# Scheme of Examination

**Bachelor of Arts (BA)**

**Three Year Programme (Annual)**

2013-14

## BA-I

<table>
<thead>
<tr>
<th>Paper</th>
<th>Nomenclature</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory Subjects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA1001</td>
<td>English</td>
<td>100</td>
</tr>
<tr>
<td>BA1002</td>
<td>Hindi</td>
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</table>

## Elective Subjects

Choose any two of the subjects one from each group:

### Group-I

<table>
<thead>
<tr>
<th>Paper</th>
<th>Nomenclature</th>
<th>Marks</th>
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<tbody>
<tr>
<td>BA1003</td>
<td><strong>History</strong>&lt;br&gt;Option-1- History of India (earlier to 1526)</td>
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<tr>
<td>BA1004</td>
<td><strong>Economics</strong>&lt;br&gt;Option-1-Micro Eco. &amp; Indian Economic Problems</td>
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<tr>
<td>BA1005</td>
<td><strong>Public Administration</strong>&lt;br&gt;Elements of Public Administration</td>
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### Group-II

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<tr>
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<tbody>
<tr>
<td>BA1006</td>
<td><strong>Political Science</strong>&lt;br&gt;Option-1-Political Theory</td>
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<tr>
<td>Mathematics</td>
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### BA-II

**2014-15**

<table>
<thead>
<tr>
<th>Paper</th>
<th>Nomenclature</th>
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<tbody>
<tr>
<td>BA2001</td>
<td>English</td>
<td>100</td>
</tr>
<tr>
<td>BA2002</td>
<td>Hindi</td>
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</table>

**Elective Subjects**
Choose any two of the subjects one from each group:

<table>
<thead>
<tr>
<th>Group-I</th>
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</thead>
<tbody>
<tr>
<td>BA2003</td>
<td>History</td>
<td>100</td>
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<tr>
<td></td>
<td>Option-1-History of India (C.A.D 1526 to 1857)</td>
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</tr>
<tr>
<td>BA2004</td>
<td>Economics</td>
<td>100</td>
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<tr>
<td></td>
<td>Option -1-Macro Economics</td>
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<tr>
<td>BA2005</td>
<td>Public Administration</td>
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<tr>
<td></td>
<td>Option-1- Bhartiya Prashashan</td>
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<td><strong>Group-II</strong></td>
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<tr>
<td>BA2006</td>
<td>Political Science</td>
<td>100</td>
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<tr>
<td></td>
<td>Option-1- Bhartiya Sarkar &amp; Rajniti</td>
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<tr>
<td>BA2007</td>
<td>Mathematics</td>
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<tr>
<td></td>
<td><strong>Paper-I</strong> Advance Calculus</td>
<td>35</td>
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<td></td>
<td><strong>Paper-II</strong> Differential Equations and Calculus of Variations</td>
<td>35</td>
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<tr>
<td></td>
<td><strong>Paper-III</strong> Mechanics</td>
<td>30</td>
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<tr>
<td>BA2008</td>
<td>Sanskrit</td>
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**BA-III** 2015 -16

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<th>Paper</th>
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<td><strong>Compulsory Subjects</strong></td>
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<tr>
<td>BA3001</td>
<td>English</td>
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<tr>
<td>BA3002</td>
<td>Hindi</td>
<td>100</td>
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**Elective Subjects**
Choose any two of the subjects one from each group:

<table>
<thead>
<tr>
<th><strong>Group-I</strong></th>
<th></th>
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<tbody>
<tr>
<td>History</td>
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<td>Course Code</td>
<td>Course Title</td>
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<td>-------------</td>
<td>--------------------------------------------------</td>
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<tr>
<td>BA3003</td>
<td>Option-2-History of Ancient World</td>
</tr>
<tr>
<td>BA3004</td>
<td><strong>Economics</strong></td>
</tr>
<tr>
<td></td>
<td>Development &amp; Environmental Economics and International Trade</td>
</tr>
<tr>
<td>BA3005</td>
<td><strong>Public Administration</strong></td>
</tr>
<tr>
<td></td>
<td>Options-2- Local Govt. and Administration in India</td>
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<tr>
<td></td>
<td><strong>Group-II</strong></td>
</tr>
<tr>
<td>BA3006</td>
<td><strong>Political Science</strong></td>
</tr>
<tr>
<td></td>
<td>Options-1-Comparative Govt. and Politics</td>
</tr>
<tr>
<td>BA3007</td>
<td><strong>Mathematics</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Paper-I</strong> Analysis</td>
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<tr>
<td></td>
<td><strong>Paper-II</strong> Abstract Algebra</td>
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<tr>
<td></td>
<td><strong>Paper-III</strong> Programming in C &amp; Numerical Analysis(Theory)</td>
</tr>
<tr>
<td>BA3008</td>
<td><strong>Sanskrit</strong></td>
</tr>
</tbody>
</table>

Important Note: *The Environmental studies is a qualifying paper for all UG Courses i.e BA & B.Com. Students are required to qualify the same, otherwise final result will not be declared and degree will not be awarded.*
BACHELOR OF ARTS (BA)

B.A. PART-I

ENGLISH (COMPULSORY)

PAPER CODE: BA1001

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions, at least two questions from each section. each question shall carry 20 marks.

Section A

   The following may be deleted:
   i) ‘Leisure’ by W.H. Davies
   ii) The Flute Player of Brindaban ‘by Sarojini Naidu
   iii) The Soldier’ by R. Brooke.
C. Ideas Aglow by Dinesh Kumar and V.B. Abrol.

Following essays may be deleted:
   i) ‘Its Question Time’ by Jayant V. Narlikar
   ii) An Interview with Christian Barnard’ by N. Ram
   iii) In humanisation of War by Huek Gutman.

SCHEME OF EXAMINATION

Q1. Explanation with Reference to the Context
   The candidate will be required to attempt two passages each (with internal choice) one from the book of Poems and the other from the Collection of essays, Ideas Aglow.
   5X2=10 Marks

Q2. Short answer type questions on (five questions to be attempted out of the given eight)
   OR
   5X2=10 Marks

Four short-answer type questions will be set on the prescribed short-stories and four short-answer questions will be set on the prescribed essays. The students will be required to attempt any five out of the given eight questions.

Q3. One essay-type question (with internal choice) will be set on each of the prescribed texts A & B.
   Students will be required to attempt one question each from both the texts.
   6x2=12 Marks

Q4. One essay type question (with internal choice) will be set on the book of essays.
   8 Marks

Section B

Text Prescribed: A Remedial English Grammar for Foreign Students by FT. Wood.

The following items may be deleted:

Item Nos.:
8. Transformations
9. Confusion of Adjectives & Adverbs
10. Adverbial use of No, Not and None  
11. The Pro word one  
12. Redundant Pronouns & Preposition  
13. The use of correlatives  

**SCHEME OF EXAMINATION**

Q5. tems based on the examples/exercises given in the prescribed text books of Grammar.  
12 Marks  

Q6. Comprehension Passage (with five questions at the end.)  
10 Marks  

Q7. Paragraph: The candidate will be required to write a paragraph on any one of the five given topics.  
10Marks  

Q8. Letter/Application: Students will be asked to write a letter or an application. (The question will carry internal choice)  
8 Marks  

**HINDI (COMPULSORY)**  
**PAPER CODE BA1002**  
हिंदी अनिवार्य  

Marks: 100  

Time: 3Hrs  

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.  

पाठ्य पुस्तकः  
1. ‘काय शिखर’ — प्राचीन एवं मध्ययुगीन काय पर आधारित संज्ञक पुस्तक सं. डॉ. नरेश मिश्र, हिन्दी विभागाध्यक्ष म. द. 

विश्वविद्यालय, रोहतक।  
2. “गद्ध—शिखर” नामक गद्ध संकलन सं. हिन्दी विभागाध्यक्ष, कु विश्वविद्यालय जिसमें पांच कहावियां और पांच निबंध संकलित हैं।  

निर्देशः  
1. पहला प्रश्न काय शिखर नामक काय संग्रह से यात्रा के रूप में होगा। पाठ्यपुस्तक में निर्धारित कवियों में से किन्हीं चार कवियों की चार यात्राएं पूछी जाएंगी। परीक्षार्थियों को उनमें से किन्हीं दो की सप्रसंग यात्रा करनी होगी। 

प्रत्येक यात्रा 6 अंक की होगी और पूरा प्रश्न 12 अंकों का होगा। त्र 12  
2. किन्हीं दो कवियों का परिचय बताएं, जिनमें से परीक्षार्थियों को एक का उत्तर देना होगा। इस प्रश्न के लिए 8 अंक निर्धारित हैं। त्र 8  
3. निर्धारित कवियों में से किन्हीं दो पर अनुशीलन में से दो आलोचनात्मक प्रश्न पूछे जाएंगे। परीक्षार्थियों को किसी एक का उत्तर देना होगा। इस प्रश्न के लिए 10 अंक निर्धारित हैं। त्र 10  
4. निर्धारित पाठ्य पुस्तक गद्ध—शिखर में सकलित निबंधों और कहावियों में से यात्रा के लिए दो—दो अवतरण दिए जाएंगे, जिनमें से परीक्षार्थियों को प्रत्येक से एक—एक अवतरण की सप्रसंग यात्रा करनी होगी। प्रत्येक यात्रा 6 अंकों की और पूरा प्रश्न 12 अंकों का होगा। त्र 12  
5. निर्धारित कहावियाँ और निबंधाओं में से एक—एक का साहित्यिक परिचय पूछा जाएगा, जिनमें से परीक्षार्थियों को किसी एक का उत्तर देना होगा। इस प्रश्न के लिए 8 अंकों का होगा। त्र 8  
6. निर्धारित लेखकों में से किन्हीं दो पर अनुशीलन में से दो आलोचनात्मक प्रश्न पूछे जाएंगे। परीक्षार्थियों को किसी एक का उत्तर देना होगा। इस प्रश्न के लिए 10 अंक निर्धारित हैं। त्र 10
7. लघूतरी प्रश्न दुलापां में निर्धारित दो कहानीकारों (मोहन कवि और मालति जोशी) और निबन्धकारों (महावीर प्रसाद विजयवासी  और सरदार पूर्ण सिंह) पर पाठ्य पुस्तक की अनुशीलनी में से ही एक–एक प्रश्न अर्थात चार प्रश्न पूछे जाएंगे, जिनमें से परीक्षाधीन योग्य को किसी तीन प्रश्नों के उत्तर देने होंगे। प्रश्न परियोजनक प्रकृति के होंगे। प्रत्येक प्रश्न 10 अंकों का होगा और पूरा प्रश्न 30 अंकों का होगा। त्र 30
8. अन्तिम प्रश्न कार्य शिखर की अनुशीलनी के यायकरण पर आधारित होगा, जिसके लिए 10 अंक निर्धारित हैं। इसके अलावा, वर्तमान, पर्याय, विलोम, वाक्य के लिए एक शब्द, मुहावरे और लोकोक्ति निर्धारित हैं। इसमें 10 अन्वेषण वस्तुनिष्ठ प्रश्न होंगे। प्रत्येक प्रश्न के लिए चार विकल्प होंगे, जिनमें से एक शुद्ध उत्तर देना होगा। त्र 10

HISTORY
OPTION –I HISTORY OF INDIA (EARLIER TO 1526)
PAPER CODE: BA1003

Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I
1. Survey of the sources.
3. Concept of the Neolithic-advent of food production.
5. Society, Polity, economy, culture and religion as reflected in the vedic literature
6. Social developments-varna, Jati, marriage and property relations.

Section II
1. The Mauryan Empire-State, administration and economy: Ashoka’s Dharma-its nature and propagation; Mauryan art and architecture.
3. Sangam Age-Literature, society and culture.
4. Gupta Empire-administration, agrarian and revenue system, and trade; society, art, architecture, literature, science and technology.
5. Status of Women-marriage, property rights, sati, purdahs and devadasi system.
6. Post-Gupta period upto 750AD-Pallavas, Chalukyas and vardhanas.

Section III
1. Invasions of Ghaznavids and Ghorids; Causes of the success and their impact.
3. Fragmentation and downfall of Sultanate.
4. Society and economy under the Sultanate.
5. Religion and culture; Bhakti and Sufi movements; art, architecture during the Sultanate.

Section IV
Maps
1. Important sites of the Harappan Civilisation.
2. Ports, trading centres and trade routes of Ancient India.
3. Extent of Ashoka’s Empire, Pillars and Edicts.
4. Extent of Harsha’s Empire.
5. Extent of Allauddin Khilji’s Empire.
6. Urban Centres during the Sultanate.

Suggested Reading
H.C. Ray, Chaudhary. Advanced History of India Delhi, 1971 (Hindi Also).
R.S. Tripathi. Ancient India Delhi, 1977 (Hindi also).
A.L. Basham. The Wonder that was India Delhi 1981 (Hindi also).
R.C. Majumdar and A.S. The Vakta Gupta Age Delhi 1981 (Hindi also).
Allechin, B and Allchin, F.R. Rise of Civilisation in India and Pakistan (Delhi Select Book Service Syndicate, 1983).
Satish Chandra. Medieval India, From Sultanate to the Mughals (Delhi, Har Anand Publications, 1997).
Habibula, A.B.M. Foundation of Muslim Rule in India (In Hindi also).
Lal, K.S. Khalji, Vansh Ka Itihas (in Hindi also).
Kanoongo, K.R. Life and Times of Sher Shah Suri (in Hindi also).

ECONOMICS
(OPTION-1-MICRO ECONOMICS AND INDIAN ECONOMIC PROBLEMS)
PAPER CODE: BA1004

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Consumer’s Behaviour: Utility- Cardinal and ordinal approaches; Indifference curve;
Consumer’s equilibrium (Hicks and Slustsky); Elasticity of demand Price, Income and gross; Consumer’s Surplus.
Theory of production Costs; Production decisions, Production function, ISO-quant Law of variable proportions; Returns to scale; Economics of scale, Different concepts of costs and their interrelations.

Unit II
Market structure and commodity pricing; market forms perfect and imperfect markets; Equilibrium of firm perfect competitions, monopolistic competition, Factor pricing marginal productivity theory of distribution.

Unit III
Basic Features; Problems and planning in India; Characteristics of Indian economy; problems of poverty; inequality and unemployment; objectives of planning in Indian achievements and failures; new economics reforms: A basic idea.

Unit IV
Indian Agriculture, Nature and importance: Trends in agricultural production and productivity, Rural credit, Agricultural marketing.
Industry: industrial development during the planning period; new industrial Policy. Growth and problems of small scale industries.

Suggested Reading
Heath field and wibe (1907), An introduction to cost and production functions, Macmillan London.
Kouisoynnis, A (1990), Modern Microeconomics, Macmillan.
Ray, N.C (1918), an Introduction to Microeconomics, Macmillan Company of India Ltd Delhi.
PUBLIC ADMINISTRATION
ELEMENTS OF PUBLIC ADMINISTRATION
PAPER CODE: BA1005
Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Organisation, meaning and basis, principles of Organisation; Hierarchy, Span of Control, Decentralization, Supervision and Control, Communication. Public Relations Meaning, Methods and significance; Administrative Law; Delegated Legislation; Administrative Tribunals.
Forms of Administrative Organisation, Department, Public Corporations; Parliamentary and Govt. Control over public Corporations, independent Regulatory Commission; Staff and Line Agencies.
Personnel Administration, Recruitment, Training, Promotion, Public Service Commission, Morale, Joint consultative Machinery (Whitley councils).

