Syllabus - XII
Session 2018-19
CONTENTS

Senior Secondary Level

A. Scheme of Studies

B. Compulsory subjects
1. General English
2. General Punjabi
3. Punjabi History and Culture
4. Environmental Education
5. Computer Science

C. Elective Subjects
(a) Humanities Group
6. Punjabi
7. Hindi
8. English
9. Urdu
10. Sanskrit
11. Arabic
12. Persian
13. French
14. German
15. Russian
16. Korean
17. History
18. Economics
19. Mathematics
20. Business Organisation and Management
22. Political Science
23. Sociology
24. Public Administration
25. Religion
26. Music(Vocal)
27. Gurmat Sangeet
28. Music (Instrumental)
29. Dance (Tabla)
30. Dance
31. Philosophy
32. Education
33. Geography
34. Defence Studies
35. Psychology
36. Home Science
37. Modeling and Sculpture
38. Geometrical Perspective and Architectural Drawing
39. Commercial Art
40. Drawing and Painting
41. History and Appreciation of Art
42. Physical Education and Sport
43. Insurance
44. Rural Development and Environment
45. Media Studies
(b) **Science Group**
46. Physics  
47. Chemistry  
48. Biology  
49. Geology  
50. Biotechnology  
51. Computer Application  
52. Elements of Electronics Engineering

(C) **Commerce Group**
53. Business Studies II  
54. Accountancy-II  
55. Business Economics and Quantitative Methods –II  
56. Fundamental of e- Business

(d) **Agriculture Group**
57. Agriculture

(d) **Technical Group**

**Note:**
1. Syllabi of all the subjects of +2 are available on the Board’s web site www.pseb.ac.in
2. Provision for opting state language as an elective subject is withdrawn
3. There is no change in the Scheme of Studies of +2.
4. Syllabi for technical group can be obtained from Director, Academics, Punjab School Education Board, Mohali.
(A) SCHEME OF STUDIES  
(ACADEMIC STREAM)  
FOR  
Senior Secondary (12th Class) Examination

(a) Compulsory Subjects: Every candidate shall offer the following subjects:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subject</th>
<th>Th</th>
<th>Prac</th>
<th>CCE</th>
<th>Total Marks</th>
<th>Min/Max</th>
<th>Pass Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>General English</td>
<td>65</td>
<td>22</td>
<td>10</td>
<td>75</td>
<td>43/3</td>
<td>25</td>
</tr>
<tr>
<td>2.</td>
<td>General Punjabi Or Punjab History and Culture</td>
<td>65</td>
<td>22</td>
<td>10</td>
<td>75</td>
<td>43/3</td>
<td>25</td>
</tr>
<tr>
<td>3.</td>
<td>Environmental Education</td>
<td>45</td>
<td>15</td>
<td>05</td>
<td>50</td>
<td>02/5</td>
<td>17</td>
</tr>
<tr>
<td>4.</td>
<td>Computer Science</td>
<td>50</td>
<td>17</td>
<td>40</td>
<td>100</td>
<td>13/10</td>
<td>33</td>
</tr>
</tbody>
</table>

*Important Note: Every candidate shall offer 'Environmental Education and Computer Science' as compulsory subjects. Examination of these subjects will be conducted at the school level. Evaluation also shall be done at school level and result in the form of Grades as shown in the Pass Formula will be sent to the Board and same will be reflected on the Certificate.

Note: 1. A candidate who has passed the Matriculation examination from a Board other than the Punjab School Education Board can have Punjab History and Culture in lieu of the Compulsory Punjabi Subject in the 11th/12th classes. Such students will furnish proof of not having studied Punjabi at the Matric level.

2. A candidate who has passed Matriculation examination from the Punjab School Education Board with 'Punjab History and Culture' as a subject can opt for Punjab History and Culture in lieu of compulsory Punjabi in the 11th and 12th classes.

