, 2020" in the Faculty of Science and Technology.
2. This Direction shall be applicable from the date of its issuance.
3. In this Direction unless the context requires otherwise;
  - a. "**ATKT**" means "Allowed to Keep Term" in the higher semester, as per the rules herein.
  - b. "**Board of Studies**" means Board of studies of the University in the discipline/subjects concerned.
  - c. "**Course**" means a theory, practical or a sessional subject prescribed in any semester and which carries maximum marks and minimum passing marks.
  - d. "**Credit**" means the unit by which the course work is measured. It is measured in terms of weekly class hours assigned to a Course.
  - e. "**Credit Point (CP)**: It is the value obtained by multiplying the Grade Point by the Credit i.e. No. of Credits assigned for the course x Grade Points secured for that course.
  - f. "**Cumulative Grade Point Average (CGPA)**": CGPA refers to the Cumulative Grade Point Average weighted across all the semesters. It is obtained by dividing total number of credit points in all the semesters by the total number of credits in all the semesters.
  - g. "**Degree**" means Master's degree in Fashion Design.

- h. **"Grade Letter"**: It is an index to indicate the performance of a student in a particular course/ Paper. It is the transformation of actual marks secured by a student in a course/paper. It is indicated by a Grade letter O, A, B, C, D, E and F. There is a range of marks for each Grade.
- i. **"Grade Point"** : Grade Point is weight allotted to each grade letter depending on the marks awarded in a course/paper
- j. **"Post Graduate programme"** means Master's degree programme in the subject of Fashion Design in the Faculty of Science and Technology.
- k. **"Student"** means student admitted to Post Graduate programme under this Direction.
- l. **Semester Grade Point Average (SGPA)**: SGPA indicates the performance of a student in a given Semester. It is based on the total credit points earned by the student in all the courses and the total number of credits assigned to the courses/papers in a Semester.
- m. **"University"**: means Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur.

#### **4. ELIGIBILITY AND ADMISSION TO THE COURSE:**

Subject to the compliance of the provisions of this direction and any other ordinances in force from time to time, an applicant for admission to the 1<sup>st</sup> Semester of the program shall have passed;

- i) A three years degree course examination in Bachelor of Fashion Design from Rashtrasant Tukdoji Maharaj Nagpur University or Bachelor degree in Fashion Design / B.Sc. Home Science/Garment Technology/ B.Sc in Fashion Design /B.A with Fashion Design /Bachelor of Khadi production design/Bachelor of fashion business management/ B.Voc in Fashion Design or any other equivalent examination from any recognized University in India or abroad or Graduation in Textile Design, Textile Science / Handloom Technology or Equivalent / Graduates in Fashion Accessories, Apparel Merchandising / Graduate in any discipline with one year relevant Garment ,Textile Industry Experience, one or two year Diploma or Certificate Course in Fashion Design, Garment Technology, Fashion Technology/Dress Designing, Dress Making/BFA/MFA (Master of Fine Arts in all discipline) M.A .Home Economics
- ii) No candidate shall be admitted to an examination under this direction, if he/she has already passed the same examination of this university or of any other university.

- 5. **Lateral admission-** Those Who have done PG Diploma in Fashion Designing or Fashion Technology /Apparel Merchandising or equivalent /M. Sc Home Science in



Textile & Clothing or equivalent shall be eligible to take admission in semester III of this programme.

6. **Duration of the Course :** The duration of the Master of Fashion Design course shall be of two academic years consisting of four Semester with University examinations at the end of each semester.
  7. **Medium of Instruction:** The medium of instructions shall be English. However, the students may write their examinations in either English or Marathi or Hindi languages.
  8. **Course Structure:** This programme shall comprise theory papers, internship and Research Project spread in various semesters. The number of papers and maximum marks assigned to each paper and minimum marks/grade, an examinee must obtain in order to pass the examination shall be as prescribed in **Appendix-I**, appended with this Direction. It shall have core and elective courses as described in the Appendix –I to this Direction
  9. **Foundation Course/Elective:** It refers to those courses which are included in the Appendix- A, of this Direction which a student of this programme and the students of other programmes may opt. In the alternative students of the programme may opt for an elective course prescribed for the students of the third and fourth semesters.
  10. The scope of the Courses/subjects shall be as prescribed in the syllabus (Appendix - V).
- 11. Scheme of Examination:**
- i) The theory examination of Semester-I, II, III and IV shall be conducted by the University and shall be held separately at the end of each semester at such places and dates as may be decided and notified by the University.
  - ii) **Research Project and Viva -Voce Examination**-The Viva-Voce shall be held at the end of part fourth semester on completion of Research Project for which external examiner shall be appointed for conduction of Viva –Voce on such date as fixed by the university.
  - iii) **Internship:-**The internship of four weeks duration shall be completed before fourth semester examinations, this internship could be done at once or in two parts

of two weeks each i.e. in the summer vacations after second semester or in winter vacation after third semester examinations. Evaluation of four weeks internship report will be conducted at the college level in semester IV.

- iv) Detail instructions regarding Project Work Scheme, Guidelines for the Students, Supervisors and Examiners, Pattern of Question Paper etc. are as given in Appendix - II

**12. A.T.K.T. Rules:** The failure students of the semester examinations of the programme shall be allowed to take admission in the higher semesters as per the rules below: -

Admission to Semester	Student should have appeared in the examination	Candidate should have passed in all the subjects of the following examination of R.T.M. Nagpur University	Candidate should have passed at least two third of the passing heads of the following examinations
Semester I		As provided in the para 4 of the direction	-----
Semester II	Semester I	-----	-----
Semester III	Semester II	Lateral admission-Those Who have done PG Diploma in Fashion Designing or Fashion Technology /Apparel Merchandising or equivalent /M. Sc Home Science in Textile & Clothing or equivalent shall be eligible to take admission in semester III of this programme.	Semester I and II taken together (For regular students )
Semester IV	Semester III	-----	-----

12. Without prejudice to other provisions of Ordinance no. 6 relating to the Examination in general, provisions of Para 5, 8, 9, 10, 26, 31 and 32 of the said ordinance shall apply to every student admitted to this course.

13. The fees for the tuition, examination, laboratory and other fees shall be as prescribed by the



University from time to time.

14. The examinee at each of the examination shall have option of not being declared successful at the examination in case he/she does not secure a minimum of 55% marks at the examination. This option will have to be exercised every time the application is submitted to any of the examinations. Once this option is exercised, the option shall be binding on the examinee and it shall not be revoked in any circumstances.
15. The classification of the examinee successful at the semester end examinations and at the end of final semester examination shall be as per the rules and regulations of Choice Based Credit System (semester pattern), as prescribed in Appendix -III, appended with this direction.
16. The provisions of Ordinance No. 3 of 2007 for the award of grace marks for passing an examination, securing higher grade in subject(s) as updated from time to time shall apply to the examination under this Direction.
17. All the successful examinees passing all the semester examinations in the minimum prescribed period securing the grades equivalent to first and second division shall be eligible for inclusion of their names in the merit list as provided in ordinance 6 relating to examination in general.
18. The unsuccessful candidate failing to score minimum passing marks in sessional/Internal Assessment shall be allowed to appear for internal/ sessional examination in subsequent examinations and college should send the marks to University before the commencement of subsequent semester examination.
19. Examinee successful at the final examination shall on payment of the prescribed fees, will be entitled for the award of the degree of Master of Fashion Design in the prescribed form signed by the Vice-Chancellor.
20. This programme is based on Choice Based Credit System the details regarding application of Choice based credit System and formula for conversion of marks in to grades and vice-versa is given in **Appendix- III** of this direction.
21. Absorption schemes from Annual pattern to semester pattern, Semester to Credit Based System, Credit Based to Choice Based Credit System etc. are given in Appendix –IV to this direction.



22. If any question of interpretation of any clause of this Direction arises the same shall be referred to the Dean, Faculty of Science and Technology whose opinion shall be final and binding.
23. Notwithstanding the lapse of Direction No. 76 of 2016, governing the examinations leading to award of Master of Fashion Design (Choice Based Credit system) in the Faculty of Science and Technology all actions taken thereunder till the issuance of this direction shall be valid and binding and be deemed to have been taken in pursuance of the provisions of the said Direction



(Dr. Subhash R. Chaudhari)  
Vice-Chancellor

Nagpur.  
Dated : 14-8-2020

## APPENDIX I

### SEMESTER-I , MASTER OF FASHION DESIGN

S N o	SUBJE CT CODE	Theory/Practical	Teaching Scheme (Hrs/week)			Exam Duration	Examination Scheme					
			Theory	Practical	Total		Theor y/Pra ctical, Univ. exam	Internal Mark s	Total Marks	Minimum Passing marks		
										Th	Pr	
1	1T-1	Core I – Fashion Illustration	4	--	4	4	3	80	20	100	50	
2	1T-2	Core II - Pattern Making	4	--	4	4	3	80	20	100	50	
3	1T-3	Core III- Textile Studies	4	--	4	4	3	80	20	100	50	
4	1T-4	Core IV - History of Fashion	4	--	4	4	3	80	20	100	50	
5	1P-1	Core I Practical - Fashion Illustration	---	8	8	4	6	80	20	100	-- 50	
6	1P-2	Core II Practical - Pattern Making	---	8	8	4	6	80	20	100	-- 50	
7	1P-3	Fashion communication skills	---	2	2	1	--	--	25	25	-- 13	
	<b>Total</b>		<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>--</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>200</b> <b>113</b>	

- Note : 1. Minimum passing marks in each Course, Theory/Practical + internal assessment will be 50%.
2. Minimum passing marks in sessional courses will be 50%.

**SEMESTER-I I , MASTER OF FASHION DESIGN**

S. N o	SUBJE CT CODE	Theory/Practical	Teaching Scheme (Hrs/week)				Exam Duration	Examination Scheme			Total Mark s	Minimu m Passing marks	
			Theory	Practical	Total	Credits		Max Marks		Theor y/Pra ctical, Univ. exam	Intern al Marks		
								T	P				
1	2T-1	Core I – CAD in Fashion	4	--	4	4	3	80	20	100	50	--	
2	2T-2	Core II - Grading	4	--	4	4	3	80	20	100	50	--	
3	2T-3	Core III-Weaving & Knitting Technology	4	--	4	4	3	80	20	100	50	--	
4	2T-4	Core IV –History of World Costume	4	--	4	4	3	80	20	100	50	--	
5	2P-1	Core I Practical - CAD in Fashion	---	8	8	4	6	80	20	100	--	50	
6	2P-2	Core II Practical - Grading	---	8	8	4	6	80	20	100	--	50	
7	2P-3	Makeup & Styling	--	2	2	1	--	--	25	25	---	13	
<b>Total</b>			<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>	<b>---</b>	<b>480</b>	<b>145</b>	<b>625</b>	<b>200</b>	<b>113</b>	

Note : 1. Minimum passing marks in each Course, Theory/Practical + internal assessment will be 50%.

2. Minimum passing marks in sessional courses will be 50%.

### SEMESTER-I I I

S. No	SUBJ ECT CODE	Theory/Practical	Teaching Scheme (Hrs/week)			Exam Duration	Examination Scheme			Total Mark s	Minimum Passing marks	
			Theory	Practical	Total		Theo ry/Pr actic al, Univ. exam	Intern al Marks	Total Mark s		T	P
1	3T-1	Core I –Garment Production Technology	4	-	4	4	3	80	20	100	50	--
2	3T-2	Core II - Research Designing & Planning	4	--	4	4	3	80	20	100	50	--
3	3T-3	Elective I Film & Theater Costume or Elective-II Indian Art application	4	-	4	4	3	80	20	100	50	--
4	3T-4	Foundation-1 ** (refer Appendix -A) or Fashion Retail Marketing	4	--	4	4	3	80	20	100	50	--
5	3-P-1	Core I Practical-Garment Production Technology	---	8	8	4	6	80	20	100	--	50
6	3P-2	Craft survey & Documentation	---	6	6	3	--	50	25	75	---	38
7	3P-3	Elective I or Elective II	---	4	4	2	--	--	50	50	--	25
	Total		16	18	34	25	--	450	175	625	200	110

Note : 1. Minimum passing marks in each Course, Theory/Practical + internal assessment will be 50%.

2. Minimum passing marks in sessional courses will be 50%.

\*\* In Semester III, student will have to opt any one foundation subject paper ( 1 & 2) other than his/her main subject paper for Post Graduation, as per Annexure -1, (List of Foundation

Subjects for Post Graduation). Once student opt foundation subject in Semester –III, it cannot be changed in Semester –IV, in option to the foundation course from the list, student may opt for elective given as option to the foundation course also.

### SEMESTER-I V

SEMESTER-I V		MASTER OF FASHION DESIGN										
S . N o	SUBJE CT CODE	Theory/Practical	Teaching Scheme (Hrs/week)				Exam Duration	Examination Scheme			Total Mar ks	Minimun Passing marks
			Theory	Practical	Total	Credits		Max Marks	Theor y/Prac tical, Univ. exam	Inter nal Mark s		
1	4T-1	Core I - Conceptual Design Development	4	--	4	4	3	80	20	100	50	--
2	4T-2	Core II – Visual Merchandising	4	--	4	4	3	80	20	100	50	--
3	4T-3	Elective I Fashion Accessory Design or Elective II Global Fashion Trend	4	-	4	4	--			50	50	25
4	4T-4	Foundation 2 (Refer Appendix A) or Fashion forecasting	4	--	4	4	3	80	20	100	50	--
5	4P-1	Core I Practical-Conceptual Design Development	--	8	8	4	6	80	20	100	--	50
6	4P-2	Research Project Internship	--	8	8	4	--	80	20	100	25	50
7	4S-1	Fashion show Management	2	--	2	2	--	--	50	50	--	13
-	Total		18	16	34	26	---	400	225	625	150	16

Note : 1. Minimum passing marks in each Course, Theory/Practical + internal assessment will be 50%.

2. Minimum passing marks in sessional courses will be 50%.

3. Four weeks Internship is compulsory in semester IV.

## **APPENDIX – II**

### **A. Project Work Scheme, Guidelines for the Students, Supervisors and Examiners**

Every student is required to carry out **Project Work** (semester IV) on a related research topic of the subject /course. It must be an original work. On the basis of this work, student must submit the Project Report (typed and properly bound) in two copies at least one month prior to commencement of the final Practical Examination of Semester IV. The project report shall comprise of Introduction, Review of literature and Methodology, Results ,Discussion, Summary, Conclusions and References along with the declaration by the candidate that the work is original and not submitted to any University or Organization for award of the degree and certificate by the supervisor and forwarded through Head/Course-coordinator/Director of the Department/Centre or the Principal of the College.

The supervisors for the Experimental project work shall be from the following.  
A person selected by the duly constituted selection committee in the relevant subject and approved by the University, exclusively for P. G. Course.

**OR**

A person selected by the duly constituted selection committee of the University approved by the University and appointed as a full time regular teacher with Masters Degree at U. G. Level in the relevant subject and having at least 10 years teaching experience.

**OR**

A person selected by the duly constituted selection committee of the University approved by the University and appointed as a full time regular teacher with Ph. D. Degree at U. G. Level in the relevant subject and having at least 5 years teaching experience.

### **B. General Rules and Regulations**

#### **Pattern of Question Paper**

1. There will be four units in each paper.
2. Question paper will consist of five questions.
3. Four questions will be from four units.
4. Fifth question will be from each of the four units having equal weightage.
5. Maximum marks of each paper will be 100 i.e. Theory paper 80 Marks and Internal assessment 20 Marks.
6. Each paper will be of 3 hours duration.