POLITICAL SCIENCE
OPTION 1 - POLITICAL THEORY
PAPER CODE: BA1006
Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Part-A
Nature and significance of Political Theory
Power and Authority
State: Original and Development
State: Dominant Perspectives
Sovereignty

Part-B
Citizenship, Rights and Liberty
Equality and Justice
Democracy
Development and Welfare State
Theories of Social change

Part-C
Short answer questions, at least five, spread over the entire syllabus.
Objective type (multiple choice) question over the whole syllabus.

Suggested Readings
N.J. Hirschman and C.D. Stefano(eds.), Revisioning the Political Feminist Reconstruction of Tradition concepts in Western

MATHEMATICS

PAPER-I ALGEBRA AND TRIGONOMETRY

PAPER CODE: BA1007

Marks: 35 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I


Section II

Relations between the roots and coefficients of general polynomial equation in one variable. Transformation of equations. Descartes’ rule of Signs. Solutions of cubic equations (Cordon method) and Bi quadratic equations (Descartes’ and Ferrari Methods).

Section III


Section IV


Suggested Reading

Paper-II CALCULUS AND ORDINARY DIFFERENTIAL EQUATION
PAPER CODE: BA1007

Marks: 35 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I

Section II

Section III

Section IV
Linear differential equations of second order, / Transformation of the equation by changing-the dependent variable/the independent variable, reduction of order. Method of variation of parameters and unknown coefficients, Ordinary simultaneous differential equations.

Books Recommended
PAPER -III VECTOR ANALYSIS AND GEOMETRY
PAPER CODE: BA1007

Marks: 30 
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I

Section II
Vector integration. Theorems of Gauss, Green, Stokes and problems based on these.

Section III

Section IV

Sanskrit  ऐछिक

PAPER CODE BA-1008

Marks: 100 
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I संस्कृत वाक्यवहार:
एकक–1 संस्कृत वाक्यवहार साही (प्रकाशक संस्कृत भारती, माता मंदिर गली, झण्डेवालान, नई दिल्ली) पुस्तक में से 1 से 8 विषयों तक संस्कृत में सरल प्रश्नोत्तर रूप में दिखित परीक्षा (शिष्टाचार, मेलनमू, सरलवाक्यानि, सामान्यवाक्यानि मित्रा मिलनमू, यान्त्रिक, प्रवासिण) प्रतिनिधितः छात्राः)

Unit-II संस्कृत ग्रन्थानुशीलनम्
एकक–2 (क) हितोपदोषः (मित्रा लामः)
(ख) दूतवाक्यम् (भाषविरचितम्)
(ग) शुक्लनाशोपदेशु (काव्यशीतः)
(पाद्यांशों की व्याख्या व सार आदि)

Unit-III संस्कृत व्याकरणम्
एकक–3 (क) शब्दरूपः राज, कवि, भानु, मित्र, लता, भारती, नरी, घनु, बघु, मातृ, फल, वारि, मघु, आलम्न, दण्डिन, वाच, सरित, सर्व, तद्, एतद्, यद्, किम्, इदम् (तीन लिंगों में), अस्मद्, युज्ञद्, एक, द्वि, त्रि, चतुर्, पच चान् (तीन लिंगों में)
(ख) धातुरूप परमप्रयादम् भू, पत्र, हस, नम, गम, अस्, हन, कुच, नश, नृत, अद, इष, पृच्छ, विन्त्।
आलम्नेपदम्— सेव, लम्, रुच, मुद्, याच्।
उभयपदम्— कृ, नी, हि, भज, पच।
QUALIFYING SUBJECT
ENVIRONMENTAL STUDIES
PAPER CODE: BA1009

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
The Multidisciplinary nature of environmental studies. Definition, scope and importance. Need for Public awareness

Unit II Natural Resources
Renewable and non-renewable resources:
Natural resources and associated problems:
Forest resources: Use and over-exploitation: deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams benefits & problems,
Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
Food resources: World food problems, changes, caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies.
Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of and individual in conservation of natural resources.
Equitable use of resources for sustainable life styles.

Unit III Ecosystems
Concept of an ecosystem.
Structure and function of an ecosystem.
Producers, consumers and decomposers.
Energy flow in the ecosystem.
- Ecological succession.
- Food chains, food webs and ecological pyramids,
- Introduction, types, characteristic features, structure and function of the following ecosystem:
a. Forest ecosystem.
b. Grassland ecosystem.
c. Desert ecosystem.
d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).

Unit IV Biodiversity and Its Conservation
- Introduction - Definition: Genetic, species and ecosystem diversity.
- Biogeographically classification of India.
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- Biodiversity at global, National and local levels.
- India as a mega-diversity nation.
- Hot-spots of biodiversity.
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India.
- Conservation of biodiversity: in-situ and ex-situ conservation of biodiversity. (8 lectures)

**Unit V Environmental Pollution**
Definition, causes, effects and control measures of:
(a) Air pollution
(b) Water pollution
(c) Soil pollution
(d) Marine pollution
(e) Noise pollution
(f) Thermal pollution
(g) Nuclear hazards
Solid waste management: Causes, effects and control measures of urban and industrial wastes.
Role of an individual in prevention of pollution.
Pollution case studies Disaster management: floods, earthquake, cyclone and landslides.

**Unit VI Social Issues and the Environment**
- From unsustainable to sustainable development.
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management.
- Resettlement and rehabilitation of people: its problems and concerns, Case studies.
- Environmental ethics: Issues and possible solutions. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, Case studies.
- Wasteland reclamation.
- Consumerism and waste products.
- Environment Protection Act.
- Air (Prevention and Control of Pollution) Act.
- Water (Prevention and control of Pollution) Act.
- Wildlife Protection Act.
- Forest conservation Act.
- Issues involved in enforcement of environmental legislation.
- Public awareness.

**Unit VII Human population and the Environment**

- HIV/AIDS.
- Woman and Child Welfare.
Role of Information Technology in Environment and human health.
Case Studies.

**Unit VIII Field Work**
- Visit to a local area to document environmental assets river/forest/grassland/hill/mountain.
- Visit to a local polluted site-urban/Rural/industrial/ Agricultural.
- Study of common plants, insects, birds.
- Study of simple ecosystems - pond, river, hill slopes, etc.

**References**
2. Bharucha, Frach, The Biodiversity of India, Mapin Publishing Pvt. Ltd. Ahmedabad 380013, India, Email: mapin@jcenet.net (R).
7. Down to Earth, Centre for Science and Environment (R).
9. Hawkins R.E, Encyclopedia of Indian Natural History, Bombay Natural History Society, Bombay. (R)

B.A. PART-II
ENGLISH (COMPULSORY)

PAPER CODE: BA2001

Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions, at least two questions from each section. each question shall carry 20 marks.

Section A

Text Prescribe
3. Selected episodes form Mahabharata by C. Raja Qojmlachari, Published by Bharatiya Vidya Bhavan Bombay
4. The first 63 chapters from episode “Ganapti”, “The Scribe” to” Yudhistra Seeks Benediction” are prescribed for study.
5. A text book of Grammar written by Sh. Inderjit Kumar of G.M.N. College, Ambala Cantt and Dr. Sanjay Kumar, Reader and Head, Ch. Devi Lai University, Sirsa Published by Kurukshetra University, Kurukshetra.

SCHEME OF EXAMINATION

Q1. Explanation with reference to the context. Candidate will be required to attempt two passages, one each from the book of poems and the book of one act plays. The passages will have internal choice.

Q2. Short-answer type questions. Four short-answer type questions will be set on the prescribed poems and four short-answer type questions will be set on the prescribed book on fiction. The
students will be required to attempt five questions out of given eight questions selecting at least two from each text (i.e. book of Poems and Books of Fiction).

10 Marks

**Q3.** One essay-type question (with internal choice) will be set on each of the prescribed book of poems and one-act plays, students will be required to attempt one question each from both the texts.

10 Marks

**Q4.** One essay-type question (with internal choice) will be set on the book of Fiction. 10 Marks

**SCHEME OF EXAMINATION**

**Q5.** Questions on Grammar on the prescribed items (use of Tenses in Communicative situations, Subject-verb concord, active and passive voice, narration, common errors, word power, vocabulary, idioms and phrases) based on prescribed text-book of Grammar but not necessary the same as those given in the textbook.

14 Marks

**Q6** Questions on the following items in the prescribed hook of Grammar,

a) Transcription of simple words, listed in the text book *of* Grammar, The students will be required to transcribe 10 words out of given 15 words from the text book.

8 Marks

**Q7** Comprehension passage.(with five questions at the end)

8 Marks

**Q8** Translation (from English to Hindi, of a passage consisting of 9 to 10 sentences.) 10 Marks

हिन्दी अनिवार्य

**PAPER CODE: BA2002**

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.
HISTORY

OPTION-I- HISTORY OF INDIA (C.A.D 1526 to 1857)

PAPER CODE: BA2003

Marks: 100

Time: 3 Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I
1. Mughal Empire till 1707 - Relations with Rajputs, Sikhs, deccan Kingdom, Maraths, Parsia and Central Asia.
2. Mughal administration and institutions: administrative structure, land revenue system: manasabdari and jagirdari.

Section II
1. Economic and technological development: agriculture, industry, trade, commerce and urban centers.
2. Society under Mughals (i) Social classes-ulema; nobility, Zamindars, peasantry, artisans, (ii) Status of Women.
3. Art and architecture under Mughals.
4. Religion and Culture: Religious policies of Akbar and Aurangzeb, Sufism; Bhakti Movement and Composite Culture.
5. Decline and disintegration of Mughal Empire.

Section III
1. Advent of European powers: Portuguese; French; and English.
4. Economic Changes: Land revenue settlement-Permanent Settlement, Rayatwari and Mahalwari; decline of cottage industry and industrialization.
5. Early resistance against Company’s rule; Revolt of 1857 Causes; nature and results.

Section IV
Maps
1. Political Condition of India in 1526.
2. Mughal Empire at the death of Akbar (1605).
3. Indian Powers and Kingdoms around 1765.
6. Areas and Centres of Socio-religious movements in early 19th century India.

Section V
Objective type questions.

Suggested Readings
Verma. H.C. Madhyakaleen Bharat-Vol-II (154)
ECONOMICS
OPTION-1- MACRO ECONOMICS
PAPER CODE: BA2004

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
National income: Concepts and measurement, Say’s Law of Market & the classical theory of employment, Keynes objection to the classics theory; Keynesian employment theory, consumption function Autonomous and induced investment; Investment multiplier, Theories of investment, MEC and accelerator.

Unit II
Trade Cycle theories-Samueison and Wicks, Control of trade cycles Growth models Harrod-Domar model and Solow model.

Unit III
Money-meaning functions and significance, Quantity theory of money Keynesian theory of money, Inflation doman-pull and cost-push; effect and control of inflation; Functions of commercial banks and Central Bank; Credit and control; Recent reforms in banking sector in India.

Unit IV
Nature and Scope of Public Finance; The principle of maximum social advantage; Classification, canons and effects of Public expenditure Classification, cannons and effects of taxation; Impact and incident taxes; Characteristics of a good tax system, Recent tax reforms India-an overview; Sources and effects of public debt; Methods of del redemption; Recommendations of Tenth Finance Commission.

Reading list
Shapiro, E (1996), Macroeconomic Analysis; Galgotia Publications, New Delhi.

PUBLIC ADMINISTRATION
OPTION- 1-BHARTIYA PRASHASHAN
PAPER CODE: BA2005

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Feature of Indian administration; its role in the context of democratic system and socio-economic development. Centre State Relationship-Administration and Financial relations.
Role of the president, Prime Minister and cabinet in Indian Administration, cabinet Secretarial, Organisation and functions of Union Minister and State Secretariat, role of the Chief Secretary in State Administration.

Preparation of the Indian Budget, its enactment Parliamentary control over Public finance in India. Role of comptroller and Auditor-General over financial Administration, composition and functions of Public Accounts

Committee and Estimate Committee at the Centre. Civil Services: Recruitment, training, promotion, discipline, morale, Union Public Service Commission. District Administration: Its Features, role and position of the Deputy Commissioner and Superintendent of Police in District Administration. Accountability of Indian Administration to the Parliament and Judiciary; administration and citizen, Lokpal and Lok- Ayukt.

POLITICAL SCIENCE
OPTION-1- BHARTIYA SARKAR AND RAJNITI
PAPER CODE: BA2006

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Part-A
The Making of India’s Constitution and its sources. Basic features of India’s Constitution.
Preamble, Fundamental Rights and Duties and the Directive Principles of State Policy.
Union Government: President, Parliament, Cabinet and Prime Minister.

Part-B
Centre-State Relations
Supreme Court and the Constitutional Process.
Political Parties : National and Regional Parties.
The Election Commission Electoral Reforms. Major issues in Indian Political, Caste, religion. Language Region, Poverty-Alleviation.

Part-C
Short answer questions, at least five, spread over the entire syllabus. Objective type (multiple choice) questions spread over the whole syllabus.

Suggested Readings
R. Kothari, Politics in India, New Delhi, Orient Longman, 1970.
M. V. Pylee, An Introduction to the constitution of India, New Delhi, 1998.

MATHMATICS
PAPER-I -ADVANCE CALCULUS
PAPER CODE: BA2007

Marks: 35 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I

Section II

Section III
Envelopes, Evolutes, Indeterminate forms.

Section IV

Books Recommended
8. Advanced Engineering Mathematics, ITP: Company, USA
PAPER-II DIFFERENTIAL EQUATIONS AND CALCULUS OF VARIATIONS  
PAPER CODE: BA2007

Marks: 35  
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I

Section II

Section III
Partial differential equations of the first order Lagrange’s Solution. Some special types of equations which can be solved easily by methods other than the general method. Charpit’s general method of solution and its special cases. Partial differential equations of second and higher orders. Classification of linear differential equation of second order. Homogeneous and non-homogeneous equation with constant coefficients. Partial differential equations reducible to equation with constant coefficients.

Section IV
Curves with torsion, principal normal, osculating circle, binomial, Serret-Frenet formulae, locus of centre of curvature, spherical curvature, surfaces, envelopes, edge of regression, fundamental magnitudes of the first order.

Books Recommended
4. SX. Ross, Differential Equations, John Wiley and Sons (Student Edition).
5. Peter V.O.'Neei, Advanced Engineering Mathematics, ITP Company, USA.
10. C.E. Weatherbiem differential Geometry, ELBS.

PAPER-III MECHANICS  
PAPER CODE: BA2007

Marks: 30  
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I
Conditions of equilibrium of Coplanar forces. Virtual work in two dimensions. Proof of principle of virtual work and its
Section II
Forces in three dimensions. Stable and unstable equilibrium.

Section III
Velocities and accelerations along radial and transverse directions and along tangential and normal directions. Simple harmonic motion. Elastic strings. Motion on smooth and rough plane curves. Motion in a resisting medium. Motion of particles of varying mass.

Section IV
Central Orbits, Kepler’s laws of motion. Motion of a particle in three dimensions. Acceleration in terms of different coordinate system

Books Recommended
4. Peter V.O.’Neil, Advanced Engineering Mathematics, 1TP Company, USA.
B.A. PART III
ENGLISH (COMPULSORY)
PAPER CODE: BA3001

Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions, at least two questions from each section. Each question shall carry 20 marks.