(b) Elective Subjects:

In addition to the compulsory subjects every candidate shall offer any of the following groups:

- Group I Humanities
- Group II Science
- Group III Commerce
- Group IV Agriculture
- Group V Technical

(c) Additional Subjects:

In addition to three elective subjects offered by a candidate out of the group (only in case of Humanities, Science and Agriculture groups) a student may offer one additional subject from the same group.
## HUMANITIES GROUP

Every candidate shall offer any three elective subjects from the following:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subject</th>
<th>Th Max/Min</th>
<th>Prac Max/Min</th>
<th>CCE Total Marks</th>
<th>Min Pass Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Language (anyone)</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>i.</td>
<td>Punjabi (Elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii.</td>
<td>Hindi</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iii.</td>
<td>English(Elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>iv.</td>
<td>Urdu</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Classical/Foreign Language (anyone)</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>i.</td>
<td>Sanskrit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ii.</td>
<td>Arabic</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>iii.</td>
<td>Persian</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>iv.</td>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>v.</td>
<td>French</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>vi.</td>
<td>German</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>vii.</td>
<td>Russian</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>viii.</td>
<td>Korean</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>3.</td>
<td>History</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>4.</td>
<td>Economics</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>5.</td>
<td>Mathematics</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>6.</td>
<td>Business Organisation &amp; Management</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>7.</td>
<td>Book Keeping and Accountancy</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>8.</td>
<td>Political Science</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>9.</td>
<td>Sociology</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>10.</td>
<td>Public Administration</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>11.</td>
<td>Philosophy</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>12.</td>
<td>Education</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>13.</td>
<td>Religion</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>14.</td>
<td>Geography</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>15.</td>
<td>Defense Studies</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>16.</td>
<td>Psychology</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>17.</td>
<td>History and Appreciation of Art</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>18.</td>
<td>Geometrical Perspective and Architectural Drawing</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>19.</td>
<td>Rural Development and Environment</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>20.</td>
<td>Insurance</td>
<td>90 30</td>
<td>10 03</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>21.</td>
<td>Computer Application</td>
<td>60 20</td>
<td>30 10</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>22.</td>
<td>Agriculture</td>
<td>70 23</td>
<td>20 07</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>Sr. No.</td>
<td>Subject</td>
<td>Th Max/ Min</td>
<td>Prac Max/ Min</td>
<td>CCE Max/ Min</td>
<td>Total Marks</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------</td>
<td>-------------</td>
<td>---------------</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1.</td>
<td>Physics</td>
<td>70 23</td>
<td>20 07</td>
<td>10 03</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>Chemistry</td>
<td>70 23</td>
<td>20 07</td>
<td>10 03</td>
<td>100</td>
</tr>
<tr>
<td>3.</td>
<td>Biology Or Mathematics</td>
<td>70 23</td>
<td>20 07</td>
<td>10 03</td>
<td>100</td>
</tr>
</tbody>
</table>

A candidate can offer an additional subject out of the following:

| I.     | Geology                     | 60 20       | 30 10         | 10 03        | 100         | 33             |
| II.    | Geography                   | 70 23       | 20 07         | 10 03        | 100         | 33             |
| III.   | Home Science                | 60 20       | 30 10         | 10 03        | 100         | 33             |
| IV.    | Agriculture                 | 70 23       | 20 07         | 10 03        | 100         | 33             |
| V.     | Biology Or Mathematics      | 70 23       | 20 07         | 10 03        | 100         | 33             |
| VI.    | Computer Application        | 60 20       | 30 10         | 10 03        | 100         | 33             |
| VII.   | Elements of Electronic Engg.| 40 13       | 50 17         | 10 03        | 100         | 33             |
Note: (i) In addition to three elective subjects offered by a candidate out of Science group a candidate desiring higher studies in Ayurveda, may offer Sanskrit as an additional language. The syllabus of Sanskrit will be the same as prescribed in the Humanities Group.

(ii) The Syllabi in subjects of Economics, Geography, Home Science and Mathematics will be the same as prescribed in the Humanities Group.

(iii) The syllabus in the subject of Agriculture will be same as prescribed in the Agriculture Group.