### APPENDIX- III

#### **Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA)**

- 1) On clearing a paper, based on cumulative score (out of 100) in that paper, a student will be given grade point average (GPA) (Maximum of 10 and minimum of 5) for that paper on the following basis.

Score (out of 100)	Grade	Grade Point Average (out of 10)
91 to 100	O: Outstanding	10
81 to 90	A: Very Good	09
71 to 80	B: Good	08
61 to 70	C: Average	07
51 to 60	D: Satisfactory	06
50	E: Pass	05
Below 50	F: Fail	00 or fail

- 2) On clearing all the papers in a semester, a student will be allotted a **Semester Grade Point Average (SGPA)** for that particular semester. As the pattern given above does not have differential weights for papers, the SGPA of a student for a particular semester will be the average of the GPA's for all the papers.
- 3) A student will be allotted a **Cumulative Grade Point Average (CGPA)** after clearing all the four semesters. Again as there is no differential weight system for semesters, the CGPA of a student will be the average of the four SGPA's of that student.
- 4)

CGPA	Equivalent class / division
9.00 to 10.00	First class (outstanding)
8.00 to 8.99	First class (excellent)
7.5 to 7.99	First class with distinction
6 to 7.49	First class
5 to 5.99	Higher Second class
5.00	Pass
Below 5.00	Fail

The CGPA can be converted to the usual / conventional divisions in the following way.

- a. A student failed to score minimum 50% marks in each head of passing and in aggregate shall be given F grade.
  - b. Student with F grade in a course would be granted credit for that course but not the grade for that course.
  - c. Grade points earned in each paper shall be calculated as – Grade points obtained (vide above table) x Credits for the paper.
  - d. The formula for GPA will be based on Average. The final GPA will not be printed unless a student passes courses equivalent to minimum 100 Credits.
- 5) While declaring the result, the existing relevant ordinances are applicable. For verification and revaluation existing rules will be applicable.
- 6) The candidate may take all the examinations as per the provisions of ATKT simultaneously but his/her result of final semester shall not be declared unless he/she is declared successful at lower examinations.
- 7) If an examinee failed to pass the post graduate programme within five successive years (for four semesters degree) from the date of his / her first admission to particular post graduate programme he/ she shall be declared as “Not Fit for the Course (NFC)” and  
he/ she will not be allowed to appear further for any previous examination of the course.
- 8) The final result of students admitted to semester III through lateral admission shall be based on result of III & IV semester together
- 9) The computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of an examinee shall be given below:
- a. The marks will be given in all examinations which will include the college assessment marks, and the total marks for each Theory/ Practical shall be converted into Grades as per above table. SGPA shall be calculated based on Grade Points corresponding to Grade as given in above table and the credits allotted to respective Theory / Practical shown in the scheme for respective semester.
  - b. SGPA shall be computed for every semester and CGPA shall be computed only in IV semester (for four semester degree). The CGPA of IV shall be calculated based on SGPA of all four semesters as per following computation:

$$\text{SGPA} = \frac{\text{C1} \times \text{G1} + \text{C2} \times \text{G2} + \dots + \text{Cn} \times \text{Gn}}{\text{C1} + \text{C2} + \dots + \text{Cn}}$$

Where C1 = Credit of individual Theory / Practical

G1 = Corresponding Grade Point obtained in the Respective Theory/  
Practical

$$\text{CGP} = \frac{(\text{SGPA}) \text{ I} \times (\text{Cr}) \text{ I} + (\text{SGPA}) \text{ II} \times (\text{Cr}) \text{ II} + (\text{SGPA}) \text{ III} \times (\text{Cr}) \text{ III} + (\text{SGPA}) \text{ IV} \times (\text{Cr}) \text{ IV}}{(\text{Cr}) \text{ I} + (\text{Cr}) \text{ II} + (\text{Cr}) \text{ III} + (\text{Cr}) \text{ IV}}$$

Where, (SGPA) I = SGPA of I Semester; (Cr) I = Total Credits for I Semester;  
(SGPA) II = SGPA of II Semester; (Cr) II = Total Credits for II  
Semester;

(SGPA) III = SGPA of III Semester; (Cr) III = Total Credits for III  
Semester; (SGPA) IV = SGPA of IV Semester; (Cr) IV = Total Credits  
for IV Semester .

## APPENDIX -IV

**A. Absorption scheme for failure students of the credit based semester pattern:**

- a) While switching over to Choice Based Credit System, the failure students of credit based semester pattern will be given **Five** chances to clear the examination.
- b) The candidates who have cleared first and second semester of the Credit Based Semester Pattern examination in the concerned subject shall get admission to Third Semester of the Choice Based Credit System directly. However, candidates who are allowed to keep term will not be eligible for admission to Third Semester of the Choice Based Credit System unless they clear all the papers and practical of first and second semester of the Credit Based System Pattern examination as per the clause (a)

**B. Absorption scheme for failure students of annual pattern:**

The candidates who have cleared first year of annual pattern shall get admission to Semester III of the Choice Based Credit System directly. However, candidates who are allowed to keep term will not be eligible for admission to Third Semester of the Choice Based Credit System unless they clear all the papers and practical of First year of the annual pattern examination.

**C. Absorption Scheme-(CBS TO CBCS )Master of Fashion Design**

**Special Instructions:**

a) A student having passed in a particular subject heads of passing of CBS( Credit Based Semester Pattern) at any semester level shall be exempted from such subject heads of CBCS (Choice Based Credit Semester System). Even if the subject is named with a new nomenclature having similar contents, shall also be exempted and such subject heads are/ shall be mentioned in the absorption scheme (as per annexure-A) provided by the respective B.O.S. for relevant semester. In case of absorption, if required, proportionate marks/grades shall be awarded to absorbed subject heads.

b) If a new subject head is introduced in the Choice Based Semester Pattern, then the internal marks shall be awarded in proportion to the marks/grades earned by a student in the university/external examination in the same subject head.

CBS				NEW CBCS			
Sr. No.	Subject Code	Subject	Theory/ Practical	Sr. N o.	Subject Code	Subject	Theory/ Practical
<b>Semester I</b>							
	1MFDT-1	Fundamental of Design	Theory		1T-1	<b>Core I – Fashion Illustration</b>	Theory
	1MFDT-2	History of World Costume	Theory		2T-4	<b>Core IV –History of World Costume</b>	Theory
	1MFDT-3	Textile Studies	Theory		1T-3	<b>Core III- Textile Studies</b>	Theory
	1MFDT-4	Pattern Making	Theory		1T-2	<b>Core II - Pattern Making</b>	Theory

	1MFDP-1	Fundamental of Design	Practical		1P-1	<b>Core I Practical - Fashion Illustration</b>	Practical
	1MFDP-2	Pattern Making	Practical		1P-2	<b>Core II Practical - Pattern Making</b>	Practical
	1MFD TW1	Fashion communication skills (SEMINAR)	Sessional		1S-1	<b>Fashion communication skills</b>	Sessional
<b>Semester II</b>							
	2MFDT-1	Advance Fashion Illustration	Theory		2T-1	<b>Core I – CAD in Fashion</b>	Theory
	2MFDT-2	History of Fashion	Theory		1T-4	<b>Core IV –History of Fashion</b>	Theory
	2MFDT-3	Weaving & Knitting Technology	Theory		2T-3	<b>Core III-Weaving &amp; Knitting Technology</b>	Theory
	2MFDT-4	Grading	Theory		2T-2	<b>Core II - Grading</b>	Theory
	2MFDP-1	Fashion Illustration(E-Fashion)	Practical		2P-1	<b>Core I Practical - CAD in Fashion</b>	Practical
	2MFD TW-1	History of Fashion (CDD)	Term Work				
					2S-1	<b>Makeup &amp; Styling **</b>	Sessional
<b>Semester III</b>							
	3MFDT-1	Garment Production Technology	Theory		3T-1	<b>Core I –Garment Production Technology</b>	Theory
	3MFDT-2	Fashion Marketing	Theory		3T-4	<b>Foundation-1 ** (refer Annexure) I or Fashion Retail Marketing</b>	Theory
	3MFDT-3	Film & Theater Costume	Theory		3T-3	<b>Elective I Film &amp; Theater Costume or Elective-II Indian Art application</b>	Theory
	3MFDT-4	Research Methodology & Statistics	Theory		3T-2	<b>Core II - Research Designing &amp; Planning</b>	Theory
	3MFDP-1	Garment Production Technology (Garment Construction)	Practical		3-P-1	<b>Core I Practical- Garment Production Technology</b>	Practical
	3MFDT W-2	Craft survey& Documentation			3P-2	<b>Craft survey &amp; Documentation</b>	Practical
					3P-3	<b>Elective I or Elective II**</b>	Sessional
<b>Semester IV</b>							
	4MFDT-1	Retail Management & Merchandising	Theory		4T-2	<b>Core II – Visual Merchandising</b>	Theory
	4MFDT-2	Costume Designing	Theory		4T-1	<b>Core I - Conceptual Design Development</b>	Theory
	4MFDT-3	Research Project			4P-2	<b>Research Project Internship</b>	Practical
					4T-3	<b>Elective I Fashion Accessory Design** or Elective II Global Fashion Trend **</b>	Sessional
					4T-4	<b>Foundation 2 (Refer Annexure)</b>	Theory

						<b>or</b> <b>Fashion forecasting**</b>	
4MFDP-1	Costume Designing	Practical		4P-1	<b>Core I Practical- Conceptual Design Development</b>	Practical	
4MFDP-2	Research Project, viva & Internship	4MFDP-2		4P-2	<b>Research Project Internship</b>	Practical	
4MFDP-2	Research seminar	Sessional		4S-2	<b>Fashion show Management</b>	Sessional	

\*\* The student s from CBS Appearing in CBCS Exam will have to clear new subject of Elective and foundation

### Appendix-A

#### List of Foundation Subjects for Post Graduate Courses.

Sr.No.	Subject	Board	4 <sup>th</sup> Papers of Semester- 3	4 <sup>th</sup> Papers of Semester-4
1	Mathematics	Mathematics	Mathematics-I	Mathematics-II
2	Physics	Physics	Physics-I	Physics-II
3	Chemistry	Chemistry	Chemistry-I	Chemistry-II
4	Bio-Technology (Ad-hoc)	Bio-Technology	Bio-Technology-I	Bio-Technology-II
5	Computer Science	Computer Science & Engineering	Computer Science-I	Computer Science-II
6	Environmental Science	Environmental Science	Environmental Science-I	Environmental Science-II
7	Botany	Botany	Botany-I	Botany-II
8	Zoology	Zoology	Zoology-I	Zoology-II
9	Statistic	Statistics	Statistics-I	Statistics-II
10	Business Management	Business Management	Business Management -I	Business Management -II
11	Accountancy	Account & Statistics	Account & Statistics-I	Account & Statistics-II
12	Managerial Skill	Commerce	Managerial Skills-I	Managerial Skills-II
13	Education Technology & Management Skills	Education and Commerce	Education Technology & Management Skills-I	Education Technology & Management Skills-II
14	Communication Skill	English	Communication Skills-I	Communication Skills-II
15	Sanskrit	Sanskrit	Sanskrit-I	Sanskrit-II
16	German	Other Foreign Languages	German-I	German-II
17	French	Other Foreign Languages	French-I	French-II
18	Law	Law	Law-I	Law-II
19	Pharmaceutical Sciences	Pharmaceutical Sciences	Pharmaceutical Sciences-I	Pharmaceutical Sciences-II
20	Life skills	Education	Life Skills-I	Life Skills-II
21	Economics	Economics	Economics-I	Economics-II
22	Political Science	Political Science	Political Science-I	Political Science-II
23	Sociology	Sociology	Sociology-I	Sociology-II
24	Psychology	Psychology	Psychology-I	Psychology-II
25	Philosophy	Philosophy	Philosophy-I	Philosophy-II
26	History	History	History-I	History-II
27	Public Administration	Public Administration	Public Admn -I	Public Admn -II
28	Buddhist Studies	Buddhist Studies	Buddhist Studies-I	Buddhist Studies-II
29	Gandhian Thoughts	Gandhian Thoughts	Gandhian Thoughts-I	Gandhian Thoughts-II
30	Dr. Ambedkar Thoughts	Dr. Ambedkar Thoughts	Dr. Ambedkar Thoughts-I	Dr. Ambedkar Thoughts-II

**MCT 1 –T1**      **MASTER OF COSMETIC TECHNOLOGY Semester I**  
**FORMULATION AND DEVELOPMENT – I (FD I)**

Max. Marks –	100
Paper -	80
Sessional -	20

- I. Consideration of physical and chemical problems inherent in the formulation and development of cosmetic preparations.
  - a) Physical properties :- Physical forms, practical size, solubility, wetting of solids and flow, cohesiveness and organolaptic properties.
  - b) Chemical properties and stability of ingredients and additives.
  
- II. Formulation Additives :  
Antioxidants and preservatives, perfumes, colouring and diluting agents, emulsifying and suspending agents, basic materials for creams/ointment bases, solvents and miscellaneous additives.
  
- III. Pilot Plant scale up Techniques: General considerations. Review of formula, Raw materials, equipments etc. Process evaluation, Preparation of Master Manufacturing process.
  
- IV. Establishing pilot plant, studies, scale-up the manufacture of product to intermediate and large scale production.  
Requirements & Methods for maintenance of sterile area.

**RECOMMENDED BOOKS :**

1. Cosmetic Science and Technology Vol. I, II, III by Sagarin
2. Harry's Cosmeticology
3. Industrial Pharmacy by Leon Lachman
4. Perfume:History & chemistre By D.D.Wasule
5. New Cosmetic Science
6. Indian Herbs by Chopra
7. Wealth of India, published by CSIR

## **MASTER OF COSMETIC TECHNOLOGY Semester I**

**MCT 1-T2**

**QUALITY ASSURANCE TECHNIQUES I (QAT I)**

Max. Marks –100

Paper - 80

Sessional - 20

1. Quality assurance management -  
Good manufacturing practices (GMP)  
Introduction  
Quality & related terms - Basic concepts  
Quality - quality functions, quality control, quality policy, quality objectives, quality assurance, quality management.  
Inspection and Test  
Inspection & Inspection planning, Inspection manual, Product acceptance inspection, Inspector errors.  
Sampling - Sampling plans, procedures  
Parameters of quality analysis - stability indicating methods  
Laboratory safety planning and management, biosafety, emergency procedures.  
GLP - General provisions, organization and personnel facilities, equipment, testing facilities operation test and control articles, protocol for and conduct of a nonclinical laboratory study, records and reports.  
ISO 9000
2. Intellectual Property Right Act, its significance and importance with reference to cosmetics.
3. Analysis of raw materials and Evaluation of finished products giving emphasis on -  
Physicochemical properties, chemical analysis, identification, instrumental analysis, biological toxicological testing, Raw Materials - Waxes, fatty acids/ alcohols/ esters dispersing agents, colors, perfumes, preservatives antioxidants. Sweetening agents. Cosmetic or therapeutic agents, adsorbents etc.  
Products - Emulsions (liquid, cream), suspension (lotion), powders (talcum, baby, compact) Lipsticks, Maskara, kajal, hair care products (shampoo, colorants) tooth pastes, tooth powders, men's toiletries, antiperspirants deodorants, nail lacquers, aerosols etc.
4. Quality assessment of packaging materials, containers, closures etc.

