FACULTY OF VISUAL ARTS AND PERFORMING ARTS

SYLLABUS

FOR

BACHELOR OF VOCATION (B.Voc.)
ARTS
(Semester: I – IV)

Session: 2019-20

GURU NANAK DEV UNIVERSITY,
AMRITSAR.

Note: (i) Copy rights are reserved.
Nobody is allowed to print it in any form.
Defaulters will be prosecuted.

(ii) Subject to change in the syllabi at any time.
Please visit the University website time to time.
## BACHELOR OF VOCATION (B.VOC.)
### (ARTS) SEMESTER SYSTEM

### SEMESTER – I:

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Paper</th>
<th>M. Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper – I</td>
<td>Business Studies</td>
<td>100</td>
</tr>
<tr>
<td>Paper – II</td>
<td>Art &amp; Painting (Th.50+Pr.50)</td>
<td>100</td>
</tr>
<tr>
<td>Paper – III</td>
<td>Textile Designing (Th.50+Pr.50)</td>
<td>100</td>
</tr>
<tr>
<td>Paper – IV</td>
<td>Communication Skills in English – I</td>
<td>50</td>
</tr>
<tr>
<td>Paper – V</td>
<td>Punjabi (Compulsory) / ** ਪੰਜਾਬੀ ਪ੍ਰਸਤਾਵੀ / ** Punjab History &amp; Culture (From Earliest Times to C 320)</td>
<td>50</td>
</tr>
<tr>
<td>Paper – VI</td>
<td>* Drug Abuse: Problem, Management and Prevention (Compulsory Paper)</td>
<td>50</td>
</tr>
</tbody>
</table>

### SEMESTER – II:

<table>
<thead>
<tr>
<th>Paper No.</th>
<th>Paper</th>
<th>M. Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper – I</td>
<td>Art &amp; Painting (Th.50+Pr.50)</td>
<td>100</td>
</tr>
<tr>
<td>Paper – II</td>
<td>Textile Designing (Th.50+Pr.50)</td>
<td>100</td>
</tr>
<tr>
<td>Paper – III</td>
<td>Computer Applications (Th.60+Pr.40)</td>
<td>100</td>
</tr>
<tr>
<td>Paper – IV</td>
<td>Communication Skills in English – II (Th.35+Pr.15)</td>
<td>50</td>
</tr>
<tr>
<td>Paper – V</td>
<td>Punjabi (Compulsory) / ** ਪੰਜਾਬੀ ਪ੍ਰਸਤਾਵੀ / ** Punjab History &amp; Culture (C 320 to 1000 B.C.)</td>
<td>50</td>
</tr>
<tr>
<td>Paper – VI</td>
<td>* Drug Abuse: Problem, Management and Prevention (Compulsory Paper)</td>
<td>50</td>
</tr>
</tbody>
</table>

Note: * Marks of this Paper will not be included in the Total Marks.
** (Special Paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)
**BACHELOR OF VOCATION (B.VOC.) (ARTS) SEMESTER SYSTEM**

### Semester – III:

<table>
<thead>
<tr>
<th>Skill Component</th>
<th>Paper Code</th>
<th>Subject</th>
<th>Theory Marks</th>
<th>Duration</th>
<th>Practical</th>
<th>Duration</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>Computer Fundamentals</td>
<td>40</td>
<td>3Hrs</td>
<td>60</td>
<td>3Hrs</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>Art &amp; Painting</td>
<td>75</td>
<td>3Hrs</td>
<td>75</td>
<td>3Hrs</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>Textile Designing</td>
<td>75</td>
<td>3Hrs</td>
<td>75</td>
<td>3Hrs</td>
<td>150</td>
</tr>
</tbody>
</table>

Grand Total 400

### Semester – IV:

<table>
<thead>
<tr>
<th>Skill Component</th>
<th>Paper Code</th>
<th>Subject</th>
<th>Theory Marks</th>
<th>Duration</th>
<th>Practical</th>
<th>Duration</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>Art &amp; Painting</td>
<td>75</td>
<td>3Hrs</td>
<td>75</td>
<td>3Hrs</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>Textile Designing</td>
<td>75</td>
<td>3Hrs</td>
<td>75</td>
<td>3Hrs</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>Graphics Design</td>
<td>50</td>
<td>3Hrs</td>
<td>50</td>
<td>3Hrs</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td><em>(ESL-221): Environmental Studies</em></td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

Grand Total 400

* Marks of EVS will not be included in the Total Marks.
BACHELOR OF VOCATION (B.VOC.)
ARTS) SEMESTER – I

Paper–I: Business Studies

Time: 3 Hrs                                                                                                          Max Marks: 100

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A
Different Forms of Business: Sole Proprietorship, Partnership, Joint Hindu Family Business, Company form of organization.
Management - concept, objectives and importance, Management as Science, Art and Profession, Levels of management, Management
Coordination - concept, characteristics and importance

SECTION–B
Principles of Management: concept, nature and significance, Fayol’s principles of management, Taylor’s Scientific Management – principles
Planning: Concept, importance and limitations, Planning process, Single use and Standing Plans - Objectives, Strategy, Policy, Procedure, Method, Rule, Budget and Programme.