**COMMERCE GROUP**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subject</th>
<th>Th Th</th>
<th>Prac</th>
<th>CCE</th>
<th>Total Marks</th>
<th>Min Pass Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Business Studies-II</td>
<td>65</td>
<td>22</td>
<td>10</td>
<td>03</td>
<td>75</td>
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<tr>
<td>2.</td>
<td>Accountancy II</td>
<td>50</td>
<td>17</td>
<td>15</td>
<td>05</td>
<td>75</td>
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<tr>
<td>3.</td>
<td>Business Economics &amp; Quantitative Methods-II</td>
<td>65</td>
<td>22</td>
<td>10</td>
<td>03</td>
<td>75</td>
</tr>
<tr>
<td>4.</td>
<td>Fundamentals of E-Business</td>
<td>50</td>
<td>17</td>
<td>15</td>
<td>05</td>
<td>75</td>
</tr>
</tbody>
</table>

A candidate can also offer an additional subject out of the following:
(a) Computer Application
(b) Mathematics

**AGRICULTURE GROUP**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Subject</th>
<th>Th Th</th>
<th>Prac</th>
<th>CCE</th>
<th>Total Marks</th>
<th>Min Pass Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Agriculture</td>
<td>70</td>
<td>23</td>
<td>20</td>
<td>07</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>Any two of the following:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td>Physics</td>
<td>70</td>
<td>23</td>
<td>20</td>
<td>07</td>
<td>100</td>
</tr>
<tr>
<td>(ii)</td>
<td>Chemistry</td>
<td>70</td>
<td>23</td>
<td>20</td>
<td>07</td>
<td>100</td>
</tr>
<tr>
<td>(iii)</td>
<td>Economics</td>
<td>90</td>
<td>30</td>
<td></td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>(iv)</td>
<td>Rural Development &amp; Environment</td>
<td>90</td>
<td>30</td>
<td></td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td>(v)</td>
<td>Geography</td>
<td>70</td>
<td>23</td>
<td>20</td>
<td>07</td>
<td>100</td>
</tr>
</tbody>
</table>

A candidate can offer an additional subject out of the following:
(a) Mathematics
(b) Computer Application
Note:- The Syllabi in the subjects of Physics, Chemistry and Computer Application will be same as prescribed in the Science Group and that of Geography, Mathematics, Economics and Rural Development & Environment will be the same as in the Humanities Group.

Abbreviations:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Th</td>
<td>Theory</td>
</tr>
<tr>
<td>Pr</td>
<td>Practical</td>
</tr>
<tr>
<td>CCE</td>
<td>Continuous</td>
</tr>
<tr>
<td></td>
<td>Comprehensive</td>
</tr>
<tr>
<td></td>
<td>Evaluation.</td>
</tr>
</tbody>
</table>

Note:-  1 A candidate can offer computer application as an additional subjects also. The syllabus of computer application will be the same as prescribed in Science Group.
1. GENERAL ENGLISH

Time: 3hrs

Theory: 65 Marks
CCE: 10 Marks
Total: 75 Marks

SYLLABUS AND THE STRUCTURE OF QUESTION PAPER

Part-I (Objective type questions) 8 marks

1. It will consist of 8 objective type questions carrying one mark each. Objective type questions may include questions with one word to one sentence answer or fill in the blank or true/false or multiple choice type questions.
   a. Lessons meant for intensive study 3×1=3
   b. Lessons meant for extensive study 3×1=3
   c. Grammar 2×1=2

Part-II (Reading) 10 marks

2. Unseen passage for Comprehension. (passage of 150-200 words) followed by two M.C.Q, 2 single line comprehension questions, one question on fill in the blank (two), one question on match the words (two).
   1+1+1+1+1+1 = 6 marks

3. Comprehension question on a given stanza from poetry (4 questions including a question on name of the poet/poem, Rhyme scheme / Simile / Metaphor / Personification/ Alliteration/ Imagery etc).(1 out of two given stanzas to be attempted) 4 marks

Part-III (Writing) 14 marks

4. Précis writing (passage of about 150 words) 5 marks

5. Letter writing (only official/ business & to the Editors/ Applications (one out of two)( Letter or Application) 6 marks

6. Explaining Newspaper Headlines (15-20 words)/ E-mail writing 3 marks

Part-IV (Grammar) 8 marks

7. Grammar items:
   a. Determiners
   b. Use of Non-finites (Infinitives, Gerunds, Participles)
   c. Transformation of Sentences
   d. Voice
   e. Narration 2+2+2+1+1=8 Marks

Part-V (Literature) 25 marks

8. Central idea (1out of 2.) 3 marks

9. Three( out of four) short answer questions of about 40 to 50 words from intensive study. 3×2=6
10. Two (out of three) short answer questions of about 40 to 50 words from extensive study.  \[ 2 \times 2 = 4 \]
11. Long answer questions on theme, incident, content, character etc. from intensive study 100 to 120 words) (with internal choice).  \[ 6 \text{ marks} \]
12. Long answer type (100 - 120 words) question from extensive study on Character/incident/theme etc (with internal choice).  \[ 6 \text{ marks} \]