### **RECOMMENDED BOOKS:**

1. A.O.A.C. (Book published by Association of organic and Analytical Chemistry).
2. W.A. Poucher : Perfumes, Cosmetics and Soap Volume I, II, and III – Chapman and Hall.
3. Balsam et al : Cosmetics Science and Technology Mim I, II and III. Wiley Interscience.
4. Standard methods of Chemical Analysis – Edited by Frant J. Welchar D. Van. Norstrand.
5. Calorimetric methods of Analysis by Z.D. Snell and C.T. –

- Snell - Van Norstrand Reinhold.
6. Toxicology of Drugs and Chemicals W.B. Deichman and H.W. Gerada, Academic Press.
  7. Cosmetic Chemistry I by Dr. Kulkarni Denett publications.
  8. Text Book of Toxicology – Dubols and Getting – Oxford.
  9. How to practice G.M.P.S. by P.P. Sharma
  10. Cosmetic formulation, Management and quality control by P.P. Sharma.
  11. How to practice GLP by P.P. Sharma
  12. Drug and Cosmetic Act. By GOI

**MASTER OF COSMETIC TECHNOLOGY Semester I**  
**MCT 1 - T3      ADVANCED COSMETIC TECHNOLOGY – I (ACT I)**

Max. Marks –	100
Paper -	80
Sessional -	20

1. Emulsions:  
Electrical theories of stabilization of emulsions, assessment and prediction of emulsion shelf life, equations, involved in emulsion stability stress conditions and physical parameters employed to evaluate emulsion stability, prevention of interaction between preservatives and emulsion ingredients like surface active agents hydrophilic polymers, suspended particles packaging materials etc. Predication of preservative's efficiency.  
Production, equipments, Industrial processing and large-scale manufacture.
2. Suspensions:  
Theory, Production, equipments, industrial processing and large-scale manufacturing.
3. Interfacial Phenomena :  
Liquid – Liquid interface: Insoluble monayers, surface pressure, surface potential, surface rheology and their measurement, structure and state of monolayers, mixed monolayers, Macromolecular films, Biological membranes, Liquid-solid interface, detailed study of wetting, detergency and water repellency.
4. Concept of Solubilization  
Surface Active agents, Micelle formation, factors affecting micelle formation and physical methods of investigation of micellar solutions. Theory and mechanism of solubilization.

**RECOMMENDED BOOKS:**

- 1) "Advances in Pharmaceutical Sciences" Vol. I, II, III & IV, edited by Bran, Bechetl & Carless.
- 2) Mortin A.N. "Physical Pharmacy".
- 3) Lachman et. Al "The Theory and Practical of Industrial Pharmacy".
- 4) "Remington, Pharmaceutical Practices".
- 5) Badger W.L. & Banche "Introduction of Chemical Engineering".
- 6) Chemical Engineering by Richardson & Crudson.

**MCT 1- P1      MASTER OF COSMETIC TECHNOLOGY Semester I**  
**FORMULATION AND DEVELOPMENT I [FD I]**

Max. Marks – 100  
Paper - 80  
Sessional - 20

1. Study of physical and chemical properties of ingredients used in Cosmetics
2. Development of following cosmetic products and incorporation of additives like color, perfumes and study of effect of ingredients on the formulation of following products.

- I.      Dispersions ( emulsions & suspensions )
- II.     Talcum powder & compact powders
- III.    Lipsticks
- IV.     Shampoos
- V.      Colorants
- VI.     Tooth paste & powder
- VII.    Nail lacquers
- VIII.   Aerial
- IX.     Shaving cream
- X.      Aftershave lotions
- XI.     Soaps

**MASTER OF COSMETIC TECHNOLOGY Semester I**

**MCT 1-P2      QUALITY ASSURANCE TECHNIQUES I [QAT I]**

Max. Marks – 100  
Paper - 80  
Sessional - 20

- A) Carry out identification, physicochemical properties, chemical analysis, instrumental analysis, biological – toxicological testing for

Raw Materials :-

Waxes, fatty acids/ Alcohols/ esters, dispersing agents, colors, perfumes, preservatives, antioxidants, sweetening agents, cosmetic or therapeutic agents, adsorbents etc.

Finished Products :-

Emulsion, suspensions, powders (Talcum, baby and compacts). Lipsticks, mascara, Kajal, Hair care products (Shampoo, colorants), toothpaste, toothpowder's, antiperspirant and deodorants, nail lacquers, aerosols, men's

toiletries (Shaving cream, after shave lotions, eue-de – colonge), soaps, perfumes,

- B) Evaluation (determination and detection) of the following –

Color

Perfumes

Flavours

### **MASTER OF COSMETIC TECHNOLOGY Semester I**

#### **MCT 1-P3 SEMINAR / ASSIGNMENTS / JOURNAL CLUB**

Max. Marks – 50

Sessional – 50

The students are expected to review the Journals, recent references and trends in the field of cosmetics formulation, quality assessment and advances.

The students will deliver the seminar on recent trends. Review of journal and completing assignments will be the part of curriculum.

### **MASTER OF COSMETIC TECHNOLOGY Semester II**

#### **MCT 2- T1**

#### **FORMULATION AND DEVELOPMENT- II(FD II)**

Max. Marks –	100
Paper -	80
Sessional -	20

- I. Formulation and Development of -

Emulsion, suspensions, powders (Talcum baby and compacts). Lipsticks, mascara, Kajal, toothpaste, toothpowders, antiperspirant and deodorants, nail lacquers,

- II. Formulation and Development of-

Hair care products like Shampoo, colorants, Hair Removers, Hair gel, Hair oils etc.

- III. Formulation & Development of men's toiletries (Shaving cream, after shave lotions, eue-de – colonge), soaps, aerosols & perfumes.

- IV. Packaging of cosmetics – Filling of solids, semisolids & liquids. Materials used for cosmetic packaging Rules & regulations and legal provisions for packaging & labeling.

**RECOMMENDED BOOKS :**

1. Cosmetic Science and Technology Vol. I, II, III by Sagarin
2. Harry's Cosmeticology
3. Industrial Pharmacy by Leon Lachman
4. Perfume:History & chemistre By D.D.Wasule
5. New Cosmetic Science
6. Indian Herbs by Chopra
7. Wealth of India, published by CSIR

**MASTER OF COSMETIC TECHNOLOGY Semester II**  
**MCT 2 – T2    ADVANCED COSMETIC TECHNOLOGY – II (ACT II)**

Max. Marks –	100
Paper –	80
Sessional –	20

- 1) Solubilization and its applications:  
Some factors in the formulation of Cosmeticeuticals containing solubilized materials like choice of surface active agents, effect on the nature of the solubility, effect of cosolubilizing agents on the solubilizing action of surface active agents, effect of temperature on the solubilization, phase equilibria in systems containing surfactants, applications of solubilization, solubilization of phenolic disinfectants, Idophors, vitamin preparations, hormones solutions, steroids, flavors and perfumes etc.
- 2) Theories of dispersion techniques:  
General basic physical considerations, adsorption and interfacial energetics and study of relevant equations, adsorption on solid surfaces, electrical phenomena at interfaces, Particle-particle interactions, influence of polymer adsorption on particle, vehicle interaction, flocculation kinetics, controlled flocculation. Application of dispersion techniques in formulation of emulsion and suspensions.
- 3) Rheology :  
Theoretical considerations, Thixotropy, spurs and bulges in the hystorisis loop, continuous shear rheometry of semisolids, visocoalasticity, the creep test study including principle of operation and applications of Coneplate, Stormer, Mac Michael, Brook-field viscometers. Chemical and Physical factors effecting rheological properties, Rheology and product design, Rheology and cosmaceutical processing, Rheology and biological applications.
- 4) Micromeritics :  
Adsorption, air permeability techniques and determination of surface area and size of particles. Classification and evaluation of some basic properties of powders, flow properties of various powder systems.

**RECOMMENDED BOOKS:**

1. "Advances in Pharmaceutical Sciences" Vol. I, II, III & IV, edited by Bran, Bechetl & Carless.
2. Mortin A.N. "Physical Pharmacy".
3. Lachman et. Al "The Theory and Practical of Industrial Pharmacy".
4. "Remington, Pharmaceutical Practices".
5. Badger W.L. & Banche "Introduction of Chemical Engineering".
6. Chemical Engineering by Richardson & Crudson.

**MASTER OF COSMETIC TECHNOLOGY Semester II**

**MCT 2- T3**

**NATURAL PRODUCTS (NP)**

<b>Max. Marks –</b>	<b>100</b>
<b>Paper -</b>	<b>80</b>
<b>Sessional -</b>	<b>20</b>

- I. Collection and identification of Raw Herbal material, methods for identification.
- II. Extraction and isolation of compounds from herbs- Compounds, structures and properties. Methods of extraction of compounds- Solvents, distillation, Supercritical fluid extraction.
- III. Standardization and quality control of herbal extracts & products. Standardization QA, AC & GMP, SOP, Qualitative & quantitative analysis of herbal extracts and products.  
New technologies and other bioassays for screening and mechanism study.  
Key to functional mechanism study of Herbal medicines.
- IV. Functional evaluation & herbal actives- significance of research, characteristics of pharmacological research, design of pharmacological study on herbal medicines.

**RECOMMENDED BOOKS:**

- 1) Fractional Herbal Medicine Research Methods edited by willow L. H. Liu.
- 2) Pharmacognosy by C. K. Kokate, A.P. Purohit, S. B. Gokhale.
- 3) Pharmacognosy by Trease and Wallis
- 4) Benttey's Text book of Pharmaceutics.
- 5) Remingtons 'The Science and Practical of Pharmacy' 21<sup>st</sup> edition

**MCT 2 - P1**

**MASTER OF COSMETIC TECHNOLOGY Semester II**  
**FORMULATION AND DEVELOPMENT II [F D II]**

Max. Marks – 100

Paper - 80

Sessional - 20

1. Extraction & Isolation of active principles from important medicinal herbs.
2. Incorporation of active herbal principals in various cosmetic products. ( at least two products from each category – solid, semi solid, and liquid)

**MASTER OF COSMETIC TECHNOLOGY Semester - II**

**MCT 2 - P2 ADVANCED COSMETIC TECHNOLOGY – II (ACT II)**

Max. Marks – 100

Paper - 80

Sessional - 20

1. Evaluation of stability of Emulsions through different methods.
  - a. Accelerated stability study.
  - b. Particle size analysis
  - c. Other Parameters
2. Evaluation of stability of suspensions through different methods.
  - a. Accelerated stability study
  - b. Particle size analysis
  - c. Other parameters.
3. To measure Zeta potential of emulsion and to co-relate with stability.
4. To measure Zeta potential of suspensions and to co-relate with stability.
5. To determine the cmc of surfactants by stalagmometer  
(Anionic, Cationic, Nonionic, Ampholytic)
6. To determine the cmc of surfactants by capillary rise method.
7. To study the effect of salts on cmc of surfactant.
8. Determination of amount of surfactants with respect to phase- volume ratio.  
Antioxidants, emulsifying agents. ,
9. To study the thixotropic behaviours of some creams.
  - a. Viscosity
  - b. Sedimentation.

10. To demonstrate the effect of air-entrapment on rheology of creams.
  11. Interaction between the preservatives, antioxidants, emulsifying agents.
  12. Interaction of above mentioned additives on the different packaging material.
  13. To study the effect of pH on partition co-efficient of weak acids.
  14. To study the effect of solvents on partition co-efficient of weak acids.
  15. To study the flow properties of powders.
    - a. Effect of particle size (b)Moisture content
    - c. Other additives like glidants & lubricants
- } On angle of Repose

### **MASTER OF COSMETIC TECHNOLOGY Semester II**

#### **MCT 2-P3 SEMINAR / ASSIGNMENTS / JOURNAL CLUB**

Max. Marks – 50  
Sessional - 50

The students are expected to review the Journals, recent references and trends in the field of cosmetics formulation, quality assessment and advances. The students will deliver the seminar on recent trends. Review of journal and completing assignments will be the part of curriculum.

### **MASTER OF COSMETIC TECHNOLOGY Semester III**

#### **MCT 3-T1 RESEARCH METHODOLOGY [R M]**

Max. Marks –	100
Paper-	80
Sessional -	20

1. Conceptual understanding of statistical measures. Classification and tabulation of data. Measurement of central tendency, measures of variation.
2. Frequency distribution, histogram, frequency, polygons, Oliver.
  - a. Binomial distribution
  - b. Normal distribution – use of normal probability tables
  - c. Parametric and non-parametric tests.
3. Testing of hypothesis. Type I and Type II errors. Levels of significance
  - a. Chi-square test. Goodness of fit. Independence of attributes 2x2 and r x c contingency tables.
  - b. Application of student 't' test for small samples. Difference in proportion for means and difference in means. Correlation, coefficient of correlation, rank correlation.
4. Regression and prediction.

- b. Analysis of variance – one way and two-way classification.
- c. Definition and Identification of research problem
- c. Selection of research problem
- d. Justification
- e. Theory, hypothesis, basic assumptions, limitations and delimitations of the problem.

Recommended Books:

1. Edwards: Experimental Design in Psychological Research.
2. Garrett, Henry E. (1971): Statistics in Psychology and Education, David Haley & Co.
3. Kerlinger: Foundation of Educational Research.
4. SPSS / PC for the IBM PC / XT, SPSS Inc.
5. Bandarkar, P.L. and Wilkinson T.S. (2000): Methodology and Techniques of Social Research, Himalaya Publishing House, Mumbai.
6. Strass, A. and Corbin, J. (1990): Basis of Qualitative Research, Grounded Theory Procedures and Techniques, Sage Publications, California. Unwanted effects of cosmetics and drugs used in dermatology by J.P. Nater. Groot, & Liem.

### **MASTER OF COSMETIC TECHNOLOGY Semester III**

#### **MCT 3- T2      QUALITY ASSURANCE TECHNIQUES II (QAT II)**

Max. Marks –100
Paper -        80
Sessional    - 20

1. Compliance of Drug & Cosmetic Act 1940 with reference to provisions for packaging and labelling (Rule 150 A, schedule S), permitted colors, flavors etc.
2. Microorganisms in raw materials, Risk assessment  
Microorganisms in manufacturing environment, current GMP, concept of HACCP, Microbial contamination in cosmetic products.  
Microbial considerations in product formulation.  
Microbiological evaluation: Various methods for microbial assay of raw materials and finished Products. Preservative efficacy tests, factors affecting preservative efficacy, modulation of preservative efficacy by  $G^+$  and  $G^-$  organisms.  
Total microbial count, Isolation and identification of microorganisms specified in BIS guidelines from cosmetic products and raw materials.
3. Skin testing – patch testing, methods of determination of Moisture, Sebum, and Conductivity of skin.
4. Hair Testing – Study of Hair texture, surface, conditioning & tensile strength of hair.