SECTION–C
Staffing: Concept and importance of staffing, Staffing as a part of Human Resource Management, Staffing process: Recruitment - sources; Selection – process
Training and Development: Concept and importance. Methods of training- on the job and off the job- Induction training, vestibule training, apprenticeship training and internship training.

SECTION–D
Directing: Concept and importance, Elements of Directing: Supervision-concept, functions of a supervisor; Motivation-Concept, Maslow’s hierarchy of needs; Financial and non-financial incentives
Communication: concept, formal and informal communication; barriers to effective; communication, how to overcome the barriers
Controlling: Concept, nature and importance Relationship between planning and controlling, Steps in the process of control

Suggested Readings:
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – I

Paper–II: Art & Painting

Time: 3 Hrs

Max Marks: 100
Theory 50
Practical 50

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be sub divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A
Elements of Art: Lines, Colours, Form, Texture, Light and Shade.
Place of Art in daily life.
Place of Art in education.

SECTION–B
Six limbs of Indian Art.
Material used in painting and its techniques.
Colour schemes, combination of different colours, contrast and harmonious colours scheme.

SECTION–C
Syllabus of Arts and Crafts for urban and Rural School.
   b) Art and Craft Books - Utility of Art and Craft Books
   c) For a teacher, selection of Art and Craft text books.
Child Art - What is Child Art purposes or importance and subjects of Child Art, Development stages of Child Art.

SECTION–D
Appreciation of Master pieces of Indian Art.
   a) SarnathBudha (Gupta Period)
   b) Lion Capital / Bull Capital
   c) Natraj Bronze (Chola Period)
   d) Mother & Child (Ajanta)
   e) SohniMahiwal by Sobha Singh
Pre Historic painting (BhimBhetka Caves)

PRACTICAL
1. Introduction of colours and colour wheel.
2. Tint and Tones colours.
3. Still life (Objective painting)
4. Letter writing.

Recommended Books:
1. Fundamentals of Plastic Art - Shamma Aggarwal
2. Bhartiya Chitrakala Ka Itihas – Premachandra Gosvami
3. Bhartiya Chitra Kala Kaltihas - Dr. Avinash Bhadur
BACHELOR OF VOCATION (B.VOC.)  
(ARTS) SEMESTER – I

Paper–III: Textile Designing

Time: 3 Hrs.

Max Marks: 100
Theory 50
Practical 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A

Design
1. Elements of Textile Design.

SECTION–B
1. Painting and printmaking.
2. Traditional Arts and Crafts of India.

SECTION–C
Colours:
1. Role of Colours - Functional & Emotional.
2. Colour Wheel - Primary, Secondary and Tertiary Colours.
4. Hue, Saturation and value.
5. Terminology & Glossary in Traditional Art & Craft.
6. Techniques of Tie and Dye.

PRACTICAL:
1. Traditional Design.
2. Tie & Dye
3. 2d & 3d design

SECTION–D
1. Care, renovation and finishes of textiles
2. Culture study

PRACTICAL
1. Muralson Board.
2. Make model with waste material.
3. Make two article using any three techniques (on fabric).

Recommended Books:
1. Colours Studies
2. Digital Textile Printings (Susan Carden)
3. Mastering the Art of Fabric Painting and Design (Laurie Wisbrun)
4. Textile Reader (Jessica Hemmings)
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – I

PAPER–IV: COMMUNICATION SKILLS IN ENGLISH – I

Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A–D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

The syllabus is divided in four sections as mentioned below:

Section–A
Reading Skills: Reading Tactics and strategies; Reading purposes–kinds of purposes and associated comprehension; Reading for direct meanings.

Section–B
Reading for understanding concepts, details, coherence, logical progression and meanings of phrases/expressions.

Activities:
• Comprehension questions in multiple choice format
• Short comprehension questions based on content and development of ideas

Section–C
Writing Skills: Guidelines for effective writing; writing styles for application, personal letter, official/business letter.

Activities:
• Formatting personal and business letters.
• Organising the details in a sequential order

Section–D
Resume, memo, notices etc.; outline and revision.

Activities:
• Converting a biographical note into a sequenced resume or vice-versa
• Ordering and sub-dividing the contents while making notes.
• Writing notices for circulation/boards

Recommended Books:
• *Oxford Guide to Effective Writing and Speaking* by John Seely.
• *English Grammar in Use* (Fourth Edition) by Raymond Murphy, CUP
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – I

PAPER-V: ਪ੍ਰਸ਼ਨਕਾਰ (ਕਲਾਸੀਕਲ)

ਸਮਾਂ : 3 ਪੇਟੀ
ਪੰਤ-ਪੰਤ ਅਦੇ ਪੰਤ-ਪੰਤ ਮਾਤਰਾ

ਮੇਕਸ਼ਨ-ਦੇ

ਅਖਾਦਾ ਅਧਿਆਪਨ (ਤਿਰਕਸ਼ ਵਾਰ,
(ਸੇਵ ਮੁਹਿੰਦਰ ਸੀਨ ਅਦੇ ਅਧਿਆਪਨ ਸਿੰਘ ਮੰਗੜ,
ਵਾਲੁ ਰਾਹਵ ਰੇ ਪੁਰਾਣਪੱਛਮਿਤੀ, ਅਭਿਆਸ਼ਾਦਾ)
(ਪ੍ਰਸ਼ਨ ਸਾਈਡ ਲਾਇਬ੍ਰੇਰੀ; ਮਾਤਰ)