Section A

2. PLAY: Macbeth by William Shakespeare.

Scheme of Examination

Q1 (a) One passage (with internal choice for explanation with reference to the context from The Eternal Muse) will be set.
(b) Similarly, there will be one passage (with internal choice) for explanation with reference to the context from Macbeth.

Q2. Two short questions (with internal choice) each on Poetry and the Play requiring critical understanding of the poems and the play.

Q3. One essay-type questions (with internal choice) on the book of poems, requiring first hand appreciation of the poems.

Q4. One essay-type question (with internal choice) on the play requiring first-hand-appreciable of the text, including appreciation of theme/characters/plot.

Section B
PRESCRIBED BOOKS

1. A Text book of English Grammer and Composition edited by (i) Dr. S.C. Sharma, Head Dept. of English, University College, Kurukshetra, (ii) Sh. Shivnarain, Sr. Lecturer in English, University College, Kurukshetra, Dr. Gulab and Mr. Pankaj of Hindu College, Sonepat.
The text book of Grammar will focus on the following items:

a) Essay : 400 words 8 Marks
b) Precis 8 Marks
c) Vocabulary-Synonyms, Antonyms , One Word Substitution 16 Marks
d) Correction of incorrect sentences/Do as directed 8 Marks

2. The spectrum of life: A Selection of Modern Essays by Late Dr. M.K. Bhatnagar, Ex Prof. Dept. of English M.D. University, Rohtak

SCHEME OF EXAMINATION

Q5. The Students shall be required to attempt an essay of approximately 400 words, on any one topic out of the four given in the question paper. The topics may be of descriptive or general nature. 8 Marks

Q6. Precis of a given passage (with internal choice) 8 Marks

Q7. Grammar (vocabulary; synonyms, Antonyms, one-word-substitution and correction of incorrect sentences, (including items covered in the exercise contained in the book of essays). 16 Marks

Q8. One essay type question with internal choice on the Spectrum of life : A Selection of Modern Essays. 8 Marks

Hindi (निबन्ध)

PAPER CODE: BA3002

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.
4. गधा भाग में से पूछे गए दो आलोचनात्मक प्रश्नों में से कोई एक प्रश्न करना होगा। यह प्रश्न 10 अंकों का होगा। १०
5. प्राचीन युग में हिन्दी और अंग्रेजी पर आधारित पाठ्य पुस्तक से 4 प्रश्न पूछे जाएंगे, इनमें से परीक्षाध्ययन को दो प्रश्नों के उत्तर देने होंगे। प्रत्येक प्रश्न 10 अंकों का होगा। २०
6. हिन्दी साहित्य का इतिहास (आदिकाल और मध्यकाल) से 4 प्रश्न पूछे जाएंगे, इनमें से किसी दो प्रश्नों के उत्तर देने होंगे। प्रत्येक प्रश्न 10 अंकों का होगा। २०
7. हिति का इतिहास (आदिकाल-मध्यकाल) और पालिका का पाठ्य पुस्तक दोनों में से 5-5 अंक लघुत्तम प्रश्न पूछे जाएंगे, इनमें से किसी पांच प्रश्नों के लगभग 50 शब्दों में उत्तर देने होंगे। प्रत्येक प्रश्न 2 अंक का होगा और पूरा 10 अंकों का होगा। १०
8. काव्यांग से दो रसों के और दो अलंकारों के सोदाहरण लक्षण पूछे जाएंगे। इनमें से एक रस और एक अलंकार का लक्षण सोदाहरण लिखना होगा। यह प्रश्न 4. ४ अंकों का होगा। ८

HISTORY

OPTION-2- HISTORY OF ANCIENT WORLD

PAPER CODE: BA3003

Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I
1. Prehistoric hunter gatherers: Paleolithic and Mesolithic cultures.
2. Food produces and Villages Settlements.
4. Iron Age civilisation: Greece and Rome – Policy, economy and society
5. Origin of feudalism in western and central Europe: Manorial system, Rise of Inter – dependency, Position of peasantry under feudalism Role of Church.

Section II
1. Arabia before Islam.
2. Rise of Islam Prophet and Pious Caliphs
3. Evolution of Islamic state with special reference to state under Ummayids and Abbasids.
4. Society under ummayyads and Abbasids.
5. Administrative structure under ummuyyads and Abbasids.

Section III
Maps
1. An outline of Bronze Age civilisations indicating important sites.
2. Location of important town of Greek Civilisation.
3. Location of important towns of Roma World.
4. Trade routes and towns under Arab Empire.

Section IV
Objectives types Questions:
Suggested Readings:
Anderson P. Passages from Antiquity to Marc Bloch Feudalism Feudal Society; 2 Vols.
Henri Pirence, Social and Economic History of Medieval Europe.
Maurice Dobb, Studies in the Development of Capitalism.
White Jr. Lynn, Medieval Technology and social Change.
Mukhia, Harbans, The Feudalism Debate (in Hindi also).
Virotam, Balmukand, Madhya Kallen Europe ka Itihas (in Hindi).
Hitti, P.K. History of the Arabs.
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Part-A (DEVELOPMENT AND ENVIRONMENTAL ECONOMICS)

Unit I
Economic growth and development Determinants and measurement of development: vicious circle of poverty-Development with unlimited supply of labor(leqi’s Model), - Balanced and unbalanced growth; critical minimum effort thesis (Harvey Leireinstein).

Unit II
Environment as a necessity and luxury; Population environment linkage; Market failure in case of environmental good; environment as a public good; Prevention and Control of Pollution; Environment as a public good; Prevention and control of pollution Environmental legislation; Meaning, importance and indicators. Sustainable development.

Part- B (International Economics)

Unit III
Meaning of balance of payments equilibrium. Causes and effect of BOP disequilibrium and corrective measures; Foreign trade multiplier; functions of IMF, World Bank and WTO; changes in the composition and direction of foreign trade of India since 1991. Cause of persistent deficit in India’s BOP and corrective measures.

Reading List:

Local Government: Meaning and significance, evaluation of Local Government in India since 1882.
Municipalities: Composition, Functions, finances, personnel, general working of Municipal bodies with special reference to Haryana and Punjab, State Government’s control over municipal bodies. State Department and Directorate of Municipal bodies, its organisation and functions. Role of the Ministry of Urban Development.
Development as well as the Central Council of Local Self-Govt. in regard to municipalities. Municipal Corporation: Composition, functions and finances, Town and Metropolitan Planning in India, 74th Constitutional Amendment Act, 1992. District Administration: Its features, purposes, problems.

Deputy Commissioner: Deputy Commissioner: his role and position, administration change in the context planning and Development at district level,
Division Commissioner: his role and position: State Headquarter’s control over district Administration.

Rural Local Government: Zila Parishad, Panchayat Samiti Panchayat: Their composition, function, finances, personnel State Government’s control over their working, role of political parties in Panchayati Raj, 73rd Constitutional amendment 1992. Role of State and Union Government in regard to Panchayati Rural Institutions in Policy, assistance training and general control problems rural –urban relationship.

POLITICAL SCIENCE
OPTION -1-COMPARATIVE GOVERNMENT AND POLITICS
PAPER CODE: BA3006

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

(Government and Politics of UK, USA, China, Switzerland)

Part A
Approaches to the study of comparative Politics.
Constitution and constitutionalism
Constitution Structures: Executive, Legislature and Judiciary
Political Culture.

Part B
Political parties and Party Systems
Interest Groups and Pressure Groups
State and Local Government
Socio-Economic bases of the constitution
Women and the Polities Process

Part C
Short answer questions, at least five, spread over the entire syllabus, Objective Type (Multiple choice) questions spread over the whole syllabus.

Suggested Readings
Inter-Parliamentary Union, Women in National Parliaments, 2000.


MATHEMATICS
PAPER-I ANALYSIS
PAPER CODE: BA3007

Marks: 35 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section - I
Riemannintegral Integrability of continuous and monotonic functions. The fundamental theorem of integral calculus, Mean value theorems of integral calculus. Countable and uncountable sets. Cantor’s set series of arbitrary terms. Convergence, divergence and oscillation, abel’s Dirichlets’s tests, Multiplication of series, Double series.

Section- II

Section- III

Section-IV

Books Recommended


Babu Ram, Metric Spaces, Vinayaka Publishers, New Delhi.

Mursaleem-Elements of Metric Spaces, Anamaya Publications,New Delhi.


Peter V.O. Neil, Advanced Engineering Mathematics, 11 Company, USA.

**PAPER-II ABSTRACT ALGEBRA**

**PAPER CODE: BA3007**

**Marks: 35**

**Time: 3Hrs**

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**Section I**

**Section II**
Ring theory-Ring homomorphism, Ideals and Quotient Rings. Field of Quantients of an Integral Domain. Euclidean Rings. Polynomial, Rings. Polynomials over the Rational Field. The Eisenstein Criterion. Polynomial Rings over Commutative Rings. Unique factorization domain. Unique factorization domain implies so is $R[x_1, x_2, \ldots \ldots x_n]$.

**Section III**

**Section IV**

**Books Recommended**
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Section I

Section II
Arrays Puppeting of string. Structures Pointers, File formatting.

Section III


Section IV

Books Recommended

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No.
1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**Unit-I**

संस्कृत वाग्यव्यवहार = 10
एकक—1 संस्कृत व्यवहारसाहित्य (प्रकाशक संस्कृत भारती, माता मंदिर गली वाणिज्यम् 20 वातावरणम् 21 मृहसभाषणम् 22 पितार: च—23 माता पितारी 24 पुज्ञा: 25 अतिधि: 26 वाक्यालि)

**Unit-II**

संस्कृत ग्रन्थानु शीलनम् = 25
एकक—2 अभिज्ञान शाकुंतलम्
(श्लोकों व सूक्तियों को व्याख्या आलोचनात्मक प्रश्न व सार)

**Unit-III**

संस्कृत साहित्येनिहास = 20
एकक—3 (क) सहिता, ब्रह्मण, आरण्यक, उपपनिषद् व वेदांक साहित्य
(ख) रामायण, महाभारत, अथवंशोऽर्थ, मास, कलिदास, बाणमदटु, सूचनु, दर्दी,
भवमूल, भावविशेष श्री हरै, माई, अभियात्त्व स्याः।
,'लेखकों व कृतियों का सामान्य परिचयद्व

**Unit-IV**

लघु सिद्धांत कौमुदी = 25
एकक—4 (क) कारक प्रकरण
(ख) सन्तो प्रत्यय प्रकरणम्
अशुद्धि श्रोधन, वाक्य रचना व सूत्रों की व्याख्या।

**Unit-V**

अलंकार निबन्धशेष = 20
एकक—5 (क) अलंकार अनुप्रास श्लेष्य, वर्ण, उपमा, उत्स्रश्य, रूपक, अर्थात्तरन्यास, अतिष्ठोत्स्वत्त, विभावना, विशेषोत्स्वत्त
(ख) सरल विषयों पर सारव संस्कृत में निबन्ध
# Scheme of Examination
Bachelor of Commerce (B.COM)
Three Year Programme (Annual)

## B.COM-I

<table>
<thead>
<tr>
<th>Paper</th>
<th>Nomenclature</th>
<th>Marks</th>
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<tbody>
<tr>
<td>BM1001</td>
<td>Business Communication</td>
<td>100</td>
</tr>
<tr>
<td>BM1002</td>
<td>Business Economics</td>
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<tr>
<td>BM1003</td>
<td>Business Management</td>
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<tr>
<td>BM1004</td>
<td>Business Mathematics</td>
<td>100</td>
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<tr>
<td>BM1005</td>
<td>Financial Accounting</td>
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<tr>
<td>BM1006</td>
<td>Basic of Computer</td>
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<tr>
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<td>Paper B- Practical</td>
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<tr>
<td>BM1007</td>
<td>Environment Studies( qualifying subject)</td>
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## B.COM-II

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<tbody>
<tr>
<td>BM2001</td>
<td>Business Regulatory Framework</td>
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<tr>
<td>BM2002</td>
<td>Business Statistics</td>
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<tr>
<td>BM2003</td>
<td>Company Law and Auditing</td>
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<tr>
<td>BM2004</td>
<td>Corporate Accounting</td>
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<tr>
<td>BM2005</td>
<td>Principles of Marketing</td>
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<td>BM2006</td>
<td>Human Resource Management</td>
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## B.COM-III

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<td>BM3002</td>
<td>Business Environment</td>
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<td>BM3003</td>
<td>Income Tax</td>
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<td>BM3004</td>
<td>Cost Accounting</td>
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<td>BM3005</td>
<td>International Marketing</td>
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<tr>
<td>BM3006</td>
<td>Management Accounting and Financial Management</td>
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</tbody>
</table>

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Important Note: *The Environmental Studies is a qualifying paper for all UG Courses i.e. BA & B.Com. Students are required to qualify the same, otherwise final result will not be declared and degree will not be awarded.*
BACHELOR OF COMMERCE (B.COM)
B.Com-I
BUSINESS COMMUNICATION
PAPER CODE: BM1001

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Introducing Business Communication: Basic Forms of Communicating; communication Models and process; Effective communication; theories of communication, Audience analysis.

Unit II
Self Development and Communication: Development of positive personal attitude; SWOT analysis; Vote’s model of interdependence; Whole communication.

Unit III
Corporate Communication: Formal and informal communication networks; Grapevine; Miscommunication (Barrier communication); Group discussion; Mock interviews; seminars; Effective listening exercise; individual and group presentations and reports writing.

Unit IV
Principle of Effective Communication.

Unit V
Writing Skills: Planning business message; Rewriting and edition; The first draft; Reconstructing the final draft; business letters and memo formats; appearance request letters; Good news and bad news letters; Persuasive letters; Sales letters; Collection letters; office memorandum.

Unit VI

Oral presentation: Principles of oral presentation factors affecting presentation, sales presentation. Training presentation, conducting surveys, speeches to motivate, effective presentation skills.

Unit VII
Non Verbal Aspects of Communicating
Body language: kinetics, Proxemics, Para language; effective listening; principles of effective listening; factors affecting listening exercise; oral, written, and video conferencing; etc.

International Communication: Cultural context; Writing and presenting in international situations; inter-cultural factors in interactions. Adapting to global business.

BUSINESS ECONOMICS
PAPER CODE: BM1002

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Introduction: Basic problems of an economy; Working of price mechanism.

Unit II
Elasticity of Demand: Concept and measurement of elasticity of demand; Price, income and cross elasticity’s; Average revenue, marginal revenue, and elasticity of demand; Determinants of elasticity of demand; Importance of elasticity of demand.
Unit III
Production Function: Law of variable proportions, Iso-quants; Economic regions and optimum factor combination; Expansion path; Returns to scale; Internal and external economies and dis-economies; Ridge lines.

Unit IV
Theory of Costs: Short-run and long-run cost curves-traditional and modern approaches.

Unit V
Market Structures: Market Structures and business decisions; Objectives of a business firm.
a) Perfect Competition: Profit maximization and equilibrium of firm and industry; Short-run and long run supply curves; Price and output determination; Practical applications.
b) Monopoly: Determination of price under monopoly; Equilibrium of a firm; Comparison between perfect competition and monopoly; Multi-plant monopoly; Price discrimination. Practical applications.
c) Monopolistic Competition: Meaning and characteristics; Price and output determination under monopolistic competition; Product differentiations; Selling costs; Comparison with perfect competition; Excess capacity under monopolistic competition.
d) Oligopoly: Characteristics, indeterminate pricing and output; Classical models of oligopoly; Price leadership; Collusive oligopoly; kinked demand curve.