#### **RECOMMENDED BOOKS:**

1. A.O.A.C. (Book published by Association of organic and Analytical Chemistry).
2. W.A. Poucher : Perfumes, Cosmetics and Soap Volume I, II, and III – Chapman and Hall.
3. Balsam et al: Cosmetics Science and Technology Mim I, II and III. Wiley Interscience.
4. Standard methods of Chemical Analysis – Edited by Frant J. Welchar D. Van. Norstrand.
5. Calorimetric methods of Analysis by Z.D. Snell and C.T. – Snell - Van Norstrand Reinhold.
6. Toxicology of Drugs and Chemicals W.B. Deichman and H.W. Gerada, Academic Press.
7. Text Book of Toxicology – Dubols and Getting – Oxford.
8. Practical Cosmetic Microbiology by Kulkarni, Meghare Denett publications.
9. How to practice G.M.P.S. by P.P. Sharma
10. Cosmetic formulation, Management and quality control by P.P. Sharma.
11. How to practice GLP by P.P. Sharma
12. Drug and Cosmetic Act. By GOI

#### **MASTER OF COSMETIC TECHNOLOGY Semester III**

#### **MCT 3-T3 ADVANCED COSMETIC TECHNOLOGY – III (ACT III)**

Max.Marks –	100
Paper-	80
Sessional –	20

1. Microencapsulation: Techniques of manufacturing- physical, physiochemical, chemical methods, Release methods and pattern, safety aspects and applications.
2. Nanoparticles: Techniques of manufacturing, safety aspects and applications.
3. Liposomes: Classification, Techniques of manufacturing, safety aspects and applications.
4. Niosomes and Transfersomes: Classification, Techniques of manufacturing, safety aspects and applications.

#### **MASTER OF COSMETIC TECHNOLOGY Semester III**

#### **MCT 3- P1 RESEARCH METHODOLOGY [RM]**

<b>Max. Marks – 100</b>
<b>Main-- 80</b>
<b>Sessional-- 20</b>

1. Literature search through chemical abstract, internet, books, journals.
2. Research data collection & presentation.

3. The candidate shall deliver seminar during the session, on selected topics of current research interest as reported in the research journals in the field of cosmetology.
4. The students will be delivering at least two seminars during the session. The seminars based on research reviews will be evaluated by the panel of experts consisting of minimum three teachers including Head of the Department.

**MASTER OF COSMETIC TECHNOLOGY Semester III**

**MCT 3- P2 QUALITY ASSURANCE TECHNIQUES II [QAT -II]**

Max. Marks – 100
Paper - 80
Sessional - 20

**Microbiological testing**

1. Evaluation of total microbial count of raw material and finished products.
2. Isolation and identification of aerobic microorganisms of raw materials and finished products as specified in BIS and CTFA guide lines.
3. Isolation and identification of anaerobic microorganisms from raw materials of natural origin and finished products.
4. Evaluation of antimicrobial activity and determination of minimum MIC of synthetic compounds and herbal extracts.
5. Determination of preservative efficacy in finished products.

**MASTER OF COSMETIC TECHNOLOGY Semester III**

**MCT 3-P3 SEMINAR / ASSIGNMENTS / JOURNAL CLUB**

Max. Marks – 50
Sessional – 50

The students are expected to review the Journals, recent references and trends in the field of cosmetics formulation, quality assessment and advances. The students will deliver the seminar on recent trends. Review of journal and completing assignments will be the part of curriculum.

## **MASTER OF COSMETIC TECHNOLOGY Semester IV**

### **MCT 4-T1 PRODUCTION MANAGEMENT IN COSMETICS (PMC)**

Max. Marks – 100  
Paper - 80  
Sessional - 20

Unit 1 : Production Management: Objectives & Policies, Types of production, Plant Location, decision Plant Layout, Types of Layouts.

Unit 2: Production planning and control, Industrial quality control, statistical quality control methods, TQM m ISO systems Job evaluation.

Unit 3: Materials Management, Scientific Purchasing, Inventory control, EOG model, inventory classification, ABC analysis, cost elements inventory Selection of vendors and vendor rating.

Unit 4 : Maintenance Management, Material handling systems, sanitation and plant utilities, stores management.

#### **RECOMMENDED BOOKS:**

1. Barat Nikhil "Production Management and Control."
2. Moore F.G. "Manufacturing Management"
3. Ammer D.S. "Manufacturing Management and Control"
4. Cundiff E.Q. and Still R.R. "Basic Marketing"
5. Griffin M.C. "Drug and Cosmetic Packaging"
6. Journals:
  - i. Manufacturing Chemist and Aerosol News.
  - ii. Drug and Cosmetic Industry.
  - iii. Journal of Association of Cosmetic Chemists.
7. Marketing Management by Dr. Philip Kotlev – PHI
8. Marketing Management by Stanton
9. Marketing Management by Rajan Saksena , TMH
10. Production Management by Chunnawala, H.Pals.
11. Marketing Management by Puffa
12. Marketing Management by by M. Telsang.

## **MASTER OF COSMETIC TECHNOLOGY Semester IV**

### **MCT 4-T2      MARKETING MANAGEMENT (MM)**

Max. Marks – 100  
Paper - 80  
Sessional - 20

Unit 1: Marketing : Meaning, Philosophies of marketing functions scope and evolution. Different demand states and formal marketing tasks, Marketing environment,

Unit 2: concept of product, product line and mix. New products, development and launch. Pricing - different methods, under different market conditions. Distribution, different channels of distribution - factor affecting channels choice, direct marketing multilevel marketing, telemarketing.

Unit 3: Promotion – Different elements of promotion, personal selling, advertising, sales promotion and public relations. Supply chain management, customer relationship management.

Unit 4: International Marketing and E-commerce activities. Packaging, Importance of packaging in marketing cosmetics, latest trends. Branding.

Market Segmentation - Different methods of segmenting market.

#### **RECOMMENDED BOOKS:**

1. Barat Nikhil "Production Management and Control."
2. Moore F.G. "Manufacturing Management"
3. Ammer D.S. "Manufacturing Management and Control"
4. Cundiff E.Q. and Still R.R. "Basic Marketing"
5. Griffin M.C. "Drug and Cosmetic Packaging"
6. Journals:
  - iv. Manufacturing Chemist and Aerosol News.
  - v. Drug and Cosmetic Industry.
  - vi. Journal of Association of Cosmetic Chemists.
7. Marketing Management by Dr. Philip Kotlev – PHI
8. Marketing Management by Stanton
9. Marketing Management by Rajan Saksena , TMH
10. Production Management by Chunnawala, H.Pals.
11. Marketing Management by Puffa
12. Marketing Management by M. Telsang.

**MASTER OF COSMETIC TECHNOLOGY SEMESTER IV**

MCT 4 –P1

## **PROJECT AND VIVA-VOCE**

Max. Marks – 300  
Main-- 250  
Sessional - 50

Every student for the degree of Master of Cosmetic Technology shall be required to undertake project work involving methodical research and submit three copies of the report of the project work, duly certified by the supervisor / Guide to the Head of the Department.

# **MASTER OF COSMETIC TECHNOLOGY SEMESTER IV**

MCT 4-P 2

## **SEMINAR / REVIEW**

**Max. Marks – 50**  
**Sessional-- 50**

Internal Assessment marks should be allotted on the basis of at least three seminar/reviews during Project work.

*Published by :*

**Subhash Belsare**  
Registrar,  
Rashtrasant Tukadoji Maharaj Nagpur University

Chhatrapati Shivaji Maharaj Administration Premises,  
Opp. Maharaj Bagh, Ravindranath Tagore Marg,  
Rashtrasant Tukadoji Maharaj Nagpur University, NAGPUR – 440001.

Printed By :  
Satish Niphadkar

Manager,  
Rashtrasant Tukadoji Maharaj Nagpur University

Chhatrapati Shivaji Maharaj Administration Premises,  
Opp. Maharaj Bagh, Ravindranath Tagore Marg,  
Rashtrasant Tukadoji Maharaj Nagpur University, NAGPUR – 440001.

---

© “;k vH;kldzfedsrhy dks.krkgh Hkkx jk"V@lar rqdMksth egkjkt  
ukxiwj fo|kihBkP;k iwokZuqerhf'kok; dks.kklgh iwueqfnzr  
fdaok izdkf'kr djrk ;s.kkj ukgh-

© “ No part of this prospectus can be reprinted or published without specific  
permission of Rashtrasant Tukadoji Maharaj Nagpur University.”

---



**MASTER OF HOSPITALITY MANAGEMENT**  
**RASHTRASANT TUKADOJI MAHARAJ NAGPUR**  
**UNIVERSITY, NAGPUR (M.S.)**

**INDIA**

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR UNIVERSITY, NAGPUR FACULTY OF  
SCIENCE AND TECHNOLOGY  
DIERCTION NO. OF 2019**

**(Issued under section 12(8) of the Maharashtra Public University Act, 2016)**

**The Examination leading to the Degree of Master of Hospitality Management (Choice Base  
Credit system semester pattern).**

Whereas the Maharashtra Public Universities Act, 2016 is made applicable to the University w.e.f. 1<sup>st</sup> March 2017 (hereinafter referred to as the Act);

**AND**

Whereas, Section 12(8) of the Act empowered the Vice-Chancellor to issue Direction for regulating the matter for which statute/Ordinance /Regulations is not made or to amend the existing statute /ordinance /Regulations;

**AND**

Whereas proviso of section 12(8) provided that the Direction issued by the Vice-Chancellor shall automatically lapsed after 180 days.

**AND**

Whereas, Direction No.22 of 2016 was issued by the Vice-Chancellor on 07/10/2016. Which could not have been converted into the Statute/Ordinance/ Regulations within Six months

**AND**

Whereas, Direction No. 22 of 2016 issued by the Vice-Chancellor on 07/10/2016 is required to be renewed for regulating the matter involved in the said Direction.

Now, therefore, I, Dr. Siddharthavinayaka P. Kane, Vice- Chancellor, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of powers conferred upon me under provision of section 12(8) of the Maharashtra Public Universities Act, 2016, do hereby issue following Directions to renew Direction No. 22 of 2016.

1. This Direction shall be called "Direction governing the Examination leading to the Degree of Master of Hospitality Management (Choice Base Credit system semester pattern) Direction 2018 in the faculty of Science and Technology R.T.M. Nagpur University, Nagpur.

2. The direction shall come into force from the date of its issuance by Hon'ble Vice Chancellor and shall remain in force till the relevant ordinance comes into force being in accordance with the provisions of the Act.
3. The duration of the Master of Hospitality Management course shall be of Two academic years consisting of Four semester with University examinations at the end of each semester namely:-
- Master of Hospitality Management, Semester I Exam.
  - Master of Hospitality Management, Semester II Exam.
  - Master of Hospitality Management, Semester III Exam.
  - Master of Hospitality Management, Semester IV Exam.
4. The examinations shall be held at such places and dates which are notified by the University.

**ELIGIBILITY TO THE COURSE:**

5. Subject to the compliance of the provisions of this direction and any other ordinances in force from time to time, an applicant for admission to the examination shall have passed.
- A 4 years Degree Course Examination in Hospitality Management /Hotel Management/ Hotel Management and Catering Technology of Rashtrasant Tukadoji Maharaj Nagpur University or of any other statutory University equivalent thereto possessing minimum of 50% of marks.

**OR**

- A 3 years degree course Examination in Hospitality Management/Hospitality Studies /Hotel Management /Hotel Management and Catering Technology of Rashtrasant Tukadoji Maharaj Nagpur University or of any other statutory University equivalent thereto possessing minimum of 50% of marks and 01 year of recognized professional experience in Hotel Industry.

**OR**

- A Bachelor's Degree of Rashtrasant Tukadoji Maharaj Nagpur University or of any other statutory University equivalent thereto with three years diploma course in Hospitality Management/ Hotel Management/ Hotel Management and Catering Technology possessing minimum of 50% marks and 01 year of recognized professional experience in Hotel Industry.

**6. (a) Master of Hospitality Management, (Choice Base Credit System Semester pattern) Examination**

Students who have fulfilled the eligibility criteria as mentioned in Section 5 have been admitted to this course in Semester-I.

b) The ATKT rules for admission for the Master of Hospitality Management Course (Choice Based Credit System Semester Pattern) (Theory and Practical as separate passing head) shall be as given in the following table-

Admission to Semester	Student should have appeared in the examination	Student should have passed in all the subjects of the following examination of R.T.M. Nagpur University	Student should have passed at least two third of the passing heads of the following examinations
Semester-I	---	As provided in the para 6 of the direction	-----
Semester- II	I Semester	-----	-----
Semester- III	II Semester	-----	Semester I and II taken together
Semester- IV	III Semester	-----	Semester I, II and III taken together

- 7) Without prejudice to other provisions of Ordinance no. 6 relating to the examination in general, provisions of Para 5, 8, 9, 10, 26, 31 and 32 of the said ordinance shall apply to every student admitted to this course.
- 8) The fees for the tuition, examination, laboratory and other fees shall be as prescribed by the university from time to time.
- 9)
  - (a) The scope of the subjects shall be as prescribed in the syllabus.
  - (b) The medium of instruction and examination shall be English.
- 10) The number of papers and maximum marks assigned to each paper and minimum marks/grade, an examinee must obtain in order to pass the examination shall be as prescribed in Appendix-1, 2, 3, 4 & Appendix-5 appended with this direction.
- 11) The examinee at each of the examination shall have option of not being declared successful at the examination in case he/she does not secure a minimum of grade equivalent to 55% marks at the examination. This option will have to be exercised every time the application is submitted to any of the examinations. Once this option is exercised, the option shall be binding on the examinee and it shall not be evoked in under any circumstances

- 12) The classification of the examinee successful at the semester and examinations and at the end of final semester examination shall be as per the rules and regulations of credit based semester pattern as prescribed in appendix, appended with this direction.
- 13) The provisions of Ordinance No. 3 of 2007 for the award of grace marks for passing an examination, securing higher grade in subject(s) as updated from time to time shall apply to the examination under this direction.
- 14) The names of the successful examinee passing the examination as a whole in the minimum prescribed period and obtaining prescribed number of places securing the grades equivalent to first and second division shall be arranged in order of merit as provided in ordinance 6 relating to examination in general.
- 15) The unsuccessful candidate failing in scoring passing marks in sessionals / internal assessment shall be allowed to appear for internal / sessional reexamination and college should send these marks to the university before the subsequent semester examination.
- 16) No candidate shall be admitted to an examination under this direction, if he/she has already passed the same examination of this university or of any other university.
- 17) Examinee successful at the final examination shall on payment of the prescribed fees, will be entitled for the award of the degree in the prescribed form signed by the Vice-Chancellor.
- 18) This course is based on choice based credit system semester pattern and therefore, it will be also regulated by guidelines and regulation given in appendices which are part of this direction.
- 19) With the issuance of this Direction, the Direction No. 22 of 2016 governing the examination leading to award of MHM (Choice Base Credit System) Semester Pattern in Faculty of Science and Technology shall stand repealed in phasic manner.

I further direct that the aforesaid Direction shall come into force from the date of issuance and shall remain in force till the relevance ordinance comes into being, in accordance with the provisions of the Maharashtra Public Universities Act,2016.

Nagpur  
Date-

(Dr. Siddharthavinayaka P. Kane)  
Vice Chancellor

## **STATEMENT OF OBJECT AND REASONS**

In 1998 the P.G. course was started with the nomenclature Masters in Hospitality Management as per Ordinance No.13 of 1998 and 15 of 2003.

In 2008 the Nomenclature of the P.G. course was converted to Master in Hospitality & Tourism Management as per Ordinance No. 21 of 2009.

In 2013, when the credit based semester system started the nomenclature was changed again to Master in Hotel Management & Catering Technology as per Direction No.11 of 2013. This was done to promote research in the core areas of Hospitality Industry. Now choice based credit system is started with the nomenclature Master of Hospitality Management.

There is a growing need for increasing the “Management” competence in the field of Hotel Management and Catering Technology. Professionally qualified personnel is the need of the day – Personnel who are multi skilled.

The Post Graduate Degree in Hospitality Management aims at bridging the gap and supplying the Hotel Management Industry with Professional Management Candidates who are competent and are able to face the challenges posed by the ever changing Hotel and Hospitality scenario.