**SYLLABUS**

**Section A (Lessons for Intensive study)**

1. Hassan’s Attendance Problem  
   Sudha Murthy
2. The March King  
   Katherine Little Bakeless
3. Thinking Out of the Box: Lateral Thinking  
   (Adapted from the article from Internet)
4. Robots and People  
   Isaac Asimov
5. On Giving Advice  
   Joseph Addison
6. On Saying 'Please'  
   A. G. Gardiner
7. The Story of My Life  
   Helen Keller
8. Two Gentlemen of Verona  
   A. J. Cronin
9. In Celebration of Being Alive  
   Dr. Christian Barnard
10. Gadari Babas in Kalapani Jail  
    Dr. Harish Puri

**Section B (Poetry)**

1. Prayer of the Woods  
   Anonymous
2. On Friendship  
   Khalil Gibran
3. The Echoing Green  
   William Blake
4. Once upon a Time  
   Gabriel Okara
5. Cheerfulness Taught by Reason  
   Elizabeth Barret Browning
6. Father Returning Home  
   Dilip Chitre
7. The Road Not Taken  
   Robert Frost
8. On His Blindness  
   John Milton

**Section C (Lessons for Extensive study)**

1. The School for Sympathy  
   E. V. Lucas
2. A Chameleon  
   Anton Chekhov
3. Bholi  
   K. A. Abbas
4. The Gold Frame  
   R. K. Luxman
5. The Barber’s Trade Union  
   Mulk Raj Anand
6. The Bull beneath the Earth  
   K. S. Virk

**Section D (Grammar and Composition)**

**Grammar**

1. Determiners
2. Use of Non-finites (Infinitives, Gerunds, Participles)
3. Transformation of Sentences
4. Voice
5. Narration

**Composition**
1. Précis writing
2. Letter writing (Official/Business/To Editors)
3. Applications
4. Explaining Newspaper Headlines
5. E-Mail writing

The book prescribed & published by the Punjab School Education Board.

1. (General English XII) A Rainbow of English
2. English Grammar and Composition for XI and XII

Note: All the lessons in the above book are included in the syllabus. No part has been deleted.

Questions can be set from the entire prescribed syllabus. It is not mandatory that all the questions asked by the Paper setter are from the back exercises only.
पुनर्द-पुनर् दी दुष्क्रेन

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

पुनर्द-पुनर् दी दुष्क्रेन की लिखित

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पुनर्द-पुनर् दी दुष्क्रेन की लिखित
STRUCTURE OF QUESTION PAPER

1. All questions are compulsory.

   The question paper will comprise of four sections A, B, C and D of 18 questions in total. The question paper will carry:

   **A. Objective Type Questions:** This type will include Question No. 1 to 7 carrying 1 mark each with one word answer/ fill in the blank/ true or false/ multiple choice type questions.

   \[ 1 \times 7 = 7 \text{ Marks} \]

   **B. Short Answer Type Questions:** This type will include 6 questions from Question No. 8 to 13 carrying 3 marks each. Answer to each question should be in about 30- 35 words.

   \[ 3 \times 6 = 18 \text{ Marks} \]

   **C. Long answer Type Questions:** This type will include 5 question from Question No. 14 to 18 will carry 5 marks each with 100% internal choice. Answer to each question should be in about 80-100 words.

   \[ 5 \times 5 = 25 \text{ Marks} \]

   **D. Map Question:** There will be one section of map carrying 15 marks (10 marks for 5 places and 5 marks each for explanation)