ਮੇਕਸ਼ਨ-ਧੀ

ਵਿਦਿਆਰਥੀ ਜਾਨਤਾ (ਵਿਦਿਆਰਥੀ ਸਿੰਘ-ਸੰਗਮਿਤੀ)
ਸੇਵ ਮੁਹਿੰਦਰ,
ਪ੍ਰਸ਼ਨਕਾਰ ਮਾਧਿਰ ਪੁਰਾਨਪੱਛਮ, ਸਭਿਆਚਾਰ। (ਕੇਂਦਰ 1 ਤੋਂ 6)
(ਵਿਚ ਪਰ ਮਾਤਰ, ਸਿੰਘ-ਸੰਗਮਿਤੀ)

ਮੇਕਸ਼ਨ-ਮੀ

(੧) ਪੁਜੂ ਉਚਾਰ
(੨) ਪੁਜੂ ਪਦ ਵਿਚ ਪੁਰਾਤ ਕਰਨਾ ਹੋਵੇਗਾ।

ਮੇਕਸ਼ਨ-ਮੀ

(੩) ਪ੍ਰਸ਼ਨਕਾਰ ਪ੍ਰਤੀ ਵਿਚਾਰ : ਪੁਰਾਤ ਅਦਾਕ, ਪੁਰਾਤ ਸਾਹਿਤ ਦੇ ਵਿਚਾਰਕਾਂ, ਸਾਹਿਤ, ਵਿਚਾਰਸਥਲ,
ਮੂਰ-ਮੂਰਆ।
(ਆ) ਕਾਫ਼ੀ ਦੇਖਾਓਂ : ਕਾਫ਼ੀ ਦੇ ਸਕੱਸ਼ਤੀ ਕੁਝ ਕਾਫ਼ੀ ਅਦਾਕ ਦਾ ਅਕਾਦ, ਪ੍ਰਸ਼ਨਕਾਰ 
ਪ੍ਰਤੀ ਪ੍ਰਸ਼ਨ ਵਿਚੋਂ ਦੇ ਪ੍ਰਕਾਸ਼-ਵਿਚਾਰ।

ਅਸਲ-ਚੀਜੀ ਅਦੇ ਪਹਿਚਾਣਕਾਰਕ ਦਾਇ ਉਤਾਹਿਤਾਂ

1. ਪੁਰਾਤ ਪ੍ਰਯਾਸ ਦੇ ਵਿਚ ਜਾਨਾ ਜਾਣਾ ਹੋਵੇਗਾ। ਉਤ ਜਾਨਾ ਹੈਣ ਦੇ ਪੁਰਾਤ ਪ੍ਰਯਾਸ ਸਾਡੇ ਹਨ।
2. ਵਿਚਾਰਸਥਲ ਦੇ ਵਿਚ ਪ੍ਰਯਾਸ ਪੁਰਾਤ ਵਰਤੇ ਰਹਾ ਹੋਵੇ। ਉਤ ਜਾਨਾ ਹੈਣ ਦੇ ਪੁਰਾਤ ਸਕਸ਼ਤੀ ਹੈ।
3. ਕਾਫ਼ੀ ਪ੍ਰਯਾਸ ਦੇ ਵਿਚਾਰਸਥਲ ਵਿਚੋਂ ਹੈ।
4. ਵਿਚਾਰ ਮੀਟ ਵਾਲਾ ਦਾ ਸੇਵਨ ਕਰਨ ਵਾਲੇ ਦੁਆਰਾ ਪੁਰਾਤ ਦੀ ਚੀੜ ਅੱਠ ਦੇ ਦੋ ਦੋਹਾਂ ਪ੍ਰਯਾਸ ਦੀ ਦੀ ਸਕਸ਼ਤੀ ਵਿਚ ਸਕਸ਼ਤ ਹੋਵੇ।
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – I

PAPER-V: ਪੰਜਾਬੀ ਪ੍ਰੇਸ਼ਨ
(In lieu of Compulsory Punjabi)

ਪਹਤ-ਚੌਧਰੀ

ਮੈਵਾਰਵਲ-ਦੇ

ਪ੍ਰੇਸ਼ਨ ਪ੍ਰਦਾਤਾ, ਤੁਕਮ ਤੁਕਮ, ਪੇਡ ਵਿਚੀ ਦੇਖਣ ਦਰਜਾ ਅਹੀ ਪੇਡ ਵਿਚ ਪੇਡ
ਦੇਖਣ ਦਰਜਾ ਅਹੀ ਅਕੂਲਾ (ਪ੍ਰੇਸ਼ਨ ਪ੍ਰਦਾਤਾ)
ਜਾਣਾ ਹੈ (ਸਿਰੀ ਸੀ, ਮੌਲ ਅਪੀਲ) : ਪ੍ਰੇਸ਼ਨ ਅਹੀ ਦਰਜਾ