“Hospitality” word covers both the areas Tourism and Hotel Management & Catering Technology which gives broader prospects to P.G. students to enter both the areas with knowledge and skill, at any competitive level.

Hence, the nomenclature for the choice based credit system of the Post Graduate course in Hotel Management & Catering Technology should be Master of Hospitality Management.

**Examination leading to Master of Hospitality Management**  
**Scheme of Teaching and Examination under semester pattern choice base credit system (CBCS)**  
**MASTER OF HOSPITALITY MANAGEMENT : SEMESTER-I ( Appendix-A) A1**

Paper Code	Subject	Teaching Scheme (Hrs/Week)			Credits	Duration	Examination Scheme			Total Marks	Minimum Passing Marks
		Theory	Practical	Total			Max. Marks	External Marks	Internal Marks		
1-T-1	Core I- Marketing for Hospitality & Tourism	4	-	4	4	3	80	20	100	50	
1-T-2	Core II- Customer Relationship Management	4	-	4	4	3	80	20	100	50	
1-T-2	Core III- Research Methodology	4	-	4	4	3	80	20	100	50	
1-T-4	Core IV – HRM & Corporate Sustainability	4	-	4	4	3	80	20	100	50	
1-P-1	Practical Core I- Marketing for Hospitality & Tourism	-	8	8	4	3	80	20	100	50	
1-P-2	Practical Core II- Customer Relationship Management	-	8	8	4	3	80	20	100	50	
1-P-3	Seminar I – Meeting, Incentive, Convention & Exhibitions.	--	2	2	1	--	--	25	25	13	
<b>Total</b>		<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>		<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>	

**MASTER OF HOSPITALITY MANAGEMENT : SEMESTER-2 (Appendix-2) A2**

Paper Code	Subject	Teaching Scheme (Hrs/Week)			Credits	Examination Scheme					
		Theory	Practical	Total		Duration	Max. Marks		Total Marks	Minimum Passing Marks	
							External Marks	Internal Marks			
2-T-1	Core I MIS in Hospitality Industry	4	-	4	4	3	80	20	100	50	
2-T-2	Core II Hospitality Laws	4	-	4	4	3	80	20	100	50	
2-T-3	Core III Statistics & Qualitative Techniques	4	-	4	4	3	80	20	100	50	
2-T-4	Core IV Tourism: A Global Perspective	4	-	4	4	3	80	20	100	50	
2-P-1	Practical Core I MIS in Hospitality Industry	-	8	8	4	3	80	20	100	50	
2-P-2	Practical Core II Tourism: A Global Perspective	-	8	8	4	3	80	20	100	50	
2-P-3	Seminar I Managerial Communication	-	2	2	1	--	--	25	25	13	
<b>Total</b>		<b>16</b>	<b>18</b>	<b>34</b>	<b>25</b>		<b>480</b>	<b>145</b>	<b>625</b>	<b>313</b>	

### MASTER OF HOSPITALITY MANAGEMENT: SEMESTER-III (Appendix-3) A3

Paper Code	Subject	Teaching Scheme (Hrs/Week)				Examination Scheme			
						Maximum Marks		Total	Minimum Passing Marks
		Theory	Practical	Total	Credits	Duration	External Marks		
3-T-1	Core I Materials Management	4	-	4	4	3	80	20	100
3-T-2	Core II Tourism Destination India	4	-	4	4	3	80	20	100
3-T-3	Elective I Food & Beverage Management -I <b>OR</b> Elective 2 Accommodation Management-I	4	-	4	4	3	80	20	100
3-T-4	Foundation –I * Responsible Practices in Tourism and Hospitality <b>OR</b> (refer Annexure)	4	-	4	4	3	80	20	100
3-P-1	Seminar Industrial Training ***	-	2	2	1	-	-	25	25
3-P-2	Tourism Destination India	-	8	8	4	3	80	20	100
3-P-3	Food & Beverage Management –I <b>OR</b> Accommodation Management-I	-	8	8	4	3	80	20	100
<b>Total</b>		16	18	34	25		480	145	625
									313

\* Minimum 5 students will be allowed to opt particular subject.

\*\* In Semester III, student will have to opt any one foundation subject paper other than his/her main subject paper for Post Graduation, as per Annexure -1, (List of Foundation Subjects for Post Graduation). Once student opt foundation subject in Semester –III, it cannot be changed in Semester –IV.

\*\*\*Training in recognized hotel and resort; travel agency should be completed for 6 weeks. Log book to be maintained during the training and submitted for evaluation. Certificate of training to be submitted. On completion of training presentation is compulsory to be evaluated by Internal Examiner.

**MASTER OF HOSPITALITY MANAGEMENT: SEMESTER –IV (Appendix-4) A4**

Paper Code	Subject	Teaching Scheme (Hrs/Week)				Examination Scheme				
		Theory	Practical	Total	Credits	Duration	Maximum Marks		Total	Minimum Passing Marks
		External Marks	Internal Marks							
<b>4-T-1</b>	Core I Strategic Management	4	-	4	4	3	80	20	100	50
<b>4-T-2</b>	Core II Food Tourism	4	-	4	4	3	80	20	100	50
<b>4-T-3</b>	Elective I Food and Beverage Management II Or Accommodation Management II	4	-	4	4	3	80	20	100	50
<b>4-T-4</b>	* Foundation II Cost Control Techniques in Hospitality OR (refer to annexure)	4	-	4	4	3	80	20	100	50
4-RP	Project work and viva voce	--	4	4	4	3	80	20	100	50
<b>4-P-2</b>	Seminar on Food Tourism	--	4	4	1			25	25	13
<b>4-P-3</b>	Elective I (Practical) Food and Beverage Management II Or Elective practical Accommodation Management II	--	8	8	4	3	80	20	100	50
<b>Total</b>		16	16	32	25	18	480	145	625	313

\* Foundation subject opt in Semester – III , it cannot be changed in Semester – IV.

**Note:-**

1. In each semester student will have to give seminar on any topic relevant to the syllabus encompassing the recent trends and development in that field. The topic of the seminar will be decided at the beginning of each semester in consultation with the supervising teachers. The student has to deliver the seminar which will be followed by discussion. The seminar will be open to all the teachers of the department, invitees, and students.
2. The student will have to carry out the research based project work in the fourth semester in the department or depending on the availability of placement; he/she will be attached to any of the national / regional / private research institute / organization / Industry. The student in consultation with supervisor will finalize the topic of the project work.

**Project Work Scheme (Appendix-5)**  
**/ Guidelines for the Students, Supervisors and Examiners**

**For Semester-III**

\* Project Design and Planning – Every student is required to design and plan experimental /field based project work on a related research topic of the subject/course. Supervisor will be allotted for guiding students. Each student must present three seminars during the semester on introduction, references, material and methods. Final presentation will be evaluated by external and internal examiners.

**For Semester –IV**

Every student is required to carry out **Experimental / Field Based Project Work** (semester IV) on a related research topic of the subject /course. It must be an original work and must indicate some degree of experimental work. The project report shall comprise of Introduction, Review of Literature Material and Methods, Results, Discussion, Summary, Conclusions and References. The project report should be forwarded through Head/Course-coordinator/ Director of the Department /Centre or the Principal of the College.

**The supervisors for the Experimental project work shall be from the following Category in order of preference.**

A person selected by the duly constituted selection committee in the relevant subject and approved by the University, exclusively for P. G. Course.

**OR**

A person selected by the duly constituted selection committee of the University approved by the University and appointed as a full time regular teacher with Masters Degree at U. G. Level in the relevant subject and having at least 10 years teaching experience.

**OR**

A person selected by the duly constituted selection committee of the University approved by the University and appointed as a full time regular teacher with Ph. D. Degree at U.G. Level in the relevant subject and having at least 5 years teaching experience.

**OR**

A person from Industry with Degree/three years diploma in relevant field with 10 years experience at the rank not below manager or with Masters Degree in the relevant field with 5 years experience at the rank not below manager can work as co-supervisor alongwith supervisor.

**OR**

A person appointed in PG on contractual / Contributory basis having NET/SET whenever applicable and approved by the University in the relevant subject and having 3 years teaching experience at P.G. level.

**OR**

University approved Ex Faculty member in the relevant Subject.

**Note : The supervisor shall be able to guide not more than 11 (Eleven) students in the given semester examination. The supervisor shall declare in the project of every student which he/she guiding, stating that he/she has not guided more than 11(Eleven) students in the given semester examination.**

## **Appendix - 6** **General Rules and Regulations**

### **A) Pattern of Question Paper**

1. There will be four units in the syllabus of each paper.
2. Question paper will consist of five questions- one question from each unit and the fifth question should include questions from all four units.
3. Maximum marks of each paper will be 100 (80 + 20).
4. All question should have equal weightage
5. Each paper will be of 3 hours duration.

### **B) Absorption Scheme:**

- 1) While switching over to Choice based credit system semester pattern, the failure students of credit based system pattern will be given **FIVE** chances to clear the examination.

### **C) Grade Point Average (GPA) and Cumulative Grade Point Average (CGPA)**

- 1) On clearing a paper, based on cumulative score (out of 100) in that paper, a student will be given grade point average (GPA) (Maximum of 10 and minimum of 5) for that paper on the following basis.

<b>Marks Obtained (out of 100)</b>	<b>Grade</b>	<b>Grade Point Average (Out of 10)</b>
91 to 100	O	10
81 to 90	A	09
71 to 80	B	08
61 to 70	C	07
51 to 60	D	06
50	E	05
Below 50	F: Fail	00 OR Fail

- 2) On clearing all the papers in a semester, a student will be allotted a **Semester Grade Point Average (SGPA)** for that particular semester. As the pattern given above does not have differential weights for papers, the SGPA of a student for a particular semester will be the average of the GPA's for all the papers.

- 3) A student will be allotted a **Cumulative Grade Point Average (CGPA)**

After clearing all the four semesters. Again as there is no differential weight system for semesters, the CGPA of a student will be the average of the four SGPA's of that student.

The CGPA can be converted to the usual / conventional divisions in the following way.

- a. A student failed to score minimum 50 % marks in each head of passing and in aggregate shall be given F grade.
  - b. Student with F grade in a course would be granted credit for that course but not the grade for that course.
  - c. Grade points earned in each paper shall be calculated as – Grade points obtained (vide above table) x Credits for the paper.
  - d. The formula for GPA will be based on Average. The final GPA will not be printed unless a student passes courses equivalent to minimum 100 Credits.
- 4) While declaring the result, the existing relevant ordinances are applicable. For verification and revaluation existing rules will be applicable.
- 5) The candidate may take all the examinations as per the provisions of ATKT simultaneously but his/her result of final semester shall not be declared unless he/she is declared successful at lower examinations.
- 6) If an examinee failed to pass the post graduate programme within five successive years (for four semesters degree) from the date of his / her first admission to particular post graduate programme he/ she shall be declared as “Not Fit for the Course (NFC)” and he/ she will not be allowed to appear further for any previous examination of the course.

<b>CGPA</b>	<b>Equivalent Class / Division</b>
9.00 to 10.00	First Class (Outstanding)
8.00 to 8.99	First Class (Excellent)
7.50 to 7.99	First Class with Distinction
6.00 to 7.49	First Class
5.01 to 5.99	Higher Second Class
5.00	Pass
Below 5.00	Fail

- 7) The computation of Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) of an examinee shall be given below:

- a. The marks will be given in all examinations which will include the college assessment marks, and the total marks for each Theory/ Practical shall be converted into Grades as per above table. SGPA shall be calculated based on Grade Points corresponding to Grade as given in above table and the credits allotted to respective Theory / Practical shown in the scheme for respective semester.
- b. SGPA shall be computed for every semester and CGPA shall be computed only in IV semester (for four semester degree). The CGPA of IV shall be calculated based on SGPA of all four semesters as per following computation:

$$\text{SGPA} = \frac{C_1 \times G_1 + C_2 \times G_2 + \dots + C_n \times G_n}{C_1 + C_2 + \dots + C_n}$$

Where  $C_1$  = Credit of individual Theory / Practical

$G_i$  = Corresponding Grade Point obtained in the Respective Theory/ Practical

$$\text{CGPA} = \frac{(SGPA) I \times (Cr) I + (SGPA) II \times (Cr) II + (SGPA) III \times (Cr) III + (SGPA) IV \times (Cr) IV}{(Cr) I + (Cr) II + (Cr) III + (Cr) IV}$$

Where, (SGPA) I = SGPA of I Semester; (Cr) I = Total Credits for I Semester;

(SGPA) II = SGPA of II Semester; (Cr) II = Total Credits for II Semester;

(SGPA) III = SGPA of III Semester; (Cr) III = Total Credits for III Semester; (SGPA)

IV = SGPA of IV Semester; (Cr) IV = Total Credits for IV Semester

\*\*\*\*\*

**Semester – I**  
**1-T-1**  
**Marketing for Hospitality & Tourism**

Theory – 80  
Sessional – 20

-----  
Total – 100  
Minimum passing marks - 50

Unit	Topic	Marks
<b>1</b>	<p><b>Sales promotion -</b>  Meaning, Definition, Importance Objectives, of Sales Promotion, Factors Contributing the growth of Sales promotion,</p> <ul style="list-style-type: none"> <li>• <b>Tools/levels of Sales promotion-</b> Consumer sales promotion, Dealer Sales Promotion, Sales force promotion.</li> <li>• <b>Sales Quota</b>-Meaning, Benefits, Weakness, Basis necessary for fixing quota, Types of Quota</li> <li>• <b>Personal Selling</b>-Definition, Concept, Objectives, Importance, Duties of Salesman and Qualities of successful salesman.</li> </ul>	<b>20</b>
<b>2.</b>	<p><b>Advertising-</b>  Meaning, Definition and Objectives of advertising, advertising and Sales promotion, Functions and Advantages of Advertising</p> <ul style="list-style-type: none"> <li>• <b>Advertising Media</b> – selection of advertising media, kinds of advertising media-indoor and outdoor advertising.</li> <li>• <b>Product Strategy</b>-Meaning of brand, essentials of a good brand, benefits of brand, Types of brand. Meaning of branding, elements of branding. Case studies.</li> <li>• <b>Building Customer Loyalty</b>-Meaning of customer loyalty, Customer Satisfaction, Customer value, Retaining customer through service quality, Developing Service Quality programme, Case Studies</li> </ul>	<b>20</b>
<b>3</b>	<p><b>Marketing Environment</b>  Concept of Micro and Macro Environment, Case study</p> <ul style="list-style-type: none"> <li>• <b>Marketing Planning</b> - Meaning of Planning and Marketing Planning, Importance, Benefits and Characteristics of marketing Planning, Marketing Planning Processes.</li> <li>• <b>Marketing Segmentation</b> -  Definition, Criteria for Market Segmentation, Basis for Consumer Market Segmentation, Philosophies of Market Segmentation</li> <li>• <b>Market positioning</b> - Product Positioning, Meaning, Qualities of Successful Position, Positioning Approaches, Product Repositioning, Case Studies</li> </ul>	<b>20</b>
<b>4.</b>	<p><b>Marketing Control</b>  Meaning and concept of control, significance, control process, tools and techniques of marketing control.</p> <ul style="list-style-type: none"> <li>• <b>Marketing of Services</b> - Definition, Characteristics of Services, Marketing Mix in service Marketing</li> <li>• <b>International marketing</b> – introduction, decision regarding international marketing, main activities, importance of international</li> </ul>	<b>20</b>

	<p>marketing.</p> <ul style="list-style-type: none"> <li>• <b>Recent trends in marketing</b> – Relationship marketing, Word-of-mouth marketing, Test marketing, case studies</li> </ul>	
--	---	--

#### **Books Recommended:**

1. Marketing for hospitality & Tourism, Philip Kotler, Second Edition, 1998
2. Marketing Management, M.M. Varma & Agarwal, Kings Publication, 2003.
3. Hospitality Sales and Marketing, Abbey, J.R.
4. Modern Marketing Management, Davar
5. Marketing Hospitality, Sales and Marketing for hotels, Motels & Resorts – Foster, D.C.
6. Sales & Marketing for the travel professional, Faster D.C.
7. Marketing Management, Kotler Philip
8. Marketing for Hospitality & Tourism, Kotler. Philip
9. Selling & Sales Management, Lonacaster G.
10. Marketing & Sales Strategies for Hotel & Travel Trade, Nagi Jagmohan
11. Modern Marketing, Pillai, R.S.
12. Service Marketing, Rampal, M.K.
13. Hospitality Marketing Management, Raid, R.D.