Unit VI
Factor Pricing-I: Marginal productivity theory and demand for factors; Nature of supply of factor inputs; Determination of wage rates under perfect competition and monopoly; Exploitation of labor; Rent-concept; Ricardian and modern theories of rent; Quasi rent.

Unit VII
Factor Pricing-II: Interests-concept and theories of interest; Profit-nature, concepts, and theories of profit.

BUSINESS MANAGEMENT
PAPER CODE: BM1003

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Introduction to Management: Concept, Nature, Process and Significance of Management; Managerial Roles (Mintzberg); Development of Management Though, Classical and Neo-classical Systems; Contingency Approaches.

Unit II
Planning: Concept process and Types; Decision Making Concept and Process; Bounded Rationality; Management by Objectives; Corporate planning Environment analysis and diagnosis; Strategic formulation.

Unit III
Organizing: Concept Nature; Process and Significance; Authority and Responsibility Relationship; Centralization vs. Decentralization; Departmentation; Organisation Structure Forms and contingency factors.

Unit IV
Motivating and Leading people at Work: Motivating concept; Theories- Maslow, Herzberg, Mcgregor, a Ouchi; Financial and non-financial incentives. Leadership concept and leadership styles; Leadership theories (Tannenbaum and Schmidt); Likert’s System Management; Communication- Nature, Process, networks and barriers; Effective communication.

Unit V
Managerial Control: Concept and process; effective control system; Techniques of control traditional and modern.

Unit VI
Management of Change: Concept, Nature and process of planned change; resistance to change; Emerging horizons of management in a changing environment
BUSINESS MATHEMATICS
PAPER CODE: BM1004

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Calculus: (Problems and theorems involving trigonometrically ratios are not to be done).
Differentiation: Partial derivatives up to second order; Homogeneity of functions and Euler’s theorem; total differentials Differentiation of implicit function with the help of total differentials. Maxima and Minima; Cases of one variable involving second or higher order derivatives; Cases of two variables involving not more than one constraint.
Integration: Integration as anti-derivative process; Standard forms; Methods of integration-by substitution, by parts, and by use of partial fractions; Definite integration; Finding areas in simple cases; Consumers and producers surplus; Nature of Commodities learning Curve; Leontiff Input-Output Model.

Unit II
Matrices and Determinants: Definition of matrix; Types of matrices; Algebra of matrices; Properties of determinants; calculation of values of determinants up to third order; Adjoint of a matrix, through adjoint and elementary row or column operations; Solution of system of linear equations having unique solution and involving not more than three variables.

Unit III
Linear Programming-Formulation of LPP: Graphical method of solution; Problems relating to two variables including the case of mixed constraints; Cases having no solution, multiple solutions, unbounded solution and redundant constraints. Simplex Method—Solution of problems up to three variables, including cases of mixed constraints; Duality; Transportation Problem.

Unit IV
Compound Interest and Annuities: Certain different types of interest rates; Concept of present value and amount of a sum; Types of annuities; Present value and amount of an annuity, including the case of continuous compounding; Valuation of simple loans and debentures; Problems relation to sinking funds.

FINANCIAL ACCOUNTING
PAPER CODE: BM1005

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Meaning and Scope of Accounting: Need development, and definition of accounting; Book-keeping and accounting; Persons interested in accounting; Disclosures; Branches of accounting; Objectives of accounting.
Accounting Principles: International accounting standards (only outlines); Accounting principles; Accounting standards in India (only outlines).
Accounting Transactions: Accounting Cycle; Journal; Rules of debit and credit; Compound journal entry; Opening entry; Sub-division of journal; Relationship between journal and ledger; Rules regarding posting; Trial balance.
Capital and Revenue: Classification of Income; Classification of expenditure; Classification of receipts.
Accounting concept of income: Accounting-concepts and income measurement; Expired cost and income measurement.
Final Accounts: Manufacturing account; Trading account; Profit and Loss account; Balance Sheet; Adjustment entries.
Rectification of Errors: Classification of errors; Location of errors; Rectification of errors; Suspense account; Effect on profit.
Depreciation Provisions and Reserves: Concept of depreciation, causes of Depreciation, depletion, amortization and dilapidation; Depreciation accounting; methods of recording depreciation; Methods for providing depreciation; Depreciation of different assets; Depreciation of replacement cost; Depreciation policy as per Accounting Standard: Depreciation accounting; Provision and reserves. Accounts of Non-Trading institutions Single Entry System Voyage Account
BASICS OF COMPUTER
PAPER-A-THEORY
PAPER CODE: BM1006

Marks: 50 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.


Introduction to windows: Types of windows, Windows as an operating system, Windows explorer, using clipboard, using paint brush, control panel installing a printer.

MS-WORD: Fundamentals of MS-WORD : Menus, Toolbars, Ruler Scroll bar, creating, Editing saving. Importing Exporting and insert fig files; Working with Frames, Columns, Pictures, Tables, Macros.


ENVIRONMENT STUDIES (QUALIFYING SUBJECT)
PAPER CODE: BM1007

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

B.Com II
BUSINESS REGULATORY FRAMEWORK
PAPER CODE: BM2001

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.
**Law of Contract (1872):** Nature of Contract, Classification, Offer and Acceptance, Capacity of Parties to Contract; Discharge of Contract; Remedies for Breach of Contract Special Contrasts: Indemnity; Guarantee: Bailment and Pledge; Agency.

**Sales of Goods Act 1930:** Formation of Contracts of Sale; Goods and their Classification, Price; Conditions, and Warranties; Transfer of Property in Goods; Performance of the Contract of Sales Unpaid Seller and his Rights, Sale by Auction; Hire Purchase Agreement.

**Negotiable Instrument Act 1881:** Definition of Negotiable Instruments; Features; Promissory Note, Bill Exchange & Cheque; Types of Crossing; Dishonor and Discharge of Negotiable Instrument.

**The Consumer Protection Act 1986:** Salient Features; Definition of Consumer; Grievance Redressal Machinery.

**Foreign Exchange Management Act 1999:** Definition and Main Provisions.

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**BUSINESS STATISTICS**

**PAPER CODE : BM2002**

**Marks: 100  Time: 3Hrs**

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**Unit I**
Introduction; Statistics as a Subject, Statistical Data-Meaning and Types, Collection and Rounding of Data, Classification and Presentation of Data, Diagrammatic Presentation of Data, Graphic Presentation of Data, Statistical Averages, Measures of Dispersion.

**Unit II**
Method of Measurement of Correlation, Rank Correlation, Method of Concurrent Deviation, Coefficient of determination, Association of Attributes, Regression Analysis (Linear), Uses of Regression Analysis, Regression Lines, Regression Equations, Standard Error of Estimate.

**Unit III**

**Unit IV**

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**COMPANY LAW AND AUDITING**

**PAPER CODE : BM2003**

**Marks: 100  Time: 3Hrs**

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**Introduction**
Meaning, characteristics & Types of companies Promotion and incorporation of companies; Memorandum of association. Articles of Association, Prospectus; Borrowing power, mortgages and charges.
Directors—appointment, powers and Legal position. Company meetings—kinds, quorum, voting, resolutions, minutes
Audit of Limited companies—Company auditor—appointment, powers, duties and liabilities; auditor report; Investigation—meaning, nature and importance.
Introduction: Meaning and Objectives of auditing; Types of audit; Internal audit.
Audit process; audit programme; Working paper and evidences; Routine checking and test checking
Internal Check System Vouching; Verification of assets and liabilities.

CORPORATE ACCOUNTING
PAPER CODE :BM2004

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Issue. Forfeiture and Re-issue of Shares; Redemption of Preference Shares, Issue and Redemption of Debentures. Profit/ Loss prior to incorporation

Final accounts of Companies: Excluding Computation of Managerial Remuneration; Valuation of goodwill and shares.
Accounting for Amalgamation, absorption of Companies as per Indian Accounting Standard.
Accounting for internal reconstruction: excluding re-construction schemes. Consolidated Balance Sheet of Holding Companies with one Subsidiary only.

Liquidation of companies: Accounts of Banking and Insurance companies.

PRINCIPLES OF MARKETING
PAPER CODE :BM2005

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Introduction: Nature and scope of marketing; Importance of marketing as a business function, and in the economy; Marketing concepts—traditional and modern: Selling vs. marketing, marketing mix; Marketing environment.

Consumer Behaviour and Market Segmentation: Nature, scope, and significance of consumer behaviour; Market segmentation—concept and importance; Bases for market segmentation.

Product: Concept of product, consumer, and industrial goods; product planning and development; Packaging—role and functions; Brand name and trade market; after-sales service; Product life cycle concept.

Price: Importance of price in the marketing mix; Factors affecting price of a product/service; Discounts and rebates.

Distribution Channels and Physical Distribution: Distribution channels—concept and role; Types of distribution channels; Factors affecting choice of a distribution channel; Retailer and wholesaler; Physical distribution of goods; transportation; Warehousing; Inventory control; Order processing.

Promotion: Methods of promotion; Optimum Promotion Mix; Advertising Media—, their relative merits and limitations, characteristics of an effective advertisement, Personal Selling, Publicity: Sales promotion and public relations.

HUMAN RESOURCE MANAGEMENT
PAPER CODE :BM2006

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**Recruitment:** steps in recruitment, recruitment policy, sources and methods of recruitment. Selection process and policy. Career planning: objectives and responsibilities; process, prerequisites advantages and limitations of career planning; career problems and their solutions. Training and development: concept and importance of training; training methods/techniques. Performance appraisal.

**Wage and salary administration:** Promotion, transfer, demotion, separation and absenteeism; labor turnover. Personnel records and audit.

**Industrial relations in India:** HD practices in Indian industries. Concept and forms of industrial democracy.

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**B.Com III**

**ADVERTISEMENT & SALES MANAGEMENT**

**PAPER CODE :BM3001**

**Marks:** 100 **Time:** 3Hrs

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**Communication Process:** Basic communication process, role and source; Encoding and decoding of message, media, audience, feedback, and noise.

**Advertising and Communication Mix:** Different advertising functions; Types of advertising, Economic social aspects of advertising; Advertising process-an overview setting advertising objectives and budget.

**Creative Aspects of Advertising:** Advertising appeals, copy writing headlines, illustration, message, copy types.

**Advertising Media:** Different types of media; Media planning and scheduling.

**Impact of Advertising:** Advertising Agency roles, relationship with clients, advertising department; Measuring advertising effectiveness; Legal and ethical aspects of advertising.

**Sales Management:** Sales Management, Personal Selling and Salesmanship, Organizing the sales efforts; Sales force management: Recruitment, Selection, Training Motivation, compensating and Controlling sales personnel, Sales Budget, Sales quotas and Sales Territories.

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**BUSINESS ENVIRONMENT**

**PAPER CODE :BM3002**

**Marks:** 100 **Time:** 3Hrs

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**Course Inputs:** Business environment: concept, components and importance

**Economic trends (overview):** Income, savings and investment Industry trade balance of payments, Money finance; prices.

**Problems of growth:** Unemployment; Poverty; regional imbalances; social injustice; Inflation; parallel economy; Industrial sickness.

**Role of Government in Indian Economy:** Monetary and fiscal policy; Industrial policy; Industrial licensing, privatization; devaluation; Export-import policy; Foreign investment; and collaborations.

**Tenth five year plan:** Major policies; resource allocation.

**International Environment:** International environment (overview); Trends in world trade and the problems of developing countries; foreign trade and economic growth.

**International economic institutions:** GATT, WTO, UNCTAD, World Bank, IMF.
INCOME TAX
PAPER CODE : BM3003

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Definitions: Agricultural Income, Previous year. Assessment year, Assesses, Person, Casual Income, Total Income, Residence of assesses and incidence of Tax liability. Income exempted from tax: Income under the head salary, house property, business and profession (including depreciation allowance and investment allowance etc.) capital gains and other sources.

Unit II
Deduction from gross total income, set-off and carry forward of losses. Aggregation of incomes. Assessment of individuals, Hindu undivided families, and Firms (including computation of tax.)

Unit III

COST ACCOUNTING
PAPER CODE : BM3004

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Introduction: Nature and scope of cost accounting, Cost concepts and classification, methods and techniques, Installation of costing system Concept of cost audit.

Accounting for material: Material control, Concept and techniques, pricing of material issues Treatment of material losses.
Accounting for labour: Labour cost control procedure, labour turnover, idle time and overtime; Methods of wage payment time and piece rates; incentive schemes.
Accounting for overheads: Classification and departmentalization; absorption of overheads; Determination of overhead rates: Under and over absorption, and its treatment.
Cost Ascertainment: Unit costing; Job, batch and contract costing operating costing; Process costing including inter process profits and excluding equivalent production and joint and by-products.
Cost Records: Integral and non-integral system; reconciliation of cost and financial accounts.
Standard Costing and variance analysis: Material and labour variances only; Budgetary control Marginal costing and break-even-analysis.

INTERNATIONAL MARKETING
PAPER CODE : BM3005

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Product Planning for International Market: Product designing, standardization vs. adoption; Branding, and packaging; Labeling and quality issues; After sales services.

International Pricing: Factors influencing international price; Pricing process and methods, International price quotation and payment terms.

Promotion of Product/services Abroad: Methods of international promotion; direct mail and sales literature; advertising; personal selling; trade fairs and exhibitions.

International Distribution: Distribution channels and logistics decisions; selection and appointment of foreign sales agents. Planning, organizing and controlling of International Marketing; Exim policy-an overview Trends in India’s foreign trade.

MANAGEMENT ACCOUNTING AND FINANCIAL MANAGEMENT
PAPER CODE :BM3006

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Management Accounting: Meaning, nature, scope and functions of management accounting in decision making; Management accounting vs financial accounting; Tools and techniques of management accounting.

Financial Statement: Meaning and types of financial statement; Limitations of financial statements; Objectives and methods of financial statements analysis; Ratio analysis Classification of ratios- Profitability ratios, turnover ratios, liquidity ratios, turnover ratios advantages of ratio analysis, Limitations of accounting ratios. Fund Flow Statement, Cash flow statement as per Indian Accounting standard,

Financial management: Financial goal; Profit vs. Wealth maximization: financial function investment, financing and dividend decision; financial planning, over-capitalization and under investment, financing, and dividend decision; financial planning, over-capitalization and under capitalization.

Capital Budgeting: Nature of investment decision; investment evaluation criteria, net present value; internal rate of return profitability index payback period accounting rate of return NPV and IRR comparison, excluding risk analysis.

Cost of Capital: Significance of cost of capital; calculating cost of debt; Preference, Equity and retained earnings; Combined (weighted) Cost of capital. Capital structure theories and determinants.

Hypothesis; forms of dividends and stability in dividends; determinants.

Management of Working Capital: Nature of working capital significance of working capital operating cycle and factors determining of working capital requirements. Estimation of working capital.
## Scheme of Examination
### Bachelor of Library & Information Science (B.Lib.I.Sc.)
#### One Year Programme (Annual)

**2013-14**

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<td>BL1003</td>
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<td>BL1004</td>
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<td>BL1005</td>
<td>Library Cataloguing Theory</td>
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<td>BL1006</td>
<td>Library Cataloguing (Practical)</td>
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<td>BL1007</td>
<td>Reference, Information Sources and Services</td>
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<td>BL1008</td>
<td>Information Technology: Basics (Theory)</td>
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<td>BL1009</td>
<td>Information Technology: Practical</td>
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BACHELOR OF LIBRARY & INFORMATION SCIENCE (B.Lib.I.Sc.)