ਮੈਵਾਰਵਲ-ਚੀ

ਪ੍ਰੇਸ਼ਨ ਸਭ-ਚੜਾਉਂਦਾ : ਪ੍ਰੇਸ਼ਨ ਪ੍ਰਦਾਤਾ
(ਸਭਾ ਸਭਾ, ਸੂਬਾ ਸਭਾ, ਕਮਿਊਨਿਟੀ ਸਭਾ, ਪ੍ਰੱਤਿਕ ਸ ਹਕਕ, ਅਵਾਰਡ ਅਹੀ ਪਿਛੁੱਦਾ)

ਮੈਵਾਰਵਲ-ਬੀ

ਪ੍ਰੇਸ਼ਨ ਦਰਜਾਂ ਦੀ ਪ੍ਰੇਸ਼ਨ ਸਭਾਪੱਛਾਸ਼ਾਈ : ਬਹਾਦਰ, ਪਹਾਡ, ਕਿਸਮਤ-ਰਾਹਿਣ, ਪੇਡ ਅਹੀ ਵਨ ਪੀਪੂਰ ਅਧਿਕਾਰ ਤਲਾਤ
ਸੇਵਾਪੱਛਾ

ਮੈਵਾਰਵਲ-ਬੀ

ਉਹਦੇ ਦੇ ਮੌਲ ਤੀਰਾ ਦੇ ਲਾ, ਵਧੂ ਅਧਿਕਾਰਾਂ ਦੇ ਲਾ, ਲੋਕੋ ਦੇ ਲਾ, ਹੈ ਉਸ ਮੋ ਉਦ ਵਿਤੀਅਲੀ ਮਹਾਂਬਾਦ ਵਿਚ

ਅਧਿਕਾਰ ਅਹੀ ਵਿਤੀਅਲੀ ਮਹਾਂਬਾਦ ਉਚਾਈਆਂ

1. ਪ੍ਰੁਸ਼ ਦੂਜਾ ਦੇ ਲਾ ਜਾਣਾ ਦੋਨੋ। ਉਹ ਜਾਣਾ ਹਿੰ ਦੇ ਪ੍ਰੁਸ਼ ਪੁੱਛੀ ਸਟਾਉ।
2. ਹਿੰ ਦੀ ਤੁਕਮ ਦੇ ਲਾਂ ਪ੍ਰੁਸ਼ ਪੁੱਛੀ ਪੁੱਛੀ। ਉਹ ਜਾਣਾ ਹੀ ਹੀ ਪ੍ਰੁਸ਼ ਹੀ ਹੀ ਅਧਿਕਾਰ ਤਲਾਤ
ਪ੍ਰੁਸ਼ਾਂ ਪ੍ਰੁਸ਼ ਦੀ ਜਾਣਾ ਹੀ ਹੀ ਜਾਣਾ ਹੀ ਬੀਜ ਨਾ ਸਕਾਰਾ ਤਾ
3. ਉਹਦੇ ਪ੍ਰੁਸ਼ ਦੇ ਲਾਂ ਅਧਿਕਾਰ ਅਧਿਕਾਰ ਉਹਦੇ।
4. ਖੇਤਰ ਮੌਲ ਸੀ ਦੁਆਰਾ ਉਹਦੇ ਉਹ ਪ੍ਰੁਸ਼ਾਂ ਦੀ ਦੰਗ ਅਖੀਰ ਦੰਗ ਉੱਠ ਵੇਲਾ ਦੰਗ ਦੰਗ ਰਾਹਿਣ-ਪ੍ਰੁਸ਼ਾਂ
ਹੀਣ ਵਨ ਸਕਾਰਾ ਤਾ।
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – I

PAPER–V: Punjab History & Culture (From Earliest Times to C 320)
(Special Paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)

Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
1. Physical features of the Punjab and its impact on history.
2. Sources of the ancient history of Punjab

Section–B
3. Harappan Civilization: Town planning; social, economic and religious life of the Indus Valley People.

Section–C
5. Social, Religious and Economic life during Rig Vedic Age.

Section–D
7. Teachings and impact of Buddhism
8. Jainism in the Punjab

Suggested Readings:
PAPER – VI: DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION
(COMPULSORY PAPER)

PROBLEM OF DRUG ABUSE

Time: 3 Hours

Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section – A

Meaning of Drug Abuse:

Section – B

Consequences of Drug Abuse for:
- Family     : Violence.
- Society    : Crime.
- Nation     : Law and Order problem.

Section – C

Management of Drug Abuse:
Medical Management: Medication for treatment and to reduce withdrawal effects.

Section – D

Psychiatric Management: Counselling, Behavioural and Cognitive therapy.
Social Management: Family, Group therapy and Environmental Intervention.
References:

Paper–I: Art & Painting

Time: 3 Hrs.  Max Marks: 100

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A
1. Scope of Art.
2. Co-relation of Art and Craft with other school subjects, need of co-relation, purpose of co-relation, co-relation of Art with languages, science, nature studies, history, geography, math, agriculture and crafts.
3. Special characteristics of Ajanta & Mughal painting.

SECTION–B
1. Art of Indus Valley Civilization with special reference to sculpture, architecture and seals.
3. Appreciation of Abstract Art.