**1-T-2**  
**Customer Relationship Management**

Theory – 80  
Sessional – 20

-----  
Total – 100

Minimum passing marks - 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>1</b>	<b>CRM: Overview</b> <ul style="list-style-type: none"> <li>○ Conceptual Framework of Customer Relationship Management in service sector.</li> <li>○ Driving CRM culture in business</li> <li>○ Transition from Database Marketing to CRM</li> <li>○ Challenges building loyal customer</li> </ul>	<b>20</b>
<b>2.</b>	<b>CRM: An enterprise wide activity</b> <ul style="list-style-type: none"> <li>○ CRM Landscape: Evolution ,types of CRM</li> <li>○ CRM implementation options: stage wise v/enterprise wide</li> <li>○ Strategic CRM: components of strategic CRM, and Developing a CRM Strategy</li> </ul>	<b>20</b>
<b>3</b>	<b>Relationship Marketing</b> <ul style="list-style-type: none"> <li>○ Rogers &amp; Pepper's model of relationship</li> <li>○ Customer engagement and experience management concept --Levels of relational bond: Financial bond, structural bond, social bond and customized bonding</li> <li>○ Building Relationship approach: Minimize negative service encounters during pre and post buy interaction</li> <li>○ Analyze service gaps using GAP model.</li> <li>○ Redefine service blueprint to enhance customer delight.</li> <li>○ Create responsibility and accountability matrix for internal customer.</li> <li>○ Benchmark competency and create performance reward incentive program to increase</li> <li>○ Customer service levels.</li> </ul>	<b>20</b>
<b>4.</b>	<b>Building CRM process structure:</b> <ul style="list-style-type: none"> <li>○ CRM levels: Collaborative CRM, Analytical CRM, Operational CRM.</li> <li>○ Front end and back end business process integration using CRM process</li> <li>○ Sales process , Post sale Customer service process</li> <li>○ Marketing campaign process</li> <li>○ Contact and activity management process</li> <li>○ Case study based on the above.</li> </ul>	<b>20</b>

**Books Recommended :**

1. Customer Relationship Management, Vikas Publishing House, Delhi- Mohammed, H. Peeru and a Sagadevan (2004)
2. CRM-Essential Customer Strategies for the 21st Century. Tata McGraw Hill- Paul Greenberge (2005).
3. Customer Relationships Management. - William, G. Zikmund, Raymund McLeod Jr.; Faye W. Gilbert

**1-T-3**  
**Research Methodology**

Theory – 80  
Sessional – 20

-----  
Total – 100  
Minimum passing marks – 50

Unit	Topic	Marks
I	<b>Introduction to Research and Research Methodology</b> Meaning, Characteristics of Research, Need of Research in Hospitality Industry, Objectives of Research, Types of Research: a. Basic Research b. Applied Research c. Descriptive Research d. Analytical Research e. Empirical Research, Issues and Problems in Research, Meaning of Research Methodology, Stages in Scientific Research Process, Criteria for a good research problem.	20
II	<b>Research Design and Sample Design</b> Research Design – Meaning, Types and Significance, Sample Design – Meaning and Significance, Essentials of a good sampling, characteristics of a good sample, sample vs. census Stages in Sample design, sampling methods/techniques with advantages and disadvantages, role of sample size and Sampling Errors , difference between concept and variables.	20
III	<b>Methods and Techniques of Data Collection/ Research tools</b> Concept of data, Types of Data Quantitative and Qualitative, Primary Data and Secondary Data – Meaning, Significance and Limitations ,Collection of Primary Data- Observation method, Survey through Questionnaire, Designing of a questionnaire – Meaning, types of questionnaire, Stages in questionnaire designing, Essentials of a good questionnaire, questionnaire rating scale, attitude scale, Interview Technique etc with their uses, validity , reliability and usability of data, Collection of Secondary Data.	20
IV	<b>Tabulation of data and Data Processing</b> Introduction, Data processing Meaning, Significance and problems in data processing, Stages in data processing: a. Editing b. Coding c. Classification d. Tabulation, Preparing a master tabulation chart, tabulation and organization of quantitative data, e. Graphic Presentation	20

**Books Recommended:**

1. B.D. John, A.L. Brown and R.R. Cocking, 1999. "How People Learn: brain, mind, experience and school". Washington, DC: National Academy Press.
2. A.R. Fraenkel, N.E. Wallen, 2008. "How to Design and Evaluate Research in Education", *1st Ed.* Boston: McGraw-Hill. .
3. K.E. David, 2009. Curriculum Development for Medical Education: A *Six-Step Approach*, 2nd Ed. The John Hopkins University Press. ISBN 0-8018-9367-4.
4. N. Peter, 2009. "Leadership: Theory and Practice." *3rd Ed* Thousand Oaks: Sage Publications.
5. G. Bordage, B. Dawson, 2003. Experimental study design and grant writing in eight steps and 28 questions. *Medical Education*, 37(4): 376-385.
6. Research Methodology - C. R. Kothari
7. Business Research Methods - Donald Cooper & Pamela Schindler, TMGH, 9th edition.
8. Business Research Methods – Alan Bryman & Emma Bell, Oxford University Press.

**Journal**

1. Journal of Hospitality Application and Research
2. Journal of Hospitality and Tourism Research

**1-T-4**  
**Human Resources Management & Corporate Sustainability**

Theory – 80  
Sessional – 20

Total – 100

Minimum passing marks - 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
I	<b>Human Resources Management</b> - Introduction, Importance and Functions of HRM in Hotel Industry- - Evolution of Human Resources Management - Difference between Personnel Management and Human Resource Management - Role of a HR Manager, Training Manager (L&D) and Personnel Manager in Hotel Industry	20
II	<b>Industrial Relations-Retirement/Separation</b> - Grievance Procedure - Collective Bargaining - Settlement of Disputes - Superannuation - Voluntary Retirement Schemes - Resignation - Discharge - Dismissal - Suspension-Layoff	20
III	<b>Principles of Sustainability and Corporate Social Responsibility</b> - Environment. - Corporate Social Responsibility - Corporate Ethics & Governance - Corporate Social Responsibility – an Overview. - CSR – Strategies & Implementation - Managing CSR – Reporting & Auditing	20

	- Case Study – CSR Initiatives undertaken by ITC, Oberoi & TATA's	
IV	<b>Corporate Ethics</b> - Corporate Ethics – an Overview -Corporate Governance – an Overview - Impact of Corporate governance on Sustainability - Case Study – CSR Initiatives undertaken by ITC, Oberoi & TATA's and others	20

**Books Recommended:**

- Personnel Management, C.B. Memoria, S.V. Gankar, Publishing house, Mumbai.
- Stoner, James, A.F., MANAGEMENT Eaglwood Cliffs, New Jersey,
- Knoontz O'Donnell and Weirich, MANAGEMENT, International students edition, McGraw hill.
- Boella, M.J.,Personnel Management in the hotel and catering Industry, Huetetinson, London.
- Ahuja K.K. Personnel Management, Kalyani Publisher, New Delhi
- Hotel Industry, Frank Bros. & Co. (Publishers) Ltd

**1-P-1**  
**Practical Core-I**  
**Marketing for Hospitality & Tourism**

Practical – 80  
 Internal – 20

-----  
 Total – 100

Minimum passing marks - 50

1. Product life cycle- FMCG & service
2. Consumer behaviour ( Presentation)- case study
3. Launching of new product (ex- restaurant, hotel,)- strategies for planning, pricing, promotion, distribution
4. Sales Promotion
  - a. Event
  - b. E-media
  - c. Product presentation

**1-P-2**  
**Practical Core-II**  
**Customer Relationship Management**

Practical – 80  
Internal – 20

-----  
Total – 100

Minimum passing marks - 50

- 1** Planning at-least one loyalty Programme for CRM per Student.
- 2** Planning CRM Module for the core departments of a star category hotel as per the choice
- 3** Tactics for handling challenging customers in different core departments of a star category hotel.
- 4** Development of customer orientation programme such as – Planning, Recording of guest preferences.
- 5** Conducting ABC analysis of customer relationships
- 6** Designing formats to measure customer satisfaction.- Such as Guest feedback card, Email Survey.
- 7** Understanding the various stages of CRM and its implementation by interacting and communicating with customers.

Assignment-Discuss the following points selecting a Hotel as a case study:

1. Service culture
2. Quality of customer service
3. Coping with challenging customers
4. Customer satisfaction and its measurement
5. Customer loyalty and loyalty programs
6. Segmenting customers based on sales or profitability.

**1-P-3**  
**Seminar 1 – Meeting, Incentive, Convention & Exhibitions**

Internal – 25

-----  
Total – 25

Minimum passing marks – 13

Identify the codes of conduct of MICE tour operators and adapt the business practices accordingly.

1. Create MICE events with enriched meeting design and content to provide more value to participants, for example by using social media platforms.
2. Stay up-to-date with new and emerging technologies that could add value to MICE buyers and participants.
3. Give Presentation on Process and Management in MICE- Setting Up, Registration, Welcome events and ceremony, Traffic strategy and solution, Effective site management, Safety and Risk Management.
5. Activity: In teams present findings from the field trip.

**Semester – II**  
**2-T-1**  
**Core I**  
**MIS in Hospitality Industry**  
**(Management Information System)**

Theory – 80  
 Sessional – 20

Total – 100  
 Minimum passing marks – 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>I</b>	<b>Introduction to MIS</b> <ul style="list-style-type: none"> <li>- Introduction, Definition, Concept</li> <li>- Understanding Information systems</li> <li>- Infrastructural Resources required for MIS           <ul style="list-style-type: none"> <li>o Hardware</li> <li>o Software</li> <li>o Data</li> <li>o Network resources</li> <li>o Types of networks</li> </ul> </li> <li>- Impact of internet revolution on Hospitality Business</li> </ul>	20
<b>II</b>	<b>Information Systems for Rooms Division Management</b> <ul style="list-style-type: none"> <li>- Property Management System-Various Modules related to Reservations, Registration, Cashiering, Telephones, Guest History, Housekeeping</li> <li>- Various reports generated in the Front Office and their purpose           <ul style="list-style-type: none"> <li>o Room Occupancy report.</li> <li>o Front Office Cashier Report</li> <li>o Guest In-House Report</li> <li>o Expected Arrival Report</li> <li>o Expected Departure Report</li> <li>o Occupancy Forecasting Reports</li> </ul> </li> <li>- Computerized reservation system, Introduction to GDS &amp; Hotel Distribution on GDS</li> <li>- MIS for key Decisions</li> <li>- Guests data base - Keeping track of guests profile, needs, expectations.</li> <li>- Projection and Monitoring of Occupancy levels</li> </ul>	20
<b>III</b>	<b>Catering Computing Systems</b> <ul style="list-style-type: none"> <li>- Recipe Costing</li> <li>- Stock Control System</li> <li>- E- Procurement Systems</li> <li>- Electronic POS System</li> <li>- Table Management Systems</li> <li>- Conference and Banqueting Systems</li> <li>- Specialist Catering Computer Systems</li> <li>o Mini Bar</li> <li>o Beverage Control Systems</li> <li>o Club Management</li> </ul>	20
<b>IV</b>	<b>Back Office Systems</b>	20

	<ul style="list-style-type: none"> <li>- Pay Roll Systems</li> <li>- Personnel Management Systems</li> <li>- Maintenance Management Systems</li> <li>- Performance Management Systems</li> <li>- At Your Service (AYS System)</li> </ul>	
--	--	--

**Books Recommended**

1. Information Management System –MTM4-Rference book of IGNOU
2. Management Information Systems – W.S.Jawadekar

**2-T-2  
Core II  
Hospitality Laws**

Theory – 80  
Sessional – 20

-----  
Total – 100

Minimum passing marks - 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>I</b>	Laws relating to Hospitality industry- Renewal Suspension and termination of licenses. Procedure for granting Star gradation in India, various approvals and permissions required to set up a hotel. Other Licenses required to start a hotel from FHRAI Guidelines.	20
<b>II</b>	Licenses and permits required by Hotels <ul style="list-style-type: none"> <li>- Bar and liquor Licenses, Validity, renewal and penalties.</li> <li>- Restaurant and various types of outlets and Licenses required by them.</li> <li>- Swimming pool License</li> <li>- Spa and Health Club License.</li> <li>- FSSAI Regulation.</li> </ul> - The Arms Act 1959- 24b, offences and Penalties-27, 28,32,37 and 41. - The Narcotic Drugs And Psychotropic Substances 1985 (Amended Act 2001) -15, 17, 30,41,42 and 45.	20
<b>III</b>	Concept of Tourist Police and Measures for safety and security of Tourist. Need of Central Tourism Legislation in India. Laws and legislation relating to tourist entry, stay and departure. Procedure and requirement for procuring various travel documents (passport, visa and health certificates) with relation to inbound and outbound tourists. Laws relating to currency exchange, FEMA, and Passport Act-1967.	20
<b>IV</b>	Laws relating to passenger safety, convenience and compensation during air travel, Legislations relating accompanied and an accompanied tourist baggage. Compensation for lost and damaged baggage. Insurance for tourists and their baggage. Archaeological site and remains act, Wildlife Protection Act, Environment Protection Act And Air, Water And Noise Pollution Act. Foreigners Act1946.	20

**Books Recommended:**

1. Gupta S.K.: Foreign Exchange Laws and Practice: Taxman Publications Delhi, 1989.
  2. Ensor, R.:Management of Foreign Exchange Risk: Euro money Publications, London
  3. Malik, S.S., Ethical, Legal and regulatory aspects of tourism Business: Rahul, Delhi
  4. Sajnani M.: Indian Tourism Business – A Legal Perspective
  5. Manuel G. Velasquez: Business Ethics Concepts and Cases: Phi Learning Pvt. Ltd.
  6. Legal Aspect for Hospitality and Tourism Industry—By Atul Bansal
- The students should refer to the respective Acts.
- Note-** 1) For all Acts the scope, objectives & definitions to be covered.  
 2) Only the provisions related to the hospitality industry to be taught.  
 3) Bare Acts for individual law shall be referred for the scope of law.