   **Note:- For blind candidates alternative questions will be given in lieu of question no. 19 (map).**

   **Note:- All units of the syllabus should be given adequate representation in the question paper.**

### SYLLLABUS

<table>
<thead>
<tr>
<th>Syllabus</th>
<th>A Objective Type Questions 1 mark</th>
<th>B Short Answer Type Questions 3 marks</th>
<th>C Long Answer Type Questions 5 marks</th>
<th>D Map question</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part-1 Units I-XI</td>
<td>04</td>
<td>03</td>
<td>03</td>
<td>100% Internal choice 5 Places ( \times 2 = 10 \text{ marks} ) Explanation ( 5 \times 1 = 5 \text{ marks} )</td>
<td>10</td>
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<tr>
<td>Part-2 Unit XII-XXII</td>
<td>03</td>
<td>03</td>
<td>02</td>
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<td>08</td>
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<tr>
<td>No. of Questions</td>
<td>07</td>
<td>06</td>
<td>05</td>
<td>1</td>
<td>19</td>
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<td><strong>Total Marks</strong></td>
<td><strong>07</strong></td>
<td><strong>18</strong></td>
<td><strong>25</strong></td>
<td><strong>15</strong></td>
<td><strong>65</strong></td>
</tr>
</tbody>
</table>

### SYLLLABUS

**PART -A**

1. The Great Mughals and their legacy to the Punjab.
2. Shri Guru Nanak Dev Ji.
4. Banda Singh Bahadur and his Martyrdom.
5. Sikhs became the Masters of the Punjab.
PART-B

1. The Punjab under Maharaja Ranjit Singh.
2. The British occupation of the Punjab.
3. Some Famous Legends of the Punjab:-
   a. Puran Bhagat
   b. Heer Ranjha
   c. Sohni Mahiwal
4. Classical Literature of the Medieval period.

PART-C

MAP QUESTION TOPICS

1. Banda Singh Bahadur
2. Shri Guru Gobind Singh
3. Maharaja Ranjit Singh
4. First Anglo-Sikh War
5. Second Anglo Sikh war
CLASS-XII
4. ENVIRONMENT EDUCATION

Time: 2 Hrs
Theory: 45 Marks
CCE: 05 Marks
Total: 50 Marks

STRUCTURE OF QUESTION PAPER (THEORY)

1. There will be one theory paper comprising of 17 questions. All questions will be compulsory.

2. Question No.1-5 are very short answer type questions carrying 1 mark each. Answer to each question will be in one line or few words only.

3. Question No. 6-10 are short answer type questions carrying 2 marks each. Answer to each question will be in 20-30 words.

4. Question No. 11-15 are long/medium answer type questions carrying 4 marks each. Answer to each question will be 50-60 words.

5. Question NO.16 and 17 long answer type question carrying 5 marks. Answer to this question will be in 80 -100 words.

6. In Question no: 16 and 17, there will be 100% internal choice.

7. There will be no objective type question such as yes/ No/ Tick/cross, fill in the blanks, multiple choice, true/ false etc.

8. The question paper should be strictly from the prescribed syllabus based on above mentioned guidelines.

Unit wise distribution of marks will be as follows.

UNIT WISE DISTRIBUTION OF MARKS

<table>
<thead>
<tr>
<th>Unit</th>
<th>1 Mark questions</th>
<th>2 Mark questions</th>
<th>4 Mark questions</th>
<th>5 Mark questions</th>
</tr>
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<tbody>
<tr>
<td>Unit-1 Biodiversity</td>
<td>1</td>
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<td>1</td>
<td>1 or 1</td>
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<tr>
<td>Unit-II Environmental</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
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<tr>
<td>Management</td>
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<tr>
<td>Unit-III Sustainable</td>
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<td>1</td>
<td>1</td>
<td>-</td>
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<tr>
<td>Development</td>
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<td></td>
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<tr>
<td>Unit-IV Sustainable</td>
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<td>1</td>
<td>1</td>
<td>1 or 1</td>
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<tr>
<td>Agriculture</td>
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</tr>
<tr>
<td>Unit-V Environmental</td>
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<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Actions</td>
<td></td>
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<tr>
<td>Total Maks</td>
<td>5 marks</td>
<td>10 marks</td>
<td>20 marks</td>
<td>10 marks</td>
</tr>
</tbody>
</table>

INSTRUCTIONS FOR PAPER SETTER

1. There will be 17 questions in theory paper.
2. Questions No. 1-5 are of 1 mark each and there should be one question from each unit.
3. Question 6-10 are of 2 marks each and there should be one question from each unit.