SECTION–C
1. Life and works of famous Punjabi artists:
   a) Sobha Singh
   b) Satish Gujral
2. Life and works of famous Indian artist.
   a) Raja Ravi Verma
   b) Amrita Sher Gill

SECTION–D
Rajasthan style of painting
Pahari style of Painting

PRACTICAL
1. Floral design, Geometrical design.
2. Landscape with colours (any medium)
3. Composition

Recommended Books:
1. Bhartiya Chitrakala Kaltihas - Dr. Mamta Singh
2. Aadhunik Bhartiya Chitra Kala - Dr. Girraj Kishore Agrawal
3. The History of Indian Painting - Dr. Prem Chand Goswami
4. Indian Miniature Painting – Arjan Chakraverty
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – II

Paper–II: Textile Designing

Time: 3 Hrs. Max Marks: 100
Theory 50
Practical 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A
1. Techniques of Stencil Printing.
2. Techniques of Fabric Painting.
3. Fibre to Fabric Process.
4. Types of Yarn.

SECTION–B
1. Basic concept of design
2. Fabric Forming Methods
   a) Weaving
   b) Knitting
   c) Non-weaving
   d) Weaving preparatory machine & their objects.

SECTION–C
Material Studies: Fiber, various textile materials, cotton textiles

PRACTICAL:
1. Stencil printing on fabric
2. Fabric printing on fabric

SECTION–D
Introduction of Indian textile: history, scope and applications design and structure of fabric

PRACTICAL
1. Make two articles using any four techniques.
2. Make one wall painting using any three traditional design.

Recommended Books:
1. Textile, Block Printing, Global Inspiration and Interiors - (John Robshaw Paints)
2. William Morris Textiles - (Linda Parry)
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – II

Paper–III: COMPUTER APPLICATIONS

Duration: 3 Hours
Marks: 100
Theory: 60
Practical: 40

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A–D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION–A

SECTION–B
Advanced Concepts of Networks and Internet: Keywords: URL, IP address, Hyperlinks, Web pages, Home page, web sites, WWW, Dial-up, Broadband, Dedicated, ISP, Browser, DSL, DNS, Gateways, Chat rooms, Downloading and Uploading, Wifi.

SECTION–C
Internet Explorer: Working with Microsoft Internet Explorer: Opening a web page, opening multiple browser windows, opening multiple tabs in a single browser windows and their management, working offline, deleting temporary files, exploring Internet Options. Net Etiquettes, Searching the Web: Meaning of Search Engines, Keywords

SECTION–D

Note: The relevant short cut keys of MS Word to be discussed.

PRACTICAL
(10 Marks)
1. Typing on Computer
2. A Question on MS-Word

Suggested Readings:
3) Fundamentals of Information Technology, Alexis and Mathew.
5) Principles of Typewriting, D.P. Bhatia and S.S. Sangal
PAPER-IV: COMMUNICATION SKILLS IN ENGLISH – II

Time: 3 Hours

Max. Marks: 50
Theory Marks: 35
Practical Marks: 15

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Course Contents:

SECTION–A
Listening Skills: Barriers to listening; effective listening skills; feedback skills.
Activities: Listening exercises – Listening to conversation, News and TV reports

SECTION–B
Attending telephone calls; note taking and note making.
Activities: Taking notes on a speech/lecture

SECTION–C
Speaking and Conversational Skills: Components of a meaningful and easy conversation; understanding the cue and making appropriate responses; forms of polite speech; asking and providing information on general topics.
Activities: 1) Making conversation and taking turns
2) Oral description or explanation of a common object, situation or concept

SECTION–D
The study of sounds of English,
Stress and Intonation,
Situation based Conversation in English,
Essentials of Spoken English.
Activities: Giving Interviews

PRACTICAL / ORAL TESTING

Marks: 15

Course Contents:-
1. Oral Presentation with/without audio visual aids.
2. Group Discussion.
3. Listening to any recorded or live material and asking oral questions for listening comprehension.

Questions:-
1. Oral Presentation will be of 5 to 10 minutes duration (Topic can be given in advance or it can be student’s own choice). Use of audio visual aids is desirable.
2. Group discussion comprising 8 to 10 students on a familiar topic. Time for each group will be 15 to 20 minutes.

Note: Oral test will be conducted by external examiner with the help of internal examiner.
16
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – II

PAPER–V: ਪੱਤਾਲੀ (ਪੰਜਾਬੀ)

ਵਿਭਾਗ : 3 ਪੇਟੀ

ਵਿਚਾਰ ਅਧਿਆਯ : 50

ਮੈਵਸ਼ੁਮਾਰ

ਆਕਸਮਿਕ ਅਧਿਆਯ (ਕ੍ਰਿਤੀ ਵਿਚਾਰ).
(ਸੰਘਾ ਮੁਕਤਵਾਚ ਕੀਤਾ ਅਧਿਆ ਵਿਗਿਆਨ ਮੰਤਰ)
ਵਾਲਾ ਦਿਨ ਦੇਵ ਪੁਰਾਤੁਤਵ ਜਨਤਾ, ਅਭਿਆਸ.
(ਵਿੱਚ-ਵਿੱਚ, ਪੁਨਰਵਿੱਚਨ)