**2-T-3**  
**Core III**  
**Statistics & Quantitative Techniques**

Theory – 80  
 Sessional – 20

Total – 100

Minimum passing marks - 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>I</b>	<b>Meaning and Importance of research report writing</b> a. Essentials of a good Research Report b. Ethical Norms in Research c. Ethical Issues in Research – Plagiarism d. Role of Computer in Research e. Structure/ layout of Research Report f. Types of Research Report g. Steps in research report writing h. Footnotes and Bibliography	20
<b>II</b>	<b>References and Citation methods-</b> a. APA (American Psychological Association) b. MLA (Modern Language Association) c. CMS (Chicago Manual Style)	20
<b>III</b>	<b>Conceptual understanding of Statistical Measures.</b> Measures of central tendencies Measures of Variations Probability Concepts- Binomial, Normal, Use of normal probability tables. Regression analysis.	20
<b>IV</b>	Testing of Hypothesis-(Z+, T. , Chi Square{2x2, rxc Contingency table}, f-Test) Corelation Coefficient of Corelation Rank Co-relation ( Pearson, Spearman) Error- Type 1 Type 2. Factor analysis.	20

**Books Recommended:**

1. B.D. John, A.L. Brown and R.R. Cocking, 1999. "How People Learn: brain, mind, experience and school". Washington, DC: National Academy Press.
2. A.R. Fraenkel, N.E. Wallen, 2008. "How to Design and Evaluate Research in Education", *ih Ed.* Boston: McGraw-Hill. .
3. N. Peter, 2009. "Leadership: Theory and Practice." *3rd Ed* Thousand Oaks: Sage Publications.

**2-T-4  
Core IV  
Tourism: A Global Perspective**

Theory – 80  
Sessional – 20

Total – 100

Minimum passing marks – 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
I	<b>Globalization &amp; tourism sector</b> Globalization & the business world, the tourism industry, Challenges, Factors affecting Global & regional tourist movements, Contemporary trends in international tourist movements. Types of international Tourism Inbound and Outbound. Global code for ethics of Tourism	<b>20</b>
II	<b>The emergence of international tourism</b> Historical aspects, development of chains, development abroad, airline connection. Trends in terms of tourist arrival and tourist receipts in inbound tourism at the global level. Global competition & the future of International Tourism Long -term tourism growth trends, tourism growth in major regions, Problems and challenges before international tourism like climate change, terrorism, and Environmental issues	<b>20</b>
III	<b>Political aspects of the international travel, tourism,</b> Barriers to travel, tourism investment & business, regulations, international organizations dealing with barriers viz : UNWTO, IMF. Need for government support of tourism, national tourism organizations, political stability, travel advisories, political risk, crisis management	<b>20</b>
IV	<b>Global Tourism Trends</b> International tourism sales & marketing. Inbound and Outbound tourism trends in East Asia Pacific(This diverse region includes China, Fiji, Indonesia, Korea, Malaysia, Philippines, Solomon Islands, Thailand, and Vietnam.), Middle East(Iran, Iraq, Turkey, UAE, Sudan and Egypt) and South Asia(Afghanistan, Bangladesh, Bhutan, India Maldives, Nepal, Pakistan, Sri Lanka).	<b>20</b>

**Books Recommended**

- 1) Tourism – The Business of Travel by Roy A. Cook, Laura J. Yale, Joseph J. Marqua, Pearson education
- 2) Tourism, Principles, Practices and Philosophies – Charles R. Goddner, JR Brent Ritchie, Wiley – India edition
- 3) Tourism Economics – Donald E. Lund berg, M. Krishnamoorthy, Mink H. Stavenga, John Wiley & sons. Inc

- 4) Dynamics of Modern Tourism – Ratandeep Singh, Kanishka Publications, New Delhi  
 5) Tourism Operations and Management – S. Roday, A. Biwal, V. Joshi, Oxford University Press, New Delhi  
 6) The Travel Industry - Chuck Y. Gee, Denter JL. Choy, James C. Maheno, AVI Publishing company

**2-P-1**  
**Practical Core I**  
**MIS in Hospitality Industry**

Practical – 80  
 Internal – 20

-----  
 Total – 100

Minimum passing marks - 50

- 1 Creation and presentation of Various reports generated in the Front Office.
  - o Room Occupancy report.
  - o Front Office Cashier Report
  - o Guest In-House Report
  - o Expected Arrival Report
  - o Expected Departure Report
  - o Occupancy Forecasting Reports
- 2 Creation and presentation of Various reports generated in the Back Office.
  - Attendance Record,
  - Maintenance record.

\*\*\*\*\*

**2-P-2**  
**Practical Core II**  
**Tourism: A Global Perspective**

Practical – 80  
Internal – 20

-----  
Total – 100  
Minimum passing marks - 50

- Product Presentation of Hospitality & Tourism – At least 3 products
- Preparing of Brochures for Hospitality & Tourism – different type of hotels 3 ; and any two continents
- Handling situations & Handling Crises (Case studies): Handling Crises in Hospitality & Tourism at least 3 situations
- Valuation of tourist destination – a comparative study of various tourist destination with respect to advantages and disadvantages

**2-P-3**  
**Seminar I-Managerial Communication**

Internal – 25  
-----  
Total –25  
Minimum passing marks - 12

**I      Introduction to Managerial Communication**

Meaning, Importance and objectives- Principles of communication , Forms of communication, communication process, Barriers of effective communication, Techniques of effective communication

**Nonverbal Communication**

Body Language, Gestures, Postures, Facial Expressions, Dress codes, The Cross Cultural Dimensions of Business Communication, Listening and Speaking techniques of eliciting response, probing questions , observations,

**Business and Social etiquettes**

**II     Managerial Speeches**

Principles of Effective speech and Presentations, Technical & Non technical presentations, Speech of Introduction – Speech of thanks-occasional speech theme speech, Use of audio visuals aid. Introducing a third person

**III    Interview Techniques**

Mastering the art of conducting and giving interview, Placement interview, discipline interviews, appraisal interviews, exit interviews

**Group Communication**

Importance, Meetings – group discussions. Video conferencing

**IV     Introduction to Managerial Writings, Business letters**

Inquiries, Circulars, Quotations, Order, Acknowledgements Executions, Complaints, claims and adjustments, collection letter, Banking correspondence, Agency correspondence, Bad news and persuading letters, Sales letters, Job applications letters Bio data, Covering letter, Interview Letters, Letter of Reference , Memos, Minutes, circulars and notices Writing official e mails

### **Reports**

Types of Business Reports – Formats, choice of vocabulary, coherence and cohesion , paragraph writings, organizations reports by individual , Report by committee

**Semester - III**  
**3-T-1**  
**Core -I**  
**Materials Management**

Theory – 80  
Sessional – 20

-----  
Total – 100

Minimum passing marks - 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>1.</b>	<b>Introduction Materials Management</b> -Evolution, Importance, Scope and objectives , Interface with other functions, evolution to 3 pl Trade off Customer service & cost <b>Materials Handling</b> - Principles of Materials Handling systems - Materials handling equipments - Safety issues	<b>20</b>
<b>2.</b>	<b>Inventory</b> - Need of inventory - Cost associated with inventory - Types of inventory , basic EOQ model - EOQ with discounts- ABC analysis classifications of materials, VED, HML, FSN, GOLF, SOS, (Numerical expected on basis EOQ , EOQ with discounts) - Inventory control & cost reduction Techniques, inventory turnover ratio codification concept and benefits	<b>20</b>
<b>3.</b>	Materials Requirement Planning Advantage over conventional Planning Input and output of MRP system -Forecasting – overview of qualitative and quantitative methods of forecasting bill of materials explosion- Materials flow in MRP, Concepts of ERP	<b>20</b>
<b>4.</b>	<b>Purchasing Management :</b> -Responsibility of Purchase Department, Purchase Cycle , Negotiation & Bargaining, Vendor Relation & Development, Purchasing methods, Global Sourcing Store – Function, Importance, Organization of stores Layout, stores procedure and documentation	<b>20</b>

**Reference Books:-**

1. Materials Management – Dutta
2. Handbook of Materials Management - Gopalkrishnan
3. Materials & Logistics Management - L. C. Jhamb
4. Introduction to Materials Management – Arnold
5. Logistics & Supply Chain Management – Martin Christopher

**3-T-2**  
**Core II**  
**Tourism Destination India**

Theory – 80  
Sessional – 20

Total – 100

Minimum passing marks – 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>1</b>	<b>History of Indian Tourism</b> - Ancient period - Pre Independence - Present status of Tourism in India	<b>20</b>
<b>2.</b>	<b>Role of Government in Tourism Promotion</b> - Incredible India - Role and Functions of India Tourism and STDC - Travel statics.	<b>20</b>
<b>3</b>	<b>Tourism Products</b> - Natural – Beaches, Hills, Islands - Human Made – Fairs, Festivals, Architecture, Monuments, Shopping - Symbiotic – Marine Parks, Wildlife, Sanctuaries, Adventure, Sports <b>Major Tourist Attractions</b> - Famous Places of Tourist interest in India	<b>20</b>
<b>4.</b>	<b>Tourist products of India (New Trends)</b> - Spiritual Tourism - Religious Tourism - Wedding Tourism - Yoga - Medical Tourism - Agro Tourism	<b>20</b>

**Books Recommended**

- 1) India –Aruna Deshpande  
2) Tourism –Romila Chawla

Reference Websites:

- [www.incredibleindia.com](http://www.incredibleindia.com)  
[www.tourism.gov.in](http://www.tourism.gov.in)  
[www.tourismindia.com](http://www.tourismindia.com)

**3-T-3**  
**Elective- I**  
**Food & Beverage Management-I**

Theory – 80  
Sessional – 20

-----  
Total – 100  
Minimum passing marks – 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
I	<b>Hazard analysis and Critical Control Point</b> <ul style="list-style-type: none"> <li>• Introduction to Food Safety Management system</li> <li>• History of HACCP, HACCP in India, seven basic principles</li> <li>• Good Manufacturing practices (GMP)</li> <li>• Good Hygiene practices (GHP)</li> <li>• Types of Hygiene</li> <li>• Importance and place of Hygiene in the Hotel Industry</li> </ul>	20
II	<b>Food &amp; Beverage Service and Food Safety</b> <ul style="list-style-type: none"> <li>• HACCP in menu planning, purchasing, receiving, storing, issuing, preparation, cooking, holding, Serving, Reheating, Cleaning.</li> <li>• Safe Hand Washing</li> <li>• Temperature danger zone</li> <li>• Waste disposal</li> </ul>	20
III	<b>Training of food handlers</b> <ul style="list-style-type: none"> <li>• Objectives and benefits of hygiene training</li> <li>• Steps in planning and implementing a training program based on HACCP</li> <li>• Evaluation of the program</li> <li>• Documentation required for maintain HACCP</li> </ul>	20
IV	<b>Standard operating procedures</b> <ul style="list-style-type: none"> <li>• Purchasing</li> <li>• Receiving deliveries</li> <li>• Storage</li> <li>• Holding Hot and Cold foods</li> <li>• Cooling</li> <li>• Reheating,</li> <li>• Serving food</li> <li>• Self service Area</li> </ul>	20

**Books Recommended:**

1. Food Hygiene and Sanitation, S. Roday, Tata Mc Graw-Hill
2. The hospitality Industry : Significance and application of HACCP, Nandita Sapra, Swaprakashan Publication
3. Managing with the HACCP System, Ronald Cichy
4. Supervising Food Safety, Richard Sprenger, Published by Highfield, Co. UK. Limited.
5. Food Service and Catering Management by R.K.Arora – APH, Publishing Corporation, New Delhi-110002
6. Food Hazard & Food Hygiene, Seema Yadav.
7. Food & beverage Service, R. Singaravelavan, Oxford University Press.

**OR**  
**3-T-3**  
**Elective-II**  
**Accommodation Management –I**

Theory – 80  
Sessional – 20

Total – 100

Minimum passing marks - 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
1	<b>Introduction to facilities management</b> <ul style="list-style-type: none"> <li>Scope and meaning of facility management</li> <li>Importance and growth of facility management</li> <li>Space management</li> <li>Capacity, resource management</li> </ul>	<b>20</b>
2.	<b>Application of scientific techniques in rooms division –</b> <ul style="list-style-type: none"> <li>Application of work study</li> <li>Work measurement- application to man power</li> <li>Technological changes using software for operating function – application to process and revenue management</li> </ul>	<b>20</b>
3	<b>Housekeeping in other venues</b> <ul style="list-style-type: none"> <li>Housekeeping administration for museums, hostels, residential schools, guest houses, corporate offices, banks, stadiums, malls.</li> <li>Waste disposal – control and management</li> </ul>	<b>20</b>
4.	<b>Front Office Accounting &amp; revenue management</b> <ul style="list-style-type: none"> <li>Room Tariff fixation and establishing room rates</li> <li>Front Office as revenue generating center, managing occupancy and effective revenue (ARR, REV, PAR)</li> <li>Various financial records and document prepared and used at billing section</li> <li>Guest Accounting cycle</li> <li>Auditing in Front Office</li> </ul>	<b>20</b>

**Books Recommended**

- 1) Managing facility by Christine Jones - Hotel facility Planning by Tarun Bansal
- 2) Hotel housekeeping Operations and Management - G Raghubalan
- 3) Hotel housekeeping Operations and Management - G Raghubalan The Professional Housekeeper by Georgina Tucker
- 4) Managing the Lodging Operations - Robert Christie Mil
- 5) Commercial Housekeeping
- 6) Professional Front Office management - Robert H. Woods

**3-T-4**  
**Foundation –I (Refer Annexure)**

Theory – 80

Sessional – 20
-----
Total – 100

Minimum passing marks – 50

**3-P-I**  
**Seminar**  
**Industrial Training \*\***

Practical – 25
Total – 25
Minimum passing marks -13

Comprehensive Viva-Voce/Presentation based on training

Industrial Training should be arranged through training and placement incharge of the department and credits will be given as per details given below:-

Log book and Certificate	–	1 Credit
Training Report	–	1 Credit
Presentation of Training Report -		2 Credit

Logbook and certificate will be evaluated by the Hotel/Travel Agency/ Agency/any Hospitality Management establishment.

Training Report will be evaluated by the internal examiner of the College.

The Seminar will be scheduled by the college or the department based on training report /and the final viva-voce will be commenced on the day and date prescribed by the university in presence of Internal Examiner.

**3-P-2**  
**Tourism Destination India**

Practical – 80
Internal – 20
Minimum passing marks -50

- 1) Visit to a tourist destination local, Regional, National
- 2) Critically analyzing these tourist destination for the basic tourist facilities (Accommodation, travel/ transportation)
- 3) Evaluating the support services of these destination – Souvenir shops, guides, drivers, escorts.
- 4) Attending a travel agency to get knowledge of travel agencies operations.

**3-P-3**  
**Food and Beverage Management-I**

Practical – 80  
Internal – 20

---

Total – 100  
Minimum passing marks – 50

1. Implement HACCP principles in the college premises.
2. Knowledge about temperature danger zone, use of thermometers in practicals
3. Practice Techniques of safe hand washing
4. Importance of Workplace hygiene—equipments, work surfaces.
5. SOP for :
  - o Purchasing perishable and non-perishable items.
  - o Holding Hot and Cold foods
  - o Reheating,
  - o Serving food
6. Visit to a hotel and observing the scales which they use for HACCP.

**OR**

**3-P-3**  
**Accommodation Management -I**

Practical – 80  
Internal – 20

---

Total – 100  
Minimum passing marks - 50

1. Preparation of various records of financial transaction at cashier sections- budgetary applications of the financial transaction
2. Fixation of room rates -
3. Designing of room tariff – display in various types of format ex. Hotel website, printed, GDS etc.
4. Designing loss prevention manual for safety & security of establishment.