LIBRARY AND SOCIETY

PAPER CODE: BL1001

Marks: 100

Time: 3Hrs

Note: Examiner is required to set Nine questions in all. Question no. 1 will be compulsory which consists of 10 short-answer questions of 2 marks each covering the entire syllabus. In addition to question no. 1 candidate will be required to attempt four questions from the remaining eight questions carrying 20 marks each

Section 1: Development of Libraries and Their Role in Society
Unit 1: Role of Libraries in Modern Society
Unit 2: Laws of Library science
Unit 3: Development of Libraries in UK and USA
Unit 4: Library Development in Modern India—plans and programme

Section 2: Types of Libraries
Unit 5: National Libraries: A Descriptive Account of National Libraries of India, UK, USA & USSR
Unit 6: Academic Libraries: University, College and School Libraries
Unit 7: Public Libraries
Unit 8: Special Libraries and Information Centres

Section 3: Library Legislation
Unit 9: Library Legislation and Model Public Library Act
Unit 10: Library Legislation in Indian States—their Salient Features

Section 4: Resource sharing and User Studies
Unit 11: User Studies
Unit 12: User Education
Unit 13: Resource Sharing — Concept, Need, Form, Resource Sharing—Selected Case Studies

Section 5: Library Associations, Organisation and Institution
Unit 14: Librarianship as a Profession and Professional ethics.
Unit 15: Role of Professional
Unit 16: Organisation and Institutions involved in Development of Library and Information Services.

LIBRARY MANAGEMENT

PAPER CODE: BL1002

Marks: 100

Time: 3Hrs

Note: Examiner is required to set Nine questions in all. Question no. 1 will be compulsory which consists of 10 short-answer questions of 2 marks each covering the entire syllabus. In addition to question no. 1 candidate will be required to attempt four questions from the remaining eight questions carrying 20 marks each

Section 1: Principles of Library Management
Unit 1: General Principles of Management and the Application to Library Management
Unit 2: Library Organisational Structure
Unit 3: Management Information System
Unit 4: Physical planning

Section 2: Information Resources Development
Unit 5: Types of Information Resources Selection Principles including the communication Media
Unit 6: Different Types of Selection Tools and the Importance
Unit 7: Acquisition Procedure Books and Non-Printing Material
Unit 8: Acquisition of Periodicals and Serials
Unit 9: Technical Processing

Section 3: Use and Maintenance of the Library
Unit 10: Circulation Work
Unit 11: Maintenance Shelving and Stock Verification, etc.
Unit 12: Elements of Binding and Preservation

Section 4: Human Resource Development
Unit 13: Human Resource Development Concept and Contours
Unit 14: Personnel Planning
Unit 15: Participatory Management and Total Quality Management (TQM)

Section 5: Library Finance, Library Budget
Unit-16: Library Finance
Unit 17: Budgeting and Accounting.

LIBRARY CLASSIFICATION THEORY

PAPER CODE: BL1003

Marks: 100 Time: 3Hrs

Note: Examiner is required to set Nine questions in all. Question no. 1 will be compulsory which consists of 10 short-answer questions of 2 marks each covering the entire syllabus. In addition to question no. 1 candidate will be required to attempt four questions from the remaining eight questions carrying 20 marks each

Section 1: Elements of Classification Theory
Unit 1: Basic Terminology and Historical Perspective
Unit 2: Perspective Need and Purpose of Library Classification

Section 2: Theory and Development of Library Classification
Unit 3: General Theory of Library Classification
Unit 4: Species of Schemes of Library Classification
Unit 5: Learning about subjects

Section 3: Approaches to Library Classification
Unit 6: Postulation and Systems Approaches
Unit 7: Fundamental Categories; Facet Analysis and facet Sequences
Unit 8: Phase Relations and Common Isolates
Unit 9: Devices in Library Classification

Section 4: Study of Selected Schemes of Classification
Unit 10: Dewey Decimal Classification
Unit 11: Comparative Study of 19th, 20th and 21st Edition of DDC
Unit 12: Universal Decimal Classification
Unit 13: Colon Classification
Unit 14: Different Versions of Colon Classification
Unit 15: Current Trends in Library Classification
LIBRARY CLASSIFICATION (PRACTICAL)

PAPER CODE: BL1004

Marks: 100

Notes:

1. There will be three parts consisting of Ten Question each.
2. The student is required to classify any 5 titles by Colon Classification 6th revised edition from part-A each title carries four Marks; Classify any 5 titles by Dewey Decimal Classification 19th edition from part-B and each title carried 4 Marks and Classify and 5 titles using both Colon Classification 19th from Part-C and each title carries 8 Marks.
4. The class members assigned should specific as possible.
5. Furnish your answers in the question paper itself in the space provided against each title.
6. Question Paper should have English and Hindi version. Only transliteration of title should be done and not the translation.

Section 1: Dewey Decimal Classification (19th Edition) Part-I

Unit 1: Introductions, Structure and Organisation
Unit 2: Definitions, Notes and Instructions
Unit 3: Introduction to Three Summaries and Steps in Classifying Documents
Unit 4: Relative Index and its use


Unit 5: Study of Tables and Schedules
Unit 6: Auxiliary tables and Devices
Unit 7: Practical Classification

Section 3: Colon Classification (6th Edition ): Preliminaries

Unit 8: Introduction, Structure and Organisation
Unit 9: Schedules and Techniques
Unit 10: Steps in Classification

Section 4: Colon Classification (6th Edition): Introduction to the Application of Postulates and Principles for Facet Analysis and Synthesis

Unit 11: Humanities and Social Sciences
Unit 12: Biological Sciences
Unit 13: Physical Sciences and Generalia

LIBRARY CATALOGUING THEORY

PAPER CODE: BL1005

Marks: 100

Time: 3Hrs

Note: Examiner is required to set Nine questions in all. Question no. 1 will be compulsory which consists of 10 short-answer questions of 2 marks each covering the entire syllabus. In addition to question no. 1 candidate will be required to attempt four questions from the remaining eight questions carrying 20 marks each

Section 1: History, Purpose and Types of Library Catalogue

Unit 1: Library Catalogue: Objectives, Purpose functions
Unit 2: History and Development of Library Catalogue codes

Unit 3: Physical form of Catalogue
Unit 4: Types of Catalogues

Section 2: Format of Catalogue Entries
Unit 5: Kinds of Entries
Unit 6: Date Elements in Different Types of Entries
Unit 7: Filing of Entries - Classified and Alphabetisation.
Unit 8: Centralised Cataloguing, Cataloguing in Publication and MARC
Unit 9: Machine Formats: MARC and CCF

Section 3: Choice of Rendering of Headings
Unit 10: Personal Authors (Western and Indian Names)
Unit 11: Corporate Authors
Unit 12: Pseudonyms, Anonymous Works and Uniform Titles
Unit 13: Cataloguing of Non-Print Media

Section 4: Subject Indexing, Vocabulary Control and Recent Development in Cataloguing
Unit 14: Subject Cataloguing - Problems
Unit 15: Vocabulary Control: Subject Heading List Thesauri
Unit 16: Subject Indexing Models
Unit 17: Techniques for subject indexing
Unit 18: Recent Trends in Library Cataloguing

LIBRARY CATALOGUING (PRACTICAL)

PAPER CODE: BL1006

Marks 100

Notes:
1. There will be two parts consisting of 5 questions each. Part-A is devoted to AACR-II and Part-II to Classified Catalogue Code, 5th revised edition
2. The students required to prepare entries for five titles selecting atleast 2 titles from each part. All titles carry equal Marks.
3. Copies of Colon Classification by S.R. Ranganthan 6th revised edition and Sears list of Subject Heading will be provided for use.

Section 1: AACR-2R-Part -1
Unit 1: Preliminaries
Unit 2: Single Personal Author
Unit 3: Shared responsibility and Editorial Direction
Unit 4: Choice Among Different Names and References
Unit 5: Series and Multivolume

Section 2: AACR -2R-Part -2
Unit 6: Subject Headings
Unit 7: Corporate Bodies
Unit 8: Uniform Titles and Serials
Unit 9: Cataloguing of Non Print Material and Users - Guide to AACR-2R

Section 3: Classified Catalogue Code Part-1
Unit 10: Preliminaries Classified Catalogue Code
Unit 11: Class Index Entries and Tracing
Unit 12: Personal Authors
Unit 13: Corporate Authors

Section 4: Classified Catalogue Code Part-2
Unit 14: Analytical Entries and Composite Books
Unit 15: Series and Composite Books
Unit 16: Multivolume
Unit 17: Periodical Publications
REFERENCE, INFORMATION SOURCES AND SERVICES

PAPER CODE: BL1007

Marks: 100

Note: Examiner is required to set Nine questions in all. Question no. 1 will be compulsory which consists of 10 short-answer questions of 2 marks each covering the entire syllabus. In addition to question no. 1 candidate will be required to attempt four questions from the remaining eight questions carrying 20 marks each.

Section 1: Study of Reference Sources
Unit 1: Reference and Information Access Tools: Overview
Unit 2: Types of References and Information Access tools
Unit 3: Non Documentary Sources: Human, Institutional, Mass Media

Section 2: Categories of Reference Sources - Part 1
Unit 4: Dictionaries
Unit 5: Encyclopedias
Unit 6: Geographical Sources
Unit 7: Biographical Sources

Section 3: Categories of Reference Sources - Part 2
Unit 8: Statistical Information Sources
Unit 9: Sources of Current Affairs
Unit 10: Indexing and Abstracting Periodicals

Section 4: Information Services
Unit 11: Concept and need for Information.
Unit 12: Information Services: An Overview
Unit 13: Users of Information Services

Section 5: Information Services and Techniques
Unit 14: Reference Services
Unit 15: Current Awareness Services
Unit 16: Document Delivery Service

INFORMATION TECHNOLOGY: BASICS (THEORY)

PAPER CODE: BL1008

Marks: 50

Note: Examiner is required to set Nine questions in all. Question no. 1 will be compulsory which consists of 10 short-answer questions of 2 marks each covering the entire syllabus. In addition to question no. 1 candidate will be required to attempt four questions from the remaining eight questions carrying 20 marks each.

Section 1: Information Technology: Concepts and Basics
Unit 1: Introduction to Information Technology
Unit 2: Introduction to Computers
Unit 3: Telecommunications: Basics

Section 2: Application Software
Unit 4: Introduction to Application Software
Unit 5: Library and Information Software Package
Unit 6: Features of Indian Software Package

Section 3: Library Automation
Unit 7: Library House Keeping Operations
Unit 8: Computerised Information Services
INFORMATION TECHNOLOGY: (Practical)

PAPER CODE: BL1009

Marks: 50

1. MS Window - Common Commands
2. MS-office- MS Word and MS- Power Point
3. Internet searching and e-mail
## Scheme of Examination

**Bachelor of Business Administration (BBA)**

**Three Year Programme (Semester System)**

**2013-14**

### First Year

#### First Semester

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#### Second Semester

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## Second Year (2014-15)

### Third Semester

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### Third Year

#### 2015-16

**Fifth Semester**

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BACHELOR OF BUSINESS ADMINISTRATION (BBA)

First Semester

PRINCIPLES OF MANAGEMENT
PAPER CODE BB1001

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Concept and Nature of Management:- Significance of Management; Meaning of Management; Changes in Management Concepts; Nature of Management; Management a Science or an Art or a Profession; Functions of Management; Managerial Hierarchy; Management skills; Social Responsibilities and Ethics.

UNIT-II

UNIT-III
Planning and Decision Making;- Concept, Nature and Elements of Planning; Kinds of Plans; Levels of Planning; Various Stages (steps) in Planning; Decision Making and Process of Rational Decision Making; Concept of Organisational Structure; Bases of Organizing; Delegation and Decentralization of Authority.

UNIT-IV
Leading Management Control:- Meaning and Significance of Leadership; Leadership Styles; Essentials of Successful Leadership; Communications;- Importance and Process of Communication; Barriers to Communications and Overcoming these Barriers; Principles of Effective Communication.

Motivation;- Definition, Motives and Motivation, Models of Motivation-Maslow’s Need Hierarchy Model, M.C.Greger’s Participation Model, Herzberg’s Model Varoom’s Model, Alderfer’s and McClelland’s Models.

Controlling;- Definition and Elements of Control Process; Kinds of Control System; Pre-requisites of Effective Control System; An Overview of Budgetary And Non-Budgetary Control Devices.

BUSINESS MATHEMATICS
PAPER CODE BB1002

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT I

UNIT II
Indices & Logarithms, Arithmetic, Geometric and Harmonic progressions and their business applications; Sum of squares and cubes of first natural numbers.

UNIT III
Permutations, combinations and Binomial Theorem (positive index).

UNIT IV
Matrices - Types, properties, addition, multiplication, transpose and inverse of matrix. Properties of determinants, solution of simultaneous Linear Equations. Differentiation of Standard Algebraic Functions; Business Applications of Matrices and Differentiation.

**FINANCIAL ACCOUNTING**  
PAPER CODE BB1003  
Marks: 100  
Time: 3Hrs

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**UNIT-I**  

**UNIT-II**  
Review of Accounting cycle: Recording, Posting and Accounting Process, Journal, Ledger, and Trial Balance; Preparation of Trial Balance; Bank Reconciliation Statement,

**UNIT-III**  
Preparation of Final Accounts of Sole Trader.

**UNIT-IV**  
Depreciation Accounting: Concepts and Methods (Straight Line and Written Down Methods only); Receipt and Payments Accounts; Income and Expenditure Accounts.

**COMPUTERS IN MANAGEMENT**  
PAPER CODE BB1004  
Marks: 50  
Practical: 50  
Time: 3Hrs

**Note:** Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

**UNIT I**  

**UNIT II**  
Number System & Programming Languages: Binary Number System, Computer Languages and its types, Generation of Computer Languages. Character Codes (ASCII, EBCDIC, ISCII)

**UNIT III**  
Data Processing Cycle, Business Information and Automation, Classification of Information, Characteristics of Information.

**UNIT IV**  
Impact of Computers on Society, Computer Applications in Offices, Communication, Education, Medical field, Banks.
DISASTER MANAGEMENT
PAPER CODE BB1005

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Introduction to Disaster Management- Dimensions of Natural and Anthropogenic Disasters, principles/Components of Disaster Management, Overview of Disaster Manager’s tasks, Natural Disasters and Mitigation Efforts, Managing activities during Earthquakes, Floods, Drought, Cyclones, Avalanches, Technological, Landslides, Tornadoes, Avalanches, Heat waves and Global warming, Forest Fires, Oil Fires, Accidents in Coal Mines.

Unit II
Socio-economic Costs of natural disasters, social risk management, social protection, role of cooperation and coordination, Role of states, NGOs and local agencies, Risk Assessment and Disaster Response, Formulation of disaster Risk reduction plans, implementation and monitoring, Insurance and Risk Management, Institution Awareness and Safety programmes.

Unit III
Psychological and social Dimensions in Disasters, Trauma and Stress, Emotional Intelligence, Electronic Warning Systems, Recent Trends in Disaster Information Provider, Geo informatics in Disaster Studies, Remote sensing and GIS Technology, Laser Scanning.

Unit IV
Disaster Management in India Disaster Preparedness, Disaster mitigation, Forecasting and Warning of disasters, Assessing Risk and vulnerability, Rehabilitation of victims, Managing Refugee Camps, and relief workers, Role of Armed Forces/Other agencies in Disaster Management, Role of media in disaster management.