ਮੈਵਸ਼ੁਮਾਰ-

ਤਿਤਿਕਸਾ ਮੰਚ (ਤਿਤਿਕਸਾ ਹੋਰ-ਵਿੱਚਨਨ)
ਸੰਘ, ਨਾਂ-ਗਿਆਨ, ਪੰਜਾਬੀ ਸੰਦੇਸ਼ ਪੁਰਾਤਤਵ, ਜਨਕਾਂ ਦਾ। (ਖੇਤਰ 7 ਤੋਂ 12)
(ਸਾਚਾ, ਲਿਖਾਣ ਮੈਲੀ)

ਮੈਵਸ਼ੁਮਾਰ-

(ਧਿਰਿਹਾਣ ਅਧਿਆਤ ਅਧੀ ਅਧਿਆਤ ਤਕਨਾ : ਪੁਰਾਤਤਵ, ਦੀਵਾਣੀ ਮੈਵਸ਼ੁਮਾਰ
(ਨ) ਅਧਿਆਤ ਮੂੱਤੀਆਂ

ਮੈਵਸ਼ੁਮਾਰ-

(ਧਿਰਿਹਾਣ ਤਕਨਾ
(ਪ) ਹਾਂਦੋਂ ਅਧਿਆਤ ਅਧੀਤ

ਆਂਚ-ਸੰਚ ਅਧੀ ਵਿਕਿਰਵਾਚ ਕਾਲੀ ਤਕਨਾਵਾਂ

1. ਪੁਸਤਕ ਪੈੜਾ ਵਿੱਚ ਚਾਲਣਾ ਤੈਖ ਜੋ। ਉਤਾ ਜਾਣਾ ਹੁਂਕਾ ਨੇ ਪੁਸਤਕ ਪੈੜੀ ਸਾਠ ਜੀ।
2. ਹੋਰ-ਵਿੱਚ ਹਾ। ਹੁਂ ਪੁਸਤਕ ਵੱਲ ਵਧ ਜੀ। ਉਤਾ ਬਣਾ ਹੁਂ ਹੀ ਉਤ ਪੁਸਤਕ ਸਾਂ ਹੀ। ਪੁਸਤਕ ਪੁਸਤਕ ਜੀਸ਼ ਨੇ ਹੁਂ ਹੀ ਜੀ। ਦੀ ਜੀ ਪੁਸਤਕ ਵੱਲ ਵਧਾ ਨਾ ਸਾਂ ਹੀ।
3. ਉਤਾਹ ਪੁਸਤਕ ਵੇਲ ਕਰਣਾ ਕੀਤਾ ਵੱਲ ਜੀ। ਉਤਾ ਪੁਸਤਕ ਦੀ ਹੁਂ ਪੈੜ ਜੇ ਪੈੜ ਵੇਲ ਚਾਲਣ ਵੀਮਾਂ ਹੀ ਜੇ ਵਧ ਪੁਸਤਕ ਵੇਲ ਹੀ ਵਧ ਨਾ ਹੀ।
4. ਪੈੜ ਮੈਂ ਵੇਲ ਵਧ ਦੇ ਵੇਲ ਦੇ ਵੇਲ ਜਾਣਾ ਵਧ ਜੀ। ਉਤਾ ਪੁਸਤਕ ਦੀ ਹੁਂ ਪੈੜ ਜੇ ਪੈੜ ਵੇਲ ਚਾਲਣ ਵੀਮਾਂ ਹੀ ਜੇ ਵਧ ਨਾ ਹੀ।
प्रथम वाक्य

मैवमल-प्रथम

महात्मा नेहरूके : पद्धति अधे लड़े
(रूप, पद्धति, लिखिता, लिखिता किंवा किंवा, विलोकन, मर्मभाव, प्रेमललक महात्मा)

मैवमल-दूसरी

पौराणिक भाव यथार्थ : पौराणिक भाव-पद्धति
(१) मानवविश्व भाव, मानवविश्व भाव अधे भ्रमण भाव (पद्धति अधे लड़े)
(२) विज्ञानीश्व भाव, पूर्वताप भाव अधे गुजरानी भाव (पद्धति अधे लड़े)

मैवमल-तीसरी

पीछा उपलब्ध
मध्ये उपलब्ध

मैवमल-चौथी

विशेष पंज्य (पौराणिक भाव चढ़डी)
अधे अधे मुरलीदेव

अधे-सिंह अधे पद्धतिभाव लड़ी उपलब्धतां

1. पूर्ण पंज्य दे चाहा ज्ञान डे टो। उद ज्ञान दिच्चे दे पूर्ण पुढे साधे।
2. विज्ञानीश्व दे दुःख पूर्ण बते उदा। उद ज्ञान दिच्चे दित पूर्ण सम्भवी ने।
3. ज्ञान पूर्ण दे पत्नी भाव उदा।
4. वेक ज्ञान चाहा ज्ञान डे देखे उन पूर्ण ची देंदे भाँग उड़ चं चं चं चं दिच्च बत सता ने।
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – II

PAPER–V: Punjab History & Culture (C 320 to 1000 B.C.)
(Special Paper in lieu of Punjabi compulsory)
(For those students who are not domicile of Punjab)

Time: 3 Hours  Max. Marks: 50

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section–A
1. Alexander’s Invasion and its Impact
2. Punjab under Chandragupta Maurya and Ashoka.