**Semester-IV**  
**4-T-1**  
**Core I**  
**Strategic Management**

Theory – 80  
Sessional – 20

-----  
Total – 100

Minimum passing marks – 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
1	<p><b>Introduction to Business Policy</b></p> <ul style="list-style-type: none"> <li>• Evaluation of business policy as a discipline, Nature of Business policy, Importance of business policy, Purpose of business policy, Objectives of business policy</li> <li>• Strategic Management – an overview</li> <li>• Understanding Strategy, Definition &amp; Explaining strategy, Strategic Decision making</li> <li>• Process of Strategic Management, School of thought on Strategy Formulation</li> <li>• Strategic Intent</li> <li>• Vision, Mission, Business Definition, Goals &amp; Objective</li> </ul>	<b>20</b>
2.	<p><b>Environmental Appraisal</b></p> <ul style="list-style-type: none"> <li>• Concept of Environment, Environmental Sectors, Environmental Scanning</li> <li>• Corporate level strategies</li> <li>• Grand Strategies, Stability Strategies, Expansion strategies, Retrenchment strategies Combination Strategies</li> <li>• Strategic Analysis &amp; Choice</li> <li>• Corporate &amp; Business Level Strategic Analysis, Contingency Strategies, Strategic Plans</li> </ul>	<b>20</b>
3	<p><b>Strategy Implementation</b></p> <ul style="list-style-type: none"> <li>• Interrelationship between formulation &amp; Implementation, Project Implementation Resource Allocation, Organizational System, Corporate Culture, Social Responsibilities &amp; Strategic Implementation</li> <li>• Functional &amp; Operational implementation</li> <li>• Functional Plan &amp; Policies, Financial Plans &amp; Policies, Marketing Plans &amp; Policies</li> <li>• Strategy Formulation</li> <li>• Expansion, Retrenchment, Merger, Joint Venture</li> <li>• Strategy Formulation Process</li> <li>• Strategy analysis &amp; Choice, Factors influencing choice, SPACE Matrix, BCG Matrix</li> <li>• Policies in functional Areas</li> <li>• Functional policies, financial policies</li> <li>• Strategic Implementation, Review &amp; Revaluation</li> </ul>	<b>20</b>

4.	<b>Strategic Evaluation &amp; Control</b> Strategic Control, Operational Control, Role of Organizational System in Control Case Studies- Case Analysis & Presentation Mission & Mission Statement, Strategies, Approaches, Entrepreneurial, Strategic Decision Making, Adaptive search, Environmental & Internal resource Analysis Environmental Scanning, SWOT Analysis (Internal & External Environment)	<b>20</b>
----	---	-----------

**Recommended Books :**

1. Wootton and Terryhorne: Strategic planning: The Nine Programme
2. John Tribe: Corporate Strategy for Tourism.
3. Prashad, L.M.: 2004, Business Policy and Strategic Management, Sultan chand & Sons.
4. Ghosh, P.K.: 2004, Strategic Planning & Management, Sultan Chand & Sons.

**4-T-2  
Core - II  
Food Tourism**

Theory – 80  
Sessional – 20

-----  
Total – 100

Minimum passing marks – 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>1</b>	<ul style="list-style-type: none"> <li>• Meaning and concept of food tourism</li> <li>• Understanding the reasons for growth of food tourism</li> <li>• Potential of food tourism</li> <li>• Global trends in food tourism</li> </ul>	<b>20</b>
<b>2</b>	<ul style="list-style-type: none"> <li>• Popular food tourist destination in world</li> <li>• Spain</li> <li>• China</li> <li>• France</li> <li>• Italy</li> <li>• Malaysia (at the cross road of Asian Food )</li> <li>• Graft trunk and food tourism</li> </ul>	<b>20</b>
<b>3</b>	<ul style="list-style-type: none"> <li>• Planning of food tourism</li> <li>• Rules and code of conduct of good tourism</li> <li>• Food safety and sustainable planning of food tourism</li> <li>• Food tourism based activities (taste trekking food walks/trails etc.)</li> <li>• Street Food</li> <li>• Promotion and marketing of food tourism</li> </ul>	<b>20</b>
<b>4</b>	<ul style="list-style-type: none"> <li>• India – as a potential destination for food tourism</li> <li>• Impact of geographical location, culture and ethnic food habits</li> <li>• Food tourism destination in India</li> <li>• North</li> <li>• South</li> <li>• East</li> </ul>	<b>20</b>

	<ul style="list-style-type: none"> <li>• West</li> <li>• Zonal/Regional food tourism</li> </ul>	
--	---	--

**Note :** As a part of curriculum the students will have to visit traditional kitchen / food service outlets of regional foods.

### **Reference Books**

- 1)Tourism – The Business of Travel by Roy A. Cook, Laura J. Yale, Joseph J. Marqua, Pearson education
- 2)Tourism, Principles, Practices and Philosophies – Charles R. Goddner, JR Brent Ritchie, Wiley –India edition
- 3)Tourism Economics – Donald E. Lund berg, M. Krishnamoorthy, Mink H. Stavenga, John Wiley & sons. Inc
- 4)Dynamics of Modern Tourism – Ratandeep Singh, Kanishka Publications, New Delhi
- 5)Tourism Operations and Management – S. Roday, A. Biwal, V. Joshi, Oxford University Press, New Delhi
- 6)The Travel Industry - Chuck Y. Gee, Denter JL. Choy, James C. Maheno, AVI Publishing company
- 7).Indian Food, K.T.Achaya, Oxford
- 8).Theory of Cookery By K Arora, Publisher: Frank Brothers
- 9) Reports of UNWTO

**Elective 1**  
**4-T-3**  
**Food & Beverage Management –II**

Theory – 80  
Sessional – 20

Total – 100

Minimum passing marks – 50

<b>Unit</b>	<b>Topic</b>	<b>Marks</b>
<b>I</b>	<b>Butler Service</b> <ul style="list-style-type: none"> <li>• Introduction about a butler</li> <li>• Responsibility of a butler</li> <li>• Types of Butler</li> <li>• Skills of a Butler</li> <li>• Etiquette and protocol of butler service</li> <li>• Travelling with your guest</li> <li>• Pets handling inside the hotels.</li> </ul>	20
<b>II</b>	<b>Managing a Bar Business</b> <ul style="list-style-type: none"> <li>• Creating a business plan</li> <li>• Marketing the bar business</li> <li>• Marketing tools to attract customers to a bar</li> <li>• Pricing as a promotional tool in bars</li> <li>• Latest trends in Bar</li> <li>• Classic and contemporary cocktails</li> <li>• Mixology beyond cocktails</li> </ul>	20
<b>III</b>	<b>Menu Engineering</b> <ul style="list-style-type: none"> <li>• Definition, scope and importance</li> <li>• Elements and pre-requisites of menu engineering</li> <li>• Psychology</li> <li>• Accounting</li> <li>• Graphic Design</li> <li>• Marketing and Strategy</li> </ul>	20
<b>IV</b>	<b>Recent Trends and Quality Management in Food and Beverage Operations</b> <ul style="list-style-type: none"> <li>• Meaning of quality</li> <li>• Importance of quality</li> <li>• Managing quality in food &amp; beverage Operations</li> <li>• Examples of quality management in food &amp; beverage operations</li> <li>• Designing a quality system for food &amp; beverage</li> </ul>	20

**Books Recommended:**

1. Classic cocktails by Stuart Walton, Suzannah Olivier, Joanna Farrow – Lorenz books,
2. Bar & Cocktails by Michael Jackson, Mitchell Beazley
3. The Bartender's guide by Peter Bohrmann – Greenwich edition London
4. International Bartender's Guide – Random house, New York.
5. Food and beverage management, Bernard davis, Andrew lockwood, peter, Alcott and Ioannis Pantelidis, fifth edition.

**OR**  
**Elective 2**  
**4-T-3**

## Accommodation Management-II

Theory – 80  
Sessional – 20

-----  
Total – 100  
Minimum passing marks – 50

Unit	Topic	Marks
<b>I</b>	<b>Ergonomics in facilities management – Hospitality organization</b> <ul style="list-style-type: none"> <li>• Importance and Principles</li> <li>• Training staff to work ergonomically</li> <li>• Job safety analysis and its applications</li> <li>• Safety awareness for staff and guest</li> <li>• Accident prevention and work environment safety</li> </ul>	<b>20</b>
<b>II</b>	<b>Trends for Internal Environment</b> <ul style="list-style-type: none"> <li>• Managing labour cost with technology</li> <li>• The shrinking labour market</li> <li>• Maximizing benefits of technology</li> <li>• Encouraging staff development</li> </ul>	<b>20</b>
<b>III</b>	<b>F.O. as Sales Department</b> <ul style="list-style-type: none"> <li>• Co-ordination of F.O. with sales department</li> <li>• Importance of F.O. as sales point</li> <li>• Sales promotion technique used by F.O.</li> <li>• Qualities of F. O. staff to act as sales agent</li> </ul>	<b>20</b>
<b>IV</b>	<b>Public Relation</b> <ul style="list-style-type: none"> <li>• Importance of Public relations in Hotels</li> <li>• Agents of Public relation building at Front Office</li> <li>• Various Public Relation tactics</li> <li>• Role of Media in Public Relation</li> </ul>	<b>20</b>

### **Books Recommended:**

- Professional Management of Housekeeping Operations – Thomas J.A., Jones, Ed.D.R.EH, John Wiley & Sons, Inc.
- Housekeeping Operations Workbook, Macmillan Education Ltd. – Valerie Paul & Christine Jones.
- Hotel, Hostel and Hospital Housekeeping-Joan C Branson, Margaret Lennox, Edwards Arnold(publishers) ltd. ELBS
- Housekeeping Supervision Jane Fellows, Macdonald & Erans Ltd. London.
- House keeping Management Margaret kappas, Aleha Nitschke, Education Institute, USA.
- ‘Bonsai’, [www.bonsai-bci.com](http://www.bonsai-bci.com)
- [www.hotelworkersrising.com](http://www.hotelworkersrising.com)

**4-T-4**

**Subject - Foundation –II (Refer Annexure)**

**OR**

**4-RP**  
**Project Work & Viva / Voce**

Practical – 80  
Internal – 20

-----  
Total – 100  
Minimum passing marks – 50

Every student shall select a research project from the Hospitality Industry. The nature of the product shall be based on the synthesis of their experience and knowledge gained from allied subjects. Subject of the project shall be approved by the department at the commencement of the session. The research project will be guided by an approved guide of the university. The students will be required to submit the project report on a prescribed date.

**Comprehensive Viva-Voce/ Seminar based on Project /Thesis**

The seminar will be scheduled by the college or the department based on the thesis/ Project and the final vice-voce will be commenced on the day and date prescribed by the university in presence of external examiner.

**4-P-2**  
**Seminar on Food Tourism**

Internal – 25  
Minimum passing marks – 13

**Elective -I**  
**4-P-3**  
**Food and Beverage Management-II**

Practical – 80  
Internal – 20

-----  
Total – 100

Minimum passing marks – 50

1. Making of Classic and contemporary cocktails
2. Free Pouring, bar tricks
3. Visit to a Bar
4. 5 Compulsory training sessions in a bar
5. Platter presentation : Starter / main course / dessert
6. Techniques for quality service

**OR**

**4-P-3**  
**Accommodation Management-II**

Practical – 80  
Internal – 20

-----  
Total – 100

Minimum passing marks – 50

1. Designing documents for analyzing work place pain and hazards with used of ergonomics.
2. Surveys to find right ergonomics practices in various hotels/other institutions
3. Developing of green cleaning programmes
4. Public Relation activities in Hotels & Publicity Activities

**Refer Annexure**  
**List of Foundation Subjects for P.G. (RTMNU)**

Sr.No.	Subject	Board	4 <sup>th</sup> Papers of Semester- 3	4 <sup>th</sup> Papers of Semester-4
1	Mathematics	Mathematics	Mathematics-I	Mathematics-II
2	Physics	Physics	Physics-I	Physics-II
3	Chemistry	Chemistry	Chemistry-I	Chemistry-II
4	Bio-Technology (Ad-hoc)	Bio-Technology	Bio-Technology-I	Bio-Technology-II
5	Computer Science	Computer Science & Engineering	Computer Science-I	Computer Science-II
6	Environmental Science	Environmental Science	Environmental Science-I	Environmental Science-II
7	Botany	Botany	Botany-I	Botany-II
8	Zoology	Zoology	Zoology-I	Zoology-II
9	Statistic	Statistics	Statistics-I	Statistics-II
10	Business Management	Business Management	Business Management -I	Business Management -II
11	Accountancy	Account & Statistics	Account & Statistics-I	Account & Statistics-II
12	Managerial Skill	Business Administration & Business Management	Managerial Skills-I	Managerial Skills-II
13	Education Technology & Management Skills	Education Technology & Management Skills	Education Technology & Management Skills-I	Education Technology & Management Skills-II
14	Communication Skill	English	Communication Skills-I	Communication Skills-II
15	Sanskrit	Sanskrit	Sanskrit-I	Sanskrit-II
16	German	Other Foreign Languages	German-I	German-II
17	French	Other Foreign Languages	French-I	French-II
18	Law	Law	Law-I	Law-II
19	Pharmaceutical Sciences	Pharmaceutical Sciences	Pharmaceutical Sciences-I	Pharmaceutical Sciences-II
20	Life skills	Education	Life Skills-I	Life Skills-II
21	Economics	Economics	Economics-I	Economics-II
22	Political Science	Political Science	Political Science-I	Political Science-II

23	Sociology	Sociology	Sociology-I	Sociology-II
24	Psychology	Psychology	Psychology-I	Psychology-II
25	Philosophy	Philosophy	Philosophy-I	Philosophy-II
26	History	History	History-I	History-II
27	Public Admn	Public Admn	Public Admn -I	Public Admn -II
28	Buddhist Studies	Buddhist Studies	Buddhist Studies-I	Buddhist Studies-II
29	Gandhian Thought	Gandhian Thought	Gandhian Thought-I	Gandhian Thought-II
30	Dr. Ambedkar Thought	Dr. Ambedkar Thought	Dr. Ambedkar Thought-I	Dr. Ambedkar Thought-II
31	Rashtrasant Tukdoji Maharaj Thought	Rashtrasant Tukdoji Maharaj Thought	Rashtrasant Tukdoji Maharaj Thought-I	Rashtrasant Tukdoji Maharaj Thought-II
32	Travel & Tourism	Travel & Tourism	Travel & Tourism-I	Travel & Tourism-II
33	Personality Development	Human Development	Personality Development-I	Personality Development-II
34	Cosmetic Technology	Cosmetic Technology	Cosmetic Technology-I	Cosmetic Technology-II
35	Hospitality Management	Hotel Mgt. & Cat. Tech.	Hospitality Mgt. -I	Hospitality Mgt. -II
36	Chemical Engineering	Chemical Engineering	Chemical Engineering-I	Chemical Engineering-II
37	Chemical Technology	Chemical Technology	Chemical Technology-I	Chemical Technology-II
38	Civil Engineering	Civil Engineering	Civil Engineering-I	Civil Engineering-II
39	Electrical Engineering	Electrical Engineering	Electrical Engineering-I	Electrical Engineering-II
40	Mechanical Engineering	Mechanical Engineering	Mechanical Engineering-I	Mechanical Engineering-II
41	Electronics Engineering	Electronics Engineering	Electronics Engineering-I	Electronics Engineering-II

42 Pali Prakrit

Pali Prakrit

Pali Prakrit I

Pali Prakrit II

\*\*\*