4. Question 11-15 are of 4 marks each and there should be one question from each unit.

5. Question 16 will be of 5 marks and to be set from unit I and choice question should be set from unit II.

6. Question 17 will be of 5 marks and to be set from unit IV and choice Question should be set from unit V.

SYLLABUS

Unit-1 Biodiversity
- Concept and value of biodiversity
- Levels of biodiversity species, eco and genetic.
- Balance in nature.
- Biodiversity for sustenance of mankind.
- Resource limitation.
- Ecological role of biodiversity.
- Interdependence among different species.
- India as a mega diversity nation.
- Economic potential of biodiversity.
- Loss of biodiversity- threatened, endangered and extinct.
- Strategies for conservation of biodiversity in situ and ex situ.
- Mitigating the people- wildlife conflict.

Unit-II Environmental Management
- Need for environment management vis-a-vis development.
- Aspects of environmental management-ethical, economic, technological and social.
- Legal provisions for environmental management.
- Approaches for environmental management- economic policies, environmental indicators, setting of standards, information exchange and surveillance.
- Problem of stubble and its management (study material upload on website)

Unit-III Sustainable Development
- Concept of sustainable development.
- Concept of sustainable consumption.
• Need for sustainable development for improving the quality of life for the present and future.
• Challenges for sustainable development-political and administrative will, dynamic and flexible polices, appropriate technologies, comprehensive review and revision mechanism, human approach.
• Development of skilled manpower.
• Role of individual and community.
• Role of national and international agencies (both governmental and non-governmental)

**Unit-IV Sustainable Agriculture**

• Need for sustainable agriculture.
• Green revolution-impact on environment.
• Importance of soil for crops, Irrigation systems, use of manure and fertilizers.
• Crop protection-major plant pests and diseases (wheat, rice, cotton, sugarcane, potato), measures for their control- agrochemicals.
• Impact of agrochemicals on environment.
• Elements of sustainable agriculture-mixed farming, mixed cropping, crop rotation, biological and economic consideration, use of biofertilizers and bio pesticides, biological pest control, integrated pest management.
• Application of biotechnology in crop improvement.
• Management of agricultural produces- storage, preservation, transportation and processing.

**Unit-V Environmental Actions**

• Meeting basic human need, food, water, shelter and fuel for all.
• Population control
• Changing consumption patterns.
• Prevention and control of environmental pollution.
• Waste management- reduce, reuse and recycle;
• Community movement for ecological restoration and conservation of environment like joint forest Management (JFM), student’s participation in tree rearing, social and agro-forestry.
• Drugs-ill effects (Part-II) Consequences of use of different drugs, The narcotic drugs and psychotropic substances Act-1985 offences as penalties.(study material uploaded on website)

**CCE**

**Example projects and Activities:**

It is expected that student will undertake two projects or activities. These projects should be undertaken individually and student will prepare a report in each case. Teacher may plan and design projects and activities
depending upon the local situations, available resources and environmental issues of concern. The projects and activities given below are only suggestive and not prescriptive.

- To study the status of an endangered species listed for region by collecting information through different sources and observation and to assess the reasons for its diminishing number. Suggest ways and means to protect the species.

- To conduct a survey of plants and trees in the locality and collect information about their cultural, economic and medicinal values from the local people and available literature. To prepare an action plan for afforestation and planting of trees as trees are most valuable in terms of their cultural, economic importance and medicinal use.

- To study the practices followed in the region for storage, preservation, transportation and processing of perishable or non-perishable farm products and to assess the extent of their wastage due to faulty practices.

- To make a list of raw materials used by the family for preparing different types of dishes. To identify the plants and their parts from which food material is obtained. To make a list of plants on which the animals depend for their food. To prepare a report supported by diagrams/photographs/pictures/graphs to focus on the importance of biodiversity in providing food to human population.

- To study the impact of changes in agricultural practices of animal husbandry including poultry, piggery, fishery and apiculture over a period of time in the local environment or in a given locality or village. The components for analysis may include; types of crop, land area under cultivation, mechanization, use of electricity, mode of irrigation and agrochemicals, agro wastes and their disposal, types of animal breed and their feed, types of shelter and health care, method of preservation and processing of products and animal wastes and their disposal. To suggest an action plan for modifying the prevailing practices so as to make them environment friendly and sustainable.
### मौती-वधुकी
5. वैशिष्ट्य नागरिक