Section–B
3. The Kushans and their Contribution to the Punjab.
4. The Panjab under the Gupta Empire.

Section–C
5. The Punjab under the Vardhana Emperors
6. Socio-cultural History of Punjab from 7th to 1000 A.D.

Section–D
7. Development of languages and Education with Special reference to Taxila
8. Development of Art & Architecture

Suggested Readings:
1. L. M Joshi (Ed), History and Culture of the Punjab, Art-I, Punjabi University, Patiala, 1989 (3rd Edition)
Instructions for the Paper Setters:-
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section – A

Prevention of Drug Abuse:
Role of family: Parent child relationship, Family support, Supervision, Shaping values, Active Scrutiny.

Section – B

School: Counselling, Teacher as role-model. Parent-teacher-Health Professional Coordination, Random testing on students.

Section – C

Controlling Drug Abuse:
Media: Restraint on advertisements of drugs, advertisements on bad effects of drugs, Publicity and media, Campaigns against drug abuse, Educational and awareness program

Section – D

References:

BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – III

Paper-I: COMPUTER FUNDAMENTALS

Time: 3 Hours
Max. Marks: 100

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section-A
• **Introduction to Windows:** Basics, Windows Accessories, using file and program
• **MS-Word:** Overview, creating, saving, opening, importing, exporting and inserting files, Manager. Formatting pages, paragraphs and sections, indents and outdents, creating lists and numbering. Headings, styles, fonts and font size editing, positioning and viewing texts, finding and replacing text, inserting page breaks, page numbers, book marks, symbols

Section-B
• **MS-Power Point:** Presentation Overview, entering information, presentation creation and dates. Using tabs and tables, header, footer and printing. opening and saving presentation, power point elements, exploring power point menu, working with dialog boxes, saving presentation, printing slides view, slide sorter view, notes view, outline view, formatting and enhancing text formatting, inserting audio and video.

Section-C
• **MS-Excel:** overview, creating, saving and opening of sheets. Data analysis using different statistical parameters.

Section-D
• **Internet:** Internet and its working, working of WWW, Web browsing (opening, viewing, saving and printing web page and bookmark), search engines.

Suggested readings:

1. R.K Taxali: Introduction to software packages, Galgotia Publications.
2. MS-Office 2003, BPB Publication
Note: Instructions for Practical Exam:

1. Entire theory paper will be covered for practical.
2. Practical Paper will be set on the spot.
Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section-A
1. Kala- The origin of the word Kala, Definitions- Plato, Croche, Rabindra Nath Tagore.
   a. Arts= based on form or place, based on motion
   b. Based on eyes and ear.
   c. Based on shape
   d. Based on imitation
   e. Based on Psychology, symbolic classical and impressionistic.

Section-B
2. Painting and technique of Ajanta Caves.

Section-C
1. Folk Art- Origin, Definition, Types- Rangoli, Mandna, Alpana, SanjhiApna, leelaGudwanaAhpan.

Section-D
1. Modern Age- Tanjore Art- Technique of Tanjore painting. Subject matter of Tanjore painting.
2. Patna or Company School- Characteristics of Patna or company school
   1. Depiction of general life.
   2. Social Theme
   3. Portraits
   4. Painting on Mica
   5. Firka Painting
   6. Animal Depiction
   7. Depiction of Festival
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – III

Practical

1. Landscape with colour (any medium)
2. Floral and Geometrical design
3. Poster making.

Recommended Books.
- The history of Indian Painting. Dr. Prem Chand Goswami.
- A Brief History of Indian Painting. L.C. Sharma
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – III

Paper-III: Textile Designing (Dyeing & Printing)

Time: 3 Hrs
Max Marks: 150
Theory 75
Practical 75

Instructions for the paper setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A

Printing
Traditional& Modern Methods of Printing

Section B

Dyes
Types of Dyes

Section C

Dyeing
Dyeing of Fibre, Yarn, Fabrics
Decorative Dyeing

Section D

Printing Defects
Dyeing Defects

Recommended Books:

- Masterpieces of Indian Textiles (1970) – Rustarm J Mehta

PRACTICAL

Development of articles using different printing techniques.
BACHELOR OF VOCATION (B.VOC.)
(ARTS) SEMESTER – IV

Paper–I: Art & Painting

Time: 3 Hrs

Max Marks: 150
Theory 75
Practical 75

Instructions for the Paper Setters:-
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section-A
1. Pre Historic Age.
2. Jogimara Cave: Painting of Jogimara

Section-B
1. Chola Art
2. Painting of Deccan School
3. Painting of Pala School
4. Painting of Jain School

Section-C
1. Mughal School
   1) Mughal School in Akbar’s time same important artists of Akbar’s time.
   2) Painting of Non- Indian Stories.
   3) Painting of Indian Stories.
   4) Historical Painting.
   5) Portrait Painting.