Second Semester

INDIAN SYSTEM OF BUSINESS AND BANKING
PAPER CODE BB2001

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I

Unit-II
Distribution and Insurance System: Distribution Channel, Life Insurance Corporation of India and General Insurance Corporation of India.

Unit III
Indian Banking System: Reserve Bank of India and Commercial Banking System.

Unit IV
Industrial Financing Institutions, Export-Import Bank of India.
MICROECONOMIC AND BANKING FOUNDATION OF BUSINESS
PAPER CODE BB2002

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Nature and scope of economics; functional areas of microeconomics; demand, supply and competitive equilibrium; law of demand; elasticity of demand and supply; consumer’s equilibrium – utility and indifference curve approaches.

Unit II
Short and long run production function; laws of return; optimal input combination; cost classification; cost curves and their interrelationships; plant size and economics of scale; location of industries; growth of a business firm-motives and methods; optimum size of the firm.

Unit III
Basic characteristics of perfect competition; monopoly, monopolistic competition and oligopoly; measurement of market concentration and monopoly power; diversification; vertical integration and merger of firms; aspects of non-price competition.

Unit IV
Characteristics of various factors of production; mobility and productivity of factors; determination of rent, interest and wages; alternative theories of profit; marginal productivity theory of distribution.

COMPANY ACCOUNTS
PAPER CODE BB2003

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit I
Accounting for share capital transaction. Issue of shares at par, at premium and at discount. Forfeiture of shares. Re-issue of forfeited shares; Redemption of preference shares.

Unit II
Debentures; Issue of debentures, provision for redemption of debentures and redemption of debentures.

Unit III
Preparation of final accounts of companies having regard to the provisions of companies Act., 1956 in general and Schedule VI to the Companies Act in particular. Underwriting Commission and Underwriting Agreement, Accounting treatment and determination of the liability of underwriters.

Unit IV
Simple problems of amalgamation, Absorption and External Reconstruction.
COMPUTER PROGRAMMING
PAPER CODE BB2004

Marks: 50 Time: 3Hrs
Practical: 50

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Flowcharts, Algorithm, Decision Table and Decision Tree

Unit-II
Compiler, Interpreter, Assembler, Sorting and Searching Techniques and their Algorithm

Unit-III
Language: Basic structure of a C program, Constants, Variables and Data types, Operators & expressions, I/O Operations, Decision, Branching and Looping

Unit-IV
Arrays, Handling of Character Strings, User-Defined Functions, Storage Classes

BUSINESS COMMUNICATION
PAPER CODE BB2005

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I

Unit-II

Unit-III
Oral Communication; Communicating with one: Interviewing-Art of effective interviewing, Types of Interviewing, Techniques of Interviewing, Qualities of Interviewer and Interviewer, Planning of Interviewing, Process of Interviewing. Communicating within groups: Presentational speaking-preparation of speech, Presentation of Speech, Guidelines for Effective Speech making. Communicating within groups: Discussion and Conference Participating and leading in conferences, Planning and Procedure of problem-solving conferences. Importance of Body language in interview, Speech and conference

Unit-IV
INTRODUCTION TO PSYCHOLOGY
PAPER CODE BB2006

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I

Unit-II
Learning and Memory: Classical conditioning, Operant Conditioning, Concept of reinforcement, Cognitive learning, Shortterm memory, Long-term memory, Improving memory.

Unit-III

Unit-IV
Emotion: Theories of Emotions, Optimal level of arousal, Stress Frustration, Reaction of Frustration, Anxiety, Defence Mechanism Stress, Attitude formation and change

Third Semester
ORGANISATIONAL BEHAVIOUR
PAPER CODE BB3001

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Introduction:- The field of Organisational Behaviour Reasons to study O.B. Foundations and Background of OB, Approaches to OB, Contributing discipline to OB Field.

UNIT-II
Industrial Behaviour: Individual differences – Abilities, intelligence; personality Meanings, development of personality, personality traits, major determinants. Perception- Nature, importance, perceptual selectivity, perceptual Organisation, social perception; Attitudes- Nature, dimensions, importance; Job Satisfaction – importance, sources & consequences.

UNIT-III
Motivation and Learning:- Motivation – Meaning; motives, process content theories and process theories of motivation, relationship between motivation and performance learning – Meaning, types; Theories of learning, Reinforcement, Law of effect, punishment.

UNIT-IV
Group Behaviour:- Group – Concept, nature, classification; stages of group development, Group dynamics; Group Behaviour; Group structure, task & processes; Group cohesiveness; Dynamics of informal groups; Group decision – making.
BUSINESS STATISTICS
PAPER CODE BB3002
Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Data Classification, Tabulation and Presentation: Meaning, objectives and types of classification, formation of frequency, role of tabulation, types of tables, significance of diagram and graphs.

UNIT-II
Measures of Central Tendency and Dispersion: Meaning, and objectives of measures of Central Tendency, different measure viz. Arithmetic mean, Median, Mode, Geometric Mean and Harmonic Mean, characteristics, applications and limitations of these measures. Measures of variation viz. Range, Quartile Deviation Mean Deviation, Standard Deviation, Co-efficient of Variation and Skew ness.

UNIT-III
Correlation and Regression: Meaning of Correlation, types of Correlation: Positive and Negative Correlation, Simple, Partial and Multiple Correlation, Methods of studying Correlation: Scatter diagram, graphic and direct method. Properties of Correlation Co-efficient, Rank Correlation, Co-efficient of Determination, Lines of Regression, Co-efficient of Regression, Standard Error of Estimate.

UNIT-IV

BASIC COSTING
PAPER CODE BB3003
Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I

UNIT-II

UNIT-III

UNIT-IV
MACROECONOMIC MANAGEMENT
PAPER CODE BB3004

Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Nature and scope of macroeconomics; functional areas of macroeconomic management; circular flow of income; national income accounting – alternative concepts and measures of national income and their interrelationship; stock and flow variables; aggregate demand; supply and macroeconomic equilibrium; nature of a trade cycle, causes of booms and recessions.

UNIT-II
Macro analysis of consumer behaviour; cyclical and secular consumption income relationship; absolute, relative and permanent income hypotheses; other factors affecting aggregate consumption; simple Keynesian model of income determination; multiplier analysis

UNIT-III
Functional areas of fiscal management; nature of fiscal policy fiscal deficits; fiscal policy in relation to growth and price stability; basic issues in fiscal deficit management; nature and management of public debt; business taxes – types, rationale and incidence.

UNIT-IV
Functional areas of monetary management; money supply measures; money creation process and money multiplier; instruments of monetary control; promotional and regulatory role of central banking and monetary policy; inflation management.

DATA BASE MANAGEMENT SYSTEMS
PAPER CODE BB3005

Marks: 50
Practical:50
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Concept of Data Base, Objectives of Data Base, Advantages and Limitations of Data Base, Entities, Attributes, Relationships (I:I, I:M, M:M)

UNIT-II
Schema, Subschema, Data base Administration, 4GL, SQL

UNIT-III
Introduction to Data Models, Hierarchical, Relational & Network Data Models.

UNIT-IV
Distributed Data Base System, Backup & recovery procedures in Data Base System, Normalization in Relational Data Base.
Fourth Semester
BUSINESS VALUES AND ETHICS
PAPER CODE BB4001

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Meaning and Nature of Values; Values in context of Business; Mission Statement and Role of Corporate Values in shaping it; influence of Individual Values on Morality of Managers; Indian Values and Changing Value systems of India.

Unit-II
Ethics; Evolution of Ethics and their relation to values, norms, morals. Nature of Ethics and Relevance to Business; Virtue theory; Utilitarianism and its Applications to Business; Rights; Justice; Profit Maximization vis-à-vis Ethics.

Unit-III
Contemporary Issues: Workplace Spirituality; Indian Ethos for Business; Vedanta and Managers. Corporate Social Responsibility; Public Policy of a Corporation and its role in a market society; the nature of an ethical corporation; concept of Total Ethical Management.

Unit-IV
Ethical Responsibilities of Business towards customers; Ethical Issues in Marketing; Issues relating to Product Safety, Product Quality, Pricing and Promotion. Ethical Responsibility of Business towards employees; whistleblowing; the changing workplace; employees discrimination; harassment of female workforce; rights and obligations of employees and employers.

INDIAN BUSINESS ENVIRONMENT
PAPER CODE BB4002

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Nature, components and determinants of business environment; basic nature of Indian economic system; relation size and growth of public and private corporate sector; social responsibility of business; broad features of India’s now economic policy.

Unit-II
Trend and pattern of industrial growth; review of industrial policy developments; industrial licensing policy; liberalization of the private sector; trends and issues in corporate management; growth and problems of the small scale sector; public sector reforms and privatization the problem of industrial sickness; MRTP Act, SICA and Industrial Disputes Act.

Unit-III
Development banks for corporate Sector (IDBI, IFCI, ICICI)- trends pattern and policy; regulation of stock exchanges and the role of SEBI; banking sector reforms; challenges facing public sector banks; growth and changing structure of non bank financial institutions; problem of non performing assets in Indian Banks.

Unit-IV
Trend and pattern of India’s foreign trade and balance of payments; latest EXIM policy-main features; policy towards foreign direct investment; globalization trends in Indian economy; role of MNCs; India’s policy commitments to multilateral institutions- IMF, World Bank and WTO.
BUSINESS LAWS  
PAPER CODE BB4003

Marks: 100  
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I  

Unit-II  

Unit-III  

Unit-IV  

BUSINESS RESEARCH METHODS  
PAPER CODE BB4004

Marks: 100  
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I  
Decisional Research: Definition and Scope; Role of Decision maker and research; Identification of problems; decision steps and research objectives, uncertainty and decision research, Research Design: Descriptive, Exploratory, Descriptive, Diagnostic and Experimental.

Unit-II  
Data Collection: Secondary and Primary Data sources; Techniques of Data Collection; Sampling: Procedure, Probability and Non-probability sampling; Sampling errors; Tabulation of Data; Attitude Scales and measurement of attitude.

Unit-III  
Data Analysis: Interpretation and presentation; basic consideration in choice of analysis and statistical techniques; hypothesis testing; tests of significance; chi-square analysis.

Unit-IV  
Report Writing: Substance of Research Based Reports, Formats of reports, Report writing Technique and Final Presentation of the report.
INTRODUCTION TO INFORMATION TECHNOLOGY
PAPER CODE BB4005

Marks: 50
Practical: 50

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Introduction to Networks: User of a Network, Categories of Networks, Topologies, Network Media & Hardware, Network Software.

Unit-II
Word Processor: Advantage, Entering Text, Editing Text, Formatting Text, Mail Merge

Unit-III
Electronic Spreadsheets: Advantages, Application Areas, Creating a Worksheet, Functions, Types of Graphs, Creating Graphs, Formatting Cells, Macros.

Unit-IV
Introduction to Internet: Background & History, Working, Major Features, Accessing the Internet, Major Application Areas, Introduction to Multimedia.

Fifth Semester
MARKETING MANAGEMENT
PAPER CODE BB5001

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Introduction to Marketing; Core concepts of marketing; Orientation towards market place; Difference between Marketing and Selling; Marketing Process; Marketing Environment.

UNIT-II
Determinants of consumer behaviour; Consumer’s Purchase decision process; Market Segmentation and Target Marketing; Marketing Research; Marketing Information System; Planning of Marketing Mix.

UNIT-III
Product decisions; Branding and Packaging decision; Product Life Cycle; Pricing strategy.

UNIT-IV
Selecting and Managing Marketing channels; Retailing, Wholesaling and Physical Distribution; Communication and Promotion mix; Designing Effective Advertising Program; Sales Promotion.
FINANCIAL MANAGEMENT
PAPER CODE BB5002

Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Evolution, Scope and function of Finance Managers, Objectives of the firm; Profit Vs Wealth Maximization.

UNIT-II
Investment Decisions; Brief Introduction of Cost of Capital; Methods of Capital Budgeting; ARR, PBP, NPV and IRR, Capital Rationing, (Simple problems on Capital Budgeting Methods)

UNIT-III
Financing Decision: Financial Leverage; Capital Structure Theories: NI, NOI and Traditional approach; EPS-EBIT Analysis; Brief discussion on sources of long term finances.

UNIT-IV
Dividend decision and Management of Working Capital: Determinants of Dividend Policy; Walter’s Dividend Model; Working Capital of Concept and Operating Cycle Method, Brief discussion on Management of Cash, Receivable and Inventory. (Simple problem on operating cycle and Inventory Management).

PRODUCTION MANAGEMENT
PAPER CODE BB5003

Marks: 100
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Production/Operations Management: Introduction, Major decisions; objectives and activities; Difference between products and services (from POM view point). Characteristics of a production system.

UNIT-II
Types of production systems: Production to order and production to stock; Plant Location: Factors affecting locations & evaluating different locations; Plant Layout: Meaning, objectives, characteristics and types; Plant layout and materials handling.

UNIT-III
Production Planning and Control: Meaning, objectives, advantages and elements, PPC and production systems, Aggregate planning and Master production Schedules, Sequencing and assignment problems. Motion and Time Study.

UNIT-IV
Inventory Control: Objectives, advantages and techniques (EOQ Model and ABC Analysis). Quality Control: Meaning and importance; Inspection, quality control charts for variables & attributes and Acceptance Sampling; Maintenance; Meaning; importance and types.
PERSONNEL MANAGEMENT
PAPER CODE BB5004

Marks: 100  
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I

UNIT-II

UNIT-III

UNIT-IV

ADVANCED INFORMATION TECHNOLOGY
PAPER CODE BB5005

Marks: 50  
Practical: 50  
Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I

UNIT-II

UNIT-III
Introduction of MS-Back Office, Electronic Communication, ISP Type of Accounts, Tools; Sending & receiving mails, Electronic Tele & Video Conferences.

UNIT-IV
Sixth Semester
TAXATION LAWS
PAPER CODE BB6001

Marks: 100
Time: 3Hrs
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Basic concepts of Income Tax, Residential Status and Tax incidence, Income Exempted from Tax.

Unit-II
Income from salaries, Income from House property and Income from Profits & Gains of Business and profession.

Unit-III
Income from capital Gains, Income from other sources; Set off and carry forward of Losses; Clubbing of Income.

Unit-IV
Deductions from Gross Total Income, Assessment of Individuals, HUF and Firms.

STRUCTURED SYSTEM ANALYSIS AND DESIGN
PAPER CODE BB6002

Marks: 100
Time: 3Hrs
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Introduction to Analysis & Design: SDLC, CASE tools for Analyst, Role of System Analyst, ER Data Models, Feasibility Study – Economic, Technical, Operational.

Unit-II

Unit-III
Implementation & Installation: Data Dictionary, Structured English, Decision Tables, Decision Trees, Installation Types, Logical Design to Physical Implementation.

Unit-IV
Introduction to Distributed Data Processing & Real Time System: Evaluating Distributing System, Designing Distributed Data Bases, Event Based Real time Analysis Tools, State Transition Diagrams.

FUNDAMENTALS OF INTERNATIONAL BUSINESS
PAPER CODE BB6003

Marks: 100
Time: 3Hrs
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Nature and main fields of International Business; Domestic versus International Business; major risks and challenges of IB; International business environment – components and determinants; the process of internationalisation of business; concept of globalisation; balance of payments accounting; basic nature of foreign exchange market.
Unit-II
Nature of multinational enterprise and foreign direct investment; basic motives and determinants of foreign direct investment; methods & forms of international business entry; strategic orientation of MNCs; basics of MNE strategy formulation and implementation.