<table>
<thead>
<tr>
<th>क्रम</th>
<th>नागरिकता दे रहे तौर</th>
<th>बुद्धि अंक</th>
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<th>2 अंक</th>
<th>4 अंक</th>
<th>6 अंक</th>
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<td>5.</td>
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<td>कर्मचारी बंधासत्त</td>
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<td>दी-वाचकता</td>
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<td>12</td>
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### पृथिवी (विभिन्न पृथिवी)

- मृत्युबंध विभिन्न शरीरमण हरी तृप्ति
- वाशिष्ट्य निर्देश
- आय: - अय विभच बनार बदल, आय दे त्र्यं दे पृथि बदली, दे डामियोदम आय दे विभचित्रमार लेने दी विभिन्नमण्डल
- स्टालिसिएशन संबंध

#### मृत्युबंध व्यक्ति दे बहुतार्थ
- कृषि
- विभिन्नमण्डल में विभिन्न विभिन्नमण्डल
- पूर्वाभास मृत्युबंध दी पूर्वाभास बदली
- मृत्युबंध मृत्युबंध में विभिन्न विभिन्नमण्डल बदली
- मृत्युबंध विभिन्न में विभिन्नमण्डल: मृत्युबंध मृत्युबंध, मृत्युबंध मृत्युबंध, मृत्युबंध में मृत्युबंध मृत्युबंध
- स्ट्रिप विभिन्नमण्डल आपूर्तियोग
- मृत्युबंध पृथिवीमण्डल: मृत्युबंध बंधासत्त (strcat () function)
- मृत्युबंध बंधासत्त (stremp () function)
- मृत्युबंध बंधासत्त (strlwr () function)
- मृत्युबंध बंधासत्त (streve () function)
- विभिन्नवर्ग बंधासत्त (strupr () function)
9.० द्वारा शब्दावली 1

• ठोस
• ठोस की तरह देखने या दिखाने के लिए विषयों को प्रस्तुत करें।
• विभागों की सूची नवनिर्देश, बारह, बारह को स्वीकार करें।
• अवधारणा के लिए एक दृष्टिकोण, दृष्टिकोण को आकलित रखें।
• हंसी या विकसित करें।

9.१ द्वारा शब्दावली 2

• ठोस
• हंसी के साथ देख पाएं।
• दृष्टिकोण के साथ साझेदारी करें।
• विकसित के लिए एक दृष्टिकोण, दृष्टिकोण को आकलित रखें।

9.२ द्वारा शब्दावली 3

• ठोस
• हंसी के साथ देख पाएं।
• दृष्टिकोण के साथ साझेदारी करें।
• विकसित के लिए एक दृष्टिकोण, दृष्टिकोण को आकलित रखें।

3. विज्ञापन प्रस्ताव

• विज्ञापन की तरह देखने या दिखाने के लिए विषयों को प्रस्तुत करें।
• विभागों की सूची नवनिर्देश, बारह, बारह को स्वीकार करें।
• अवधारणा के लिए एक दृष्टिकोण, दृष्टिकोण को आकलित रखें।
• हंसी या विकसित करें।

4. विज्ञापन प्रस्ताव 2

• विज्ञापन की तरह देखने या दिखाने के लिए विषयों को प्रस्तुत करें।
• विभागों की सूची नवनिर्देश, बारह, बारह को स्वीकार करें।
• अवधारणा के लिए एक दृष्टिकोण, दृष्टिकोण को आकलित रखें।
• हंसी या विकसित करें।
5. यूजरकिविया संपर्क

• सुविधा
• यूजरबाब दी उपचा: यूजरबाब दी ब्लैंड उपचा, यूजर ब्लैंड दी टाइप सं "बांटी बजाता", टाइप 

6a बजाता जु क्लिक

6. कुंडहट्टे देवधार:

• बंगार
• गटदेवधार (Strlen())
• गटदेवधार (Strcpy())
• गटदेवधार (Strcat())
• गटदेवधार (Strcmp())
• गटदेवधार (Getchar())
• गटदेवधार (Putchar())
• गटदेवधार (Printf())
• गटदेवधार (Scanf())
• गटदेवधार (Cos())
• गटदेवधार (Exp())
• गटदेवधार (Pow())
• गटदेवधार (Sqrt())
• गटदेवधार (Fabs())
• गटदेवधार (Ceil())
• गटदेवधार (Floor())
• गटदेवधार अंत: गटदेवधार बंगार (islower() and isupper())
• गटदेवधार अंत: तूफान बंगार (tolower()) and (toupper())
• गटदेवधार दि शुष्क