Section-D
1. Contemporary and Modern Art
2. Yamini Rai
3. Devi Prasad Roy Choudhary
4. SudhirRanjanKhastgir
5. K. S. Kulkarni
Practical

1. Landscape with color (any medium).
2. Miniature Painting
3. Cartoon Making

Recommended Books:

- The history of Indian Painting. Dr. Prem Chand Goswami.
- A Brief History of Indian Painting. L.C. Sharma
Paper-II: Textile Designing (Traditional Textiles)

Time: 3 Hrs

Max Marks: 150
Theory 75
Practical 75

Instructions for the paper setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A
Brocades, Chanderi, Baluchari, Kanjivaram

Section B
Kalamkari, Sanganeri, Phad

Section C
Bandhani, Palola, Ikkat

Section D
Kutch, Phulkari, Kantha, Kasuti, ChambaRumal, Kashida, Chikankari

Recommended Books:
- Indian Embrodery – SavitriPandit
- Traditional Indian Textiles - BhatnagarParul
- Textile Arts of India – KhotShoin

PRACTICAL
Making of sample of traditional embroideries–Kantha, Kasuti, Phulkari, Chickankari, Kulch, Kashida.
Paper-III: (Graphic Design)

Instructions for the paper setters:-

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Section A
Introduction of Graphic Designing
Shaping, Design & Illustration

Section B
Graphic Designing Software’s Tools

Section C
Photoshop
Coral Draw

Section D
Illustrator
Image Layout and Effects

Recommended Books:

- Graphic Design The New Basics – Ellen Lupton and Jennifer Cole Phillips
- Design Your Life – The pleasures and perils of every days things – Ellen Lupton and Julia Reinhard Lupton

PRACTICAL

Development of Design using different software’s.
Paper-IV: (ESL-221): ENVIRONMENTAL STUDIES

Time: 3 Hrs.  Max. Marks: 100

Teaching Methodologies
The Core Module Syllabus for Environmental Studies includes class room teaching and field work. The syllabus is divided into 8 Units [Unit-1 to Unit-VII] covering 45 lectures + 5 hours for field work [Unit-VIII]. The first 7 Units will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit-VIII comprises of 5 hours field work to be submitted by each candidate to the Teacher in-charge for evaluation latest by 15 December, 2019.

Exam Pattern:

End Semester Examination- 75 Marks
Project Report/Field Study- 25 Marks [based on submitted report]
Total Marks- 100

The structure of the question paper being:

Part-A, Short answer pattern with inbuilt choice – 25 Marks
Attempt any five questions out of seven distributed equally from Unit-1 to Unit-VII.
Each question carries 5 marks. Answer to each question should not exceed 2 pages.

Part-B, Essay type with inbuilt choice – 50 Marks
Attempt any five questions out of eight distributed equally from Unit-1 to Unit-VII. Each question carries 10 marks. Answer to each question should not exceed 5 pages.

Project Report / Internal Assessment:

Part-C, Field work – 25 marks [Field work equal to 5 lecture hours]
The candidate will submit a hand written field work report showing photographs, sketches, observations, perspective of any topic related to Environment or Ecosystem. The exhaustive list for project report/area of study are given just for reference:

1. Visit to a local area to document environmental assets: River / Forest/ Grassland / Hill / Mountain / Water body / Pond / Lake / Solid Waste Disposal / Water Treatment Plant / Wastewater Treatment Facility etc.
2. Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
3. Study of common plants, insects, birds
4. Study of tree in your areas with their botanical names and soil types
5. Study of birds and their nesting habits
6. Study of local pond in terms of wastewater inflow and water quality
7. Study of industrial units in your area. Name of industry, type of industry, Size (Large, Medium or small scale)
8. Study of common disease in the village and basic data from community health centre
9. Adopt any five young plants and photograph its growth
10. Analyze the Total dissolved solids of ground water samples in your area.
11. Study of Particulate Matter (PM_{2.5} or PM_{10}) data from Sameer website. Download from Play store.
12. Perspective on any field on Environmental Studies with secondary data taken from Central Pollution Control Board, State Pollution Control Board, State Science & Technology Council etc.
Unit-I
The multidisciplinary nature of environmental studies
Definition, scope and importance, Need for public awareness

(2 lectures)

Unit-II
Natural Resources: Renewable and non-renewable resources:
Natural resources and associated problems.
(a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
(b) Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
(c) Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
(d) Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, waterlogging, salinity, case studies.
(e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.
(f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles.

(8 Lectures)

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: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

(6 Lectures)

Unit-IV
Biodiversity and its conservation
- Introduction – Definition: genetic, species and ecosystem diversity
- Biogeographical 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)
Environmental Pollution:
Definition:
- Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution
- 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  

(8 Lectures)

Social Issues and the Environment
- From unsustainable to sustainable development
- Urban problems and 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
- Environmental Protection Act, 1986
- Air (Prevention and Control of Pollution) Act, 1981
- Water (Prevention and control of Pollution) Act, 1974
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness  

(7 Lectures)

Human Population and the Environment
- Population growth, variation among nations
- Population explosion – Family Welfare Programmes
- Environment and human health
- Human Rights
- Value Education
- HIV / AIDS
- Women and Child Welfare
- Role of Information Technology in Environment and Human Health
- Case Studies  

(6 Lectures)
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

(Field work equal to 5 lecture hours)

References:
2. Down to Earth, Centre for Science and Environment, New Delhi.