Unit-III
International trade theory – the theory of absolute advantage; theory of comparative advantage; factor endowment theory and international product life-cycle theory; tariff and non-tariff barriers to international trade; international logistic decisions; major trade documents; main intermediaries in international trade.

Unit-IV
Assessing international markets; designing products for foreign markets; branding decisions; promotional decisions; pricing decision; basic methods of international payment. Regulation of international business – a overview of the role of WTO, IMF, UNCTAD and World Bank.

CONSUMER PROTECTION
PAPER CODE BB6004
Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

Unit-I
Concept of consumer, Types of consumers; need for consumer protection; methods of consumer protection – legal and voluntary; consumer buying motives; doctrines of caveat emptor and caveat venditor; Concept of consumer’s sovereignty

Unit-II
Measures for consumer protection in India; basic provisions of the consumer Protection Act., 1986; consumer rights; Organisational set up – National and State Consumer Protection Councils; District Forum, State Commission and National Commission; their functions, powers and jurisdiction, Grounds of filing complaint; procedure of filing a complaint; relief available

Unit-III
Consumer protection measures under the Monopolies and Restrictive Trade Practices Act., 1969; concept and remedy against unfair trade practices and restrictive trade practices; consumers; roles and rights under the MRTP Act

Unit-IV
Recent developments in consumer protection movement in India; role of voluntary consumer Organisations product testing; growing consumer awareness role of the media and Government; formation and registration of a voluntary consumer Organisation; business self-regulation; Advertising Standards Council of India.
Scheme of Examination  
Bachelor of Computer Applications (BCA)  
Three Year Programme (Semester System)  
2013-14  

First Year

First Semester

<table>
<thead>
<tr>
<th>Paper</th>
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<td>BC1001</td>
<td>Computer &amp; Programming Fundamentals</td>
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<td>BC1002</td>
<td>PC Software</td>
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<td>BC1003</td>
<td>Mathematics</td>
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<td>BC1004</td>
<td>Logical Organization of Computer-I</td>
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<td>BC1005</td>
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Second Semester

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<td>BC1007</td>
<td>Logical Organization of Computer-II</td>
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<td>BC1008</td>
<td>Mathematical Foundations of Computer Science</td>
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<td>BC1009</td>
<td>Structured System Analysis and Design</td>
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<td>BC1011</td>
<td>Environment Studies( qualifying subject)*</td>
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Important Note: *The Environmental studies is a qualifying paper for all UG Courses. Students are required to qualify the same, otherwise final result will not be declared and degree will not be awarded.
### Second Year

#### 2014-15

#### Third Semester

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<td>BC2002</td>
<td>DATA STRUCTURES – I</td>
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<td>BC2003</td>
<td>Introduction to database system</td>
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<td>Communication skills (English)</td>
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<td>BC2007</td>
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<td>BC2008</td>
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### Third Year

#### 2015-16

#### Fifth Semester

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<td>BC3002</td>
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<td>BC3003</td>
<td>Data Communication and Networking</td>
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<td>BC3007</td>
<td>Object Technologies &amp; Programming using Java</td>
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<tr>
<td>BC3008</td>
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<td>BC3009</td>
<td>Introduction to .NET</td>
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BACHELOR OF COMPUTER APPLICATIONS (BCA)
First Semester

COMPUTER & PROGRAMMING FUNDAMENTALS
PAPER CODE: BC1001

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Computer Fundamentals: Generations of Computers, Definition, Block Diagram along with its components, characteristics & classification of computers, Limitations of Computers, Human-Being VS Computer, Applications of computers in various fields.
Memory: Concept of primary & secondary memory, RAM, ROM, types of ROM, Cache Memory, flash memory, Secondary storage devices: Sequential & direct access devices viz. magnetic tape, magnetic disk, optical disks i.e. CD, DVD, virtual memory.

UNIT-II
Computer hardware & software: I/O devices, definition of software, relationship between hardware and software, types of software.
Overview of operating system: Definition, functions of operating system, concept of multiprogramming, multitasking, multithreading, multiprocessing, time-sharing, real time, single-user & multi-user operating system.
Computer Virus: Definition, types of viruses, Characteristics of viruses, anti-virus software.

UNIT-III
Computer Languages: Analogy with natural language, machine language, assembly language, high-level languages, forth generation languages, compiler, interpreter, assembler, Linker, Loader, characteristics of a good programming language, Planning the Computer Program: Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation.
Structured programming concepts, Programming methodologies viz. top-down and bottom-up programming, Advantages and disadvantages of Structured programming.

UNIT-IV
Overview of Networking: An introduction to computer networking, Network types (LAN, WAN, MAN), Network topologies, Modes of data transmission, Forms of data transmission, Transmission channels(media), Introduction to internet and its uses, Applications of internet, Hardware and Software requirements for internet, Intranet, Applications of intranet.

REFERENCE BOOKS
3. Leon, Alexis & Leon, Mathews, Introduction to Computers, Leon Tech World
4. Rajaraman, V., Fundamentals of Computers, PHI
5. Ram, B., Computer Fundamentals, Architecture & Organization, New Age International (P) Ltd.

Note: Latest and additional good books may be suggested and added from time to time.
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT - I
MS-Windows: Operating system-Definition & functions, basics of Windows. Basic components of windows, icons, types of icons, taskbar, activating windows, using desktop, title bar, running applications, exploring computer, managing files and folders, copying and moving files and folders. Control panel – display properties, adding and removing software and hardware, setting date and time, screensaver and appearance. Using windows accessories.

UNIT - II

UNIT - III

UNIT - IV
Presentation using MS-PowerPoint: Presentations, Creating, Manipulating & Enhancing Slides, Organizational Charts, Excel Charts, Word Art, Layering art Objects, Animations and Sounds, Inserting Animated Pictures or Accessing through Object, Inserting Recorded Sound Effect or In-Built Sound Effect.

TEXT BOOKS
1. Microsoft Office – Complete Reference – BPB Publication
2. Learn Microsoft Office – Russell A. Stultz – BPB Publication

REFERENCES BOOKS

Note: Latest and additional good books may be suggested and added from time to time.
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT I
SETS: Sets, Subsets, Equal Sets Universal Sets, Finite and Infinite Sets, Operation on Sets, Union, Intersection and Complements of Sets, Cartesian Product, Cardinality of Set, Simple Applications.

DETERMINANTS: Definition, Minors, Cofactors, Properties of Determinants, Applications of determinants in finding area of triangle, Solving a system of linear equations.

MATRICES: Definition, Types of Matrices, Addition, Subtraction, Scalar Multiplication and Multiplication of Matrices, Adjoint, Inverse, solving system of linear equation Cramer’s Rule.

UNIT II
RELATIONS AND FUNCTIONS: Properties of Relations, Equivalence Relation, Partial Order Relation Function: Domain and Range, Onto, Into and One to One Functions, Composite and Inverse Functions.

LIMITS & CONTINUITY: Limit at a Point, Properties of Limit, Computation of Limits of Various Types of Functions, Continuity of a function at a Point, Continuity Over an Interval, Sum, product and quotient of continuous functions, Intermediate Value Theorem, Type of Discontinuities.

UNIT III
DIFFERENTIATION: Derivative of a function, Derivatives of Sum, Differences, Product & Quotient of functions, Derivatives of polynomial, trigonometric, exponential, logarithmic, inverse trigonometric and implicit functions, Logarithmic Differentiation, Chain Rule and differentiation by substitution.

UNIT IV
INTEGRATION: Indefinite Integrals, Methods of Integration by Substitution, By Parts, Partial Fractions, Integration of Algebraic and Transcendental Functions, Reduction Formulae for simple and Trigonometric Functions, Definite Integral as Limit of Sum, Fundamental Theorem of Integral Calculus, Evaluation of definite integrals by substitution, using properties of definite integral,

TEXT BOOKS
2. Lipschutz, Seymour: Discrete Mathematics, Schaum’s Series

Note: Latest and additional good books may be suggested and added from time to time.
LOGICAL ORGANIZATION OF COMPUTER-I
PAPER CODE: BC1004

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT - I
Information Representation: Number Systems, Binary Arithmetic, Fixed-point and Floating-point representation of numbers, BCD Codes, Error detecting and correcting codes, Character Representation – ASCII, EBCDIC, Unicode

UNIT - II
Binary Logic: Boolean Algebra, Boolean Theorems, Boolean Functions and Truth Tables, Canonical and Standard forms of Boolean functions, Simplification of Boolean Functions – Venn Diagram, Karnaugh Maps.

UNIT - III

UNIT - IV

TEXT BOOKS

REFERENCE BOOKS

Note: Latest and additional good books may be suggested and added from time to time.
Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I

Overview of C: History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant, Structure of a C Program, printf(), scanf() Functions, Operators & Expression: Arithmetic, relational, logical, bitwise, unary, assignment, shorthand assignment operators, conditional operators and increment and decrement operators, Arithmetic expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy & associativity.

UNIT-II

Decision making & branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement.
Decision making & looping: For, while, and do-while loop, jumps in loops, break, continue statement, Nested loops.

UNIT-III

User defined functions: Introduction/Definition, prototype, Local and global variables, passing parameters, recursion.

UNIT-IV

Arrays, strings and pointers: Definition, types, initialization, processing an array, passing arrays to functions, Array of Strings. String constant and variables, Declaration and initialization of string, Input/output of string data, Introduction to pointers.
Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime.
Algorithm development, Flowcharting and Development of efficient program in C.

TEXT BOOKS

REFERENCE BOOKS
2. Yashwant Kanetker, Let us C, BPB.
3. Rajaraman, V., Computer Programming in C, PHI.
4. Yashwant Kanetker, Working with C, BPB.
Note: Latest and additional good books may be suggested and added from time to time.
LOGICAL ORGANIZATION OF COMPUTER-II
PAPER CODE: BC1007

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT - I
Sequential Logic: Characteristics, Flip-Flops, Clocked RS, D type, JK, T type and Master-Slave flip-flops. State table, state diagram and state equations. Flip-flop excitation tables

UNIT - II
Sequential Circuits: Designing registers – Serial Input Serial Output (SISO), Serial Input Parallel Output (SIPO), Parallel Input Serial Output (PISO), Parallel Input Parallel Output (PIPO) and shift registers. Designing counters – Asynchronous and Synchronous Binary Counters, Modulo-N Counters and Up-Down Counters

UNIT - III
Memory & I/O Devices: Memory Parameters, Semiconductor RAM, ROM, Magnetic and Optical Storage devices, Flash memory, I/O Devices and their controllers.

UNIT - IV

TEXT BOOKS

REFERENCE BOOKS

Note: Latest and additional good books may be suggested and added from time to time.

MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE
PAPER CODE: BC1008

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Basic Statistics: Measure of Central Tendency, Preparing frequency distribution table, Mean, Mode, Median, Measure of Dispersion: Range, Variance and Standard Deviations, Correlation and Regression.
UNIT-II

**Algorithm:** Algorithms, merits and demerits, Exponentiation, How to compute fast exponentiation. Linear Search, Binary Search, "Big Oh" notation, Worst case, Advantage of logarithmic algorithms over linear algorithms, complexity.

**Graph Theory:** Graphs, Types of graphs, degree of vertex, sub graph, isomorphic and homeomorphic graphs, Adjacent and incidence matrices, Path Circuit; Eulerian, Hamiltonian path circuit.

UNIT-III

**Tree:** Trees, Minimum distance trees, Minimum weight and Minimum distance spanning trees.

**Recursion:** Recursively defined function.

UNIT-IV

**Recurrence Relations:** LHRR, LHRWCCs, DCRR. Recursive procedures.

**Number Theory:** Principle of Mathematical induction, GCD, Euclidean algorithm, Fibonacci numbers, congruences and equivalence relations, public key encryption schemes.

REFERENCE BOOKS

5. Babu Ram : Discrete Mathematics

Note: Latest and additional good books may be suggested and added from time to time.

STRUCTURED SYSTEM ANALYSIS AND DESIGN

PAPER CODE: BC1009

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I

Introduction to system, Definition and characteristics of a system, Elements of system, Types of system, System development life cycle, Role of system analyst, Analyst/user interface, System planning and initial investigation: Introduction, Bases for planning in system analysis, Sources of project requests, Initial investigation, Fact finding, Information gathering, information gathering tools, Fact analysis, Determination of feasibility.

UNIT-II

Structured analysis, Tools of structured analysis: DFD, Data dictionary, Flow charts, Gantt charts, decision tree, decision table, structured English, Pros and cons of each tool, Feasibility study: Introduction, Objective, Types, Steps in feasibility analysis, Feasibility report, Oral presentation, Cost and benefit analysis: Identification of costs and benefits, classification of costs and benefits, Methods of determining costs and benefits, Interpret results of analysis and take final action.

UNIT-III

System Design: System design objective, Logical and physical design, Design Methodologies, structured design, Form-Driven methodology(IPO charts), structured walkthrough, Input/Output and form design: Input design, Objectives of input design, Output design, Objectives of output design, Form design, Classification of forms, requirements of form design, Types of forms, Layout considerations, Form control.

UNIT-IV
System testing: Introduction, Objectives of testing, Test plan, testing techniques/Types of system tests, Quality assurance goals in system life cycle, System implementation, Process of implementation, System evaluation, System maintenance and its types, System documentation, Forms of documentation.

REFERENCE BOOKS:

1. Systems Analysis and design BY e.m. aWAD Galgotia Pub.(P) Ltd.
2. Data Management and Data Structures by Loomis (PHI)
4. Introductory System analysis and Design by Lee Vol. I & II

Note: Latest and additional good books may be suggested and added from time to time.

Practical- Software lab
PAPER CODE: BC1010

(Based on paper BC-1006 i.e. C Programming)

ENVIRONMENT STUDIES (Qualifying Subject)
PAPER CODE: BC1011

Marks: 100 Time: 3Hrs

Third Semester

Introduction to Operating System
PAPER CODE: BC2001

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I


UNIT-II

CPU Scheduling: Basic concepts, Scheduling criteria, Scheduling algorithms : FCFS, SJF, Round Robin & Queue Algorithms.

Deadlocks: Deadlock characterization, Methods for handling deadlocks, Banker’sAlgorithm.

UNIT-III

Memory Management: Logical versus Physical address space, Swapping, Contiguous allocation, Paging, Segmentation.

Virtual Memory: Demand paging, Performance of demand paging, Page replacement, Page
replacement algorithms, Thrashing.

UNIT-IV


Suggested Readings

Note: Latest and additional good books may be suggested and added from time to time.

DATA STRUCTURES – I
PAPER CODE: BC2002

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I
Introduction: Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures, Data structure operations, Applications of data structures, Algorithms complexity and time-space tradeoff, Big-O notation.
Strings: Introduction, Storing strings, String operations, Pattern matching algorithms.

UNIT – II
Arrays: Introduction, Linear arrays, Representation of linear array in memory, address calculations, Traversal, Insertions, Deletion in an array, Multidimensional arrays, Parallel arrays, Sparse arrays.
Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list, Header linked list, Circular linked list, Two-way linked list, Threaded lists, Garbage collection, Applications of linked lists.

UNIT – III
Stack: Introduction, Array and linked representation of stacks, Operations on stacks, Applications of stacks: Polish notation, Recursion.
Queues: Introduction, Array and linked representation of queues, Operations on queues, Deques, Priority Queues, Applications of queues.

UNIT – IV
Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees, Traversal algorithms using stacks.
Graph: Introduction, Graph theory terminology, Sequential and linked representation of graphs.

TEXT BOOKS
REFERENCE BOOKS:

Note: Latest and additional good books may be suggested and added from time to time.

INTRODUCTION TO DATABASE SYSTEM
PAPER CODE: BC2003

Marks: 100

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I
Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users .

UNIT – II
Database System Architecture – Three Levels of Architecture, External, Conceptual and Internal Levels, Schemas, Mappings and Instances.
Data Independence – Logical and Physical Data Independence.
Classification of Database Management System, Centralized and Client Server architecture to DBMS .

UNIT – III
Entity-Relationship Model – Entity Types, Entity Sets, Attributes Relationship Types, Relationship Instances and ER Diagrams, abstraction and integration.
Basic Concepts of Hierarchical and Network Data Model, Relational Data Model:-Brief History, Relational Model Terminology-Relational Data Structure, Database Relations, Properties of Relations, Keys, Domains, Integrity Constraints over Relations .

UNIT – IV
Relational algebra, Relational calculus, Relational database design: Functional dependencies, Modification anomalies, Ist to 3rd NFs, BCNF, 4th and 5th NFs, computing closures of set FDs, SQL: Data types, Basic Queries in SQL, Insert, Delete and Update Statements, Views, Query processing: General strategies of query processing, query optimization, query processor, concept of security, concurrency and recovery.

TEXT BOOKS:

REFERENCE BOOKS:

Note: Latest and additional good books may be suggested and added from time to time.
COMMUNICATION SKILLS (ENGLISH)
PAPER CODE: BC2004

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Introduction to Basics of Communication: Communication and its various definition, features/characteristics of the communication, process of communication, communication model and theories, barrier to effective communication.

UNIT-II
Improving LSRW: introduction, verbal and nonverbal communication, listening process, group discussion, forms of oral presentation, self-presentation, dyadic communication, 5C’s of communication, Developing dialogues, soft skill.

UNIT-III
Basic vocabulary: how to improve vocabulary, prefix/suffix, synonyms/antonyms, one word substitution, spellings

Developing fluency: grammar (conjunction, auxiliaries, prepositions, articles, tenses……), language games.

UNIT-IV

Effective self-presentation & facing interview: The interview process & preparing for it, The presentation skills.

Suggested Readings

4. Mohan, Banerjee, Business Communication, Mac million
5. Raman, Singh – Business communication – Oxford Press

Note: Latest and additional good books may be suggested and added from time to time.

PRACTICAL- SOFTWARE LAB
PAPER CODE: BC2005

( Practical Based on Paper BC2002 & 2003 Using C LANGUAGE AND SQL)
FOURTH SEMESTER

WEB DESIGNING

PAPER CODE: BC2006

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I

Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic features; Web Browsers; Web Servers; Hypertext Transfer Protocol, Overview of TCP/IP and its services; URLs; Searching and Web-Casting Techniques; Search Engines and Search Tools;

UNIT – II

Web Publishing: Hosting your Site; Internet Service Provider; Web terminologies, Phases of Planning and designing your Web Site; Steps for developing your Site; Choosing the contents; Home Page; Domain Names, Front page views, Adding pictures, Links, Backgrounds, Relating Front Page to DHTML. Creating a Website and the Markup Languages (HTML, DHTML);

UNIT – III

Web Development: Introduction to HTML; Hypertext and HTML; HTML Document Features; HTML command Tags; Creating Links; Headers; Text styles; Text Structuring; Text colors and Background; Formatting text; Page layouts;

UNIT – IV

Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts; Frame Creation and Layouts; Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes; DHTML: Dynamic HTML, Features of DHTML, CSSP(cascading style sheet positioning) and JSSS(JavaScript assisted style sheet), Layers of netscape, The ID attributes, DHTML events.

TEXT BOOKS:

REFERENCE BOOKS:
3. Deitel and Goldberg, “Internet and World Wide Web, How to Program”, PHI.

Note: Latest and additional good books may be suggested and added from time to time.
DATA STRUCTURES – II
PAPER CODE: BC2007

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I
Tree: Header nodes, Threads, Binary search trees, Searching, Insertion and deletion in a Binary search tree, AVL search trees, Insertion and deletion in AVL search tree, m-way search tree, Searching, Insertion and deletion in an m-way search tree, B-trees, Searching, Insertion and deletion in a B-tree, B+tree, Huffman’s algorithm, General trees.

UNIT – II

UNIT – III
Sorting: Internal & external sorting, Radix sort, Quick sort, Heap sort, Merge sort, Tournament sort, Searching: Linear search, binary search, merging, Comparison of various sorting and searching algorithms on the basis of their complexity.

UNIT – IV

TEXT BOOKS

REFERENCE BOOKS

Note: Latest and additional good books may be suggested and added from time to time.
Object Oriented Programming Using C++
PAPER CODE: BC2008

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Object Oriented Programming Concepts: Procedural Language and Object Oriented approach, Characteristics of OOP, user defined types, polymorphism and encapsulation. Getting started with C++: syntax, data types, variables, string, function, namespace and exception, operators, flow control, recursion, array and pointer, structure.

UNIT-II
Abstracting Mechanism: classes, private and public, Constructor and Destructor, member function, static members, references;
Memory Management: new, delete, object copying, copy constructor, assignment operator, this input/output

UNIT-III
Inheritance and Polymorphism: Derived Class and Base Class, Different types of Inheritance, Overriding member function, Abstract Class, Public and Private Inheritance, Ambiguity in Multiple inheritance, Virtual function, Friend function, Static function.

UNIT-IV
Exception Handling: Exception and derived class, function exception declaration, unexpected exception, exception when handling exception, resource capture and release.
Template and Standard Template Library: Template classes, declaration, template functions, namespace, string, iterators, hashes, iostreams and other types.

Suggested Readings
4. Shah & Thakker: Programming in C++, ISTE/EXCEL.
5. Johnston: C++ Programming Today, PHI.
7. Samanta: Object Oriented Programming with C++ & JAVA, PHI.

Note: Latest and additional good books may be suggested and added from time to time.

Software Engineering
PAPER CODE: BC2009

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I
Software Requirements Analysis & Specifications: Requirement engineering, requirement
elicitation techniques like FAST, QFD, requirements analysis using DFD, Data dictionaries & ER Diagrams, Requirements documentation, Nature of SRS, Characteristics & organization of SRS.

UNIT – II


UNIT - III

Software Implementation: Relationship between design and implementation, Implementation issues and programming support environment, Coding the procedural design, Good coding style.

UNIT - IV


Suggested Readings
1. Pressman : Software Engineering, TMH.
5. Ghezzi, Carlo : Fundaments of Software Engineering, PHI.

Note: Latest and additional good books may be suggested and added from time to time.

PRACTICAL- SOFTWARE LAB
PAPER CODE: BC2010

PRACTICAL BASED ON PAPER BC2006 & BC2008 i.e HTML AND C++ LANGUAGE

Fifth Semester

MANAGEMENT INFORMATION SYSTEM
PAPER CODE: BC3001

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I

UNIT – II

UNIT – III

UNIT – IV
Functional MIS: A Study of Personnel, Financial and production MIS, Introduction to e-business systems, ecommerce – technologies, applications, Decision support systems – support systems for planning, control and decision-making

TEXT BOOK:

REFERENCE BOOK:
5. Note: Latest and additional good books may be suggested and added from time to time.

COMPUTER GRAPHICS
PAPER CODE: BC3002

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I
Output Primitives: Points and lines, line drawing algorithms, mid-point circle and ellipse algorithms. Filled area primitives: Scan line polygon fill algorithm, boundary fill and flood-fill algorithms.

UNIT-II
2-D Geometrical Transforms: Translation, scaling, rotation, reflection and shear transformations, matrix representations and homogeneous coordinates, composite transforms, transformations between coordinate systems.
2-D Viewing: The viewing pipeline, viewing coordinate reference frame, window to view-port coordinate transformation, viewing functions, Cohen-Sutherland and Cyrus-beck line clipping algorithms, Sutherland – Hodgeman polygon clipping algorithm.
UNIT-III

3-D Object Representation: Polygon surfaces, quadric surfaces, spline representation, Hermite curve, Bezier curve and B-Spline curves, Bezier and B-Spline surfaces. Basic illumination models, polygon-rendering methods.

UNIT-IV

3-D Geometric Transformations: Translation, rotation, scaling, reflection and shear transformations, composite transformations.

3-D Viewing: Viewing pipeline, viewing coordinates, view volume and general projection transforms and clipping.

Suggested Readings

Note: Latest and additional good books may be suggested and added from time to time.

DATA COMMUNICATION AND NETWORKING
PAPER CODE: BC3003

Marks: 100  Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I


UNIT – II

Analog and Digital Communications Concepts: Concept of data, signal, channel, bid-rate, maximum data-rate of channel, Representing Data as Analog Signals, Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate; Asynchronous and synchronous transmission, data encoding techniques, Modulation techniques, Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites; Switching and Multiplexing; Dialup Networking; Analog Modem Concepts; DSL Service.

UNIT - III

Data Link Layer: Framing, Flow Control, Error Control; Error Detection and Correction; Sliding Window Protocols; Media Access Control: Random Access Protocols, Token Passing Protocols; Token Ring; Introduction to LAN technologies: Ethernet, switched Ethernet, VLAN, fast Ethernet, gigabit Ethernet, token ring, FDDI, Wireless LANs; Bluetooth; Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards, Bridges, Switches, Routers, Gateways.
UNIT – IV

TEXT BOOKS:

REFERENCE BOOKS:

Note: Latest and additional good books may be suggested and added from time to time.

Visual Basic
PAPER CODE: BC3004

Marks: 100 Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I

UNIT – II

UNIT – III

UNIT – IV
Programming with VB: Procedures: General & event procedures, Subroutines, Functions, Calling procedures, Arguments- passing mechanisms, Optional arguments, Named arguments, Functions returning custom data types, Functions returning arrays.
Working with forms and menus: Adding multiple forms in VB, Hiding & showing forms, Load & unload statements, creating menu, submenu, popup menus, Activate & deactivate events, Form-load event, menu designing in VB Simple programs in VB.

TEXT BOOKS:
REFERENCE BOOKS:

Note: Latest and additional good books may be suggested and added from time to time.

PRACTICAL- SOFTWARE LAB
PAPER CODE: BC3005

Practical Based on Paper BC3002 & BC3004 i.e. Visual Basic)

Sixth Semester

E-COMMERCE
PAPER CODE: BC3006

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I


UNIT-II

Value Chains in Electronic Commerce, Supply chain, Porter’s value chain Model, Inter Organizational value chains, Strategic Business unit chains, Industry value chains.

UNIT-III

Electronic Payment System: Electronic Cash, Electronic Wallets, Smart Card, Credit and Change Card.
UNIT-IV

Business to Business E-Commerce: Inter-organizational Transitions, Credit Transaction Trade Cycle, a variety of transactions, Electronic Data Interchange (EDI): Introduction to EDI, Benefits of EDI, EDI Technology, EDI standards, EDI Communication, EDI Implementation, EDI agreement, EDI security.

Suggested Readings:
4. Gary P. Schneider and Jame Perry, Electronic Commerce Thomson Publication.
6. E-Commerce: An Indian Perspective; P_T_Joseph; S.J.; PHI.
8. E-Commerce; Efrain Turbon; Jae Lee; David King; H Michael Chang.

OBJECT TECHNOLOGIES & PROGRAMMING USING JAVA

PAPER CODE: BC3007

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT-I

Object Oriented Methodology-1: Paradigms of Programming Languages, Evolution of OO Methodology, Basic Concepts of OO Approach, Comparison of Object Oriented and Procedure Oriented Approaches, Benefits of OOPs, Introduction to Common OO Language, Applications of OOPs.

Object Oriented Methodology-2: Classes and Objects, Abstraction and Encapsulation, Inheritance, Method Overriding and Polymorphism.

UNIT-II


Object Oriented Concepts: Class and Objects-- Class Fundamentals, Creating objects , Assigning object reference variables; Introducing Methods, Static methods, Constructors, Overloading constructors; This Keyword; Using Objects as Parameters, Argument passing, Returning objects , Method overloading, Garbage Collection, The Finalize ( ) Method.


UNIT-III

Packages : Defining Package, CLASSPATH, Package naming, Accessibility of Packages , using Package Members.

Interfaces: Implementing Interfaces, Interface and Abstract Classes, Extends and Implements together .

Exceptions Handling : Exception , Handling of Exception, Using try-catch , Catching Multiple Exceptions , Using finally clause , Types of Exceptions, Throwing Exceptions, Writing Exception Subclasses.
UNIT-IV


I/O in Java: I/O Basics, Streams and Stream Classes, The Predefined Streams, Reading from, and Writing to, Console, Reading and Writing Files, The Transient and Volatile Modifiers, Using Instance of Native Methods.


Suggested Readings
1. Programming in Java, E Balagurusamy.
2. The Complete Reference JAVA, TMH Publication.
4. JAVA 2 UNLEASHED, Tech Media Publications.

Note: Latest and additional good books may be suggested and added from time to time.

ARTIFICIAL INTELLIGENCE
PAPER CODE: BC3008

Marks: 100                        Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I

Overview of A.I: Introduction to AI, Importance of AI, AI and its related field, AI techniques, Criteria for success.

Problems, problem space and search: Defining the problem as a state space search, Production system and its characteristics, Issues in the design of the search problem

Heuristic search techniques: Generate and test, hill climbing, best first search technique, problem reduction, constraint satisfaction

UNIT - II

Knowledge Representation: Definition and importance of knowledge, Knowledge representation, Various approaches used in knowledge representation, Issues in knowledge representation.

Using Predicate Logic: Representing Simple Facts in logic, Representing instances and is_a relationship, Computable function and predicate.

UNIT - III

Natural language processing: Introduction syntactic processing, Semantic processing, Discourse and pragmatic processing.


UNIT - IV


Suggested Readings

Note: Latest and additional good books may be suggested and added from time to time.
INTRODUCTION TO .NET
PAPER CODE: BC3009

Marks: 100

Time: 3Hrs

Note: Examiner will be required to set NINE questions in all. Question No. 1 will be compulsory which consists of 10 short-answer type questions each of 2 marks covering the entire syllabus. In addition to Q.No. 1, candidate will be required to attempt four questions from the remaining eight questions each carrying 20 marks.

UNIT – I

UNIT – II

UNIT – III
Operators and expressions: Arithmetic, relational, logical, bitwise, special operators, evolution of expressions, operator precedence & associativity, Control constructs in C#: Decision making, loops, Classes & methods: Class, methods, constructors, destructors, overloading of operators & functions.

UNIT – IV
Inheritance & polymorphism: visibility control, overriding, abstract class & methods, sealed classes & methods, interfaces. Advanced features of C#: Exception handling & error handling, automatic memory management, Input and output (Directories, Files, and streams).

TEXT BOOKS:
1. Introduction to C# using .NET By Robert J. Oberg, PHI, 2002.

REFERENCES BOOKS:

Note: Latest and additional good books may be suggested and added from time to time.

PRACTICAL- SOFTWARE LAB
PAPER CODE: BC3010
PRACTICAL BASED ON PAPER BC3007 and BC3009 Using Java & .NET