7. शी-बरस्त्तों (e-Governance)

• शी-बरस्त्तों दि धुमक़ा
• बंगार बजाता, ति उड़ान, बजाता जु क्लिक दी धुमक़ा, आमँसत पहेंय
• शी-बरस्त्तों दि अस्हक-अक्षा पंजा-फिग्यु-फिग्यु-फिग्यु-पंजा बैंकिंग, आमँसत-स्थानीय बंगार अंत: उबरी में फिजिंग, आसी- फिजिंग, शी-फिजिंग, पंजा-फिजिंग में बंगार
• न्याय टेस्ट
पूर्विक सही अवशेष बैठा ठेठ दिशे अनुसार उदाहरणों:

1. मानवस्त्र - हे बाहिरा - बेम 10
2. मानवस्त्र - शीविक बड़रिक 10
3. मानवस्त्र - ती रंग दुर्गा 20

1. मानवस्त्र - हे दिशे पूर्विक अन्धकारों दे घनता वह विशे देख पृथ्व पृथ्वी सात्रों। उद पृथ्वी दे हे अवशेष दी दुर्गे। दिध पृथ्वी दिशे पृथ्वी अन्धकारों दे बाह्य बैठा दिशे अन्धकारों अन्ध मसले मानवस्त्रों दे चुनुं बैठे अवशेष दुर्गा।

2. मानवस्त्र - शीविक बैठा अन्धकारों दी मानवस्त्र दी दुर्गे। 10 अवशेष
3. मानवस्त्र - हे दिशे पृथ्वी /पृथ्वी रंग बैठे सात्रों निसुरू विशे पूर्विक अन्धकारों दे घनता पृथ्वी / पृथ्वी रंग दी दुर्गे मानवस्त्रों। उद पृथ्वी /पृथ्वी रंग अवशेष दी दुर्गे, पृथ्वी पृथ्वी / पृथ्वी रंग अन्धकारों अवशेष दी दुर्गे।

पूर्विक अवशेष (पूर्विक पृथ्वी)

1. मानवस्त्र दी बड़ी दुर्गे:
   • मानवस्त्र दिशे: कृषि रंगकार, विद्रिक्षक पशुसंसार
   • पृथ्वी मानवस्त्र दी पृथ्वी रंगकार बैठा
   • मानवस्त्र बुधुर अवेद दिशे
   • मानवस्त्र दिशे / आमूंगुट पृथ्वी / पृथ्वी/ पृथ्वी / पृथ्वी/ पृथ्वी/ पृथ्वी (I/O getchar(), putchar(), printf() )
   • मानवस्त्र अवशेष (string.h)

2. पृथ्वी दिशे दिशे दिशे अवशेष:
   • घिरा-हिरा दिशे अवशेष / घिरा-हिरा अवशेष
   • आमूंगुट अवेद पृथ्वी पृथ्वी बैठा
   • बैठा रंगकार
   • बैठा रंगकार
   • बैठा देखा वृक्षारोप
   • वोर्डिन्टा
   • वोर्डिन्टा दिशे
   • वोर्डिन्टा दिशे दिशे दिशे
   • वोर्डिन्टा दिशे दिशे
   • वोर्डिन्टा दिशे दिशे

3. दिशे मुखी अवशेष-1
   • आमूंगुट- दोटी दिशे
   • पृथ्वी, पृथ्वी, देखा दिशे, वोर्डिन्टा

4. दिशे मुखी अवशेष-2
   • दोटी दिशे दिशे दिशे
   • पृथ्वी, पृथ्वी, पृथ्वी, पृथ्वी, पृथ्वी, पृथ्वी

5. दिशे दिशे अवशेष:
   • वृक्षारोप
   • दिशे दिशे दिशे (Strlen () )
   • पृथ्वी दिशे दिशे (Strcpy() )
   • दिशे दिशे दिशे (Strcat() )
   • दिशे दिशे दिशे दिशे (Strcmp() )
   • दिशे दिशे दिशे दिशे (getchar() )
   • पृथ्वी दिशे दिशे (putchar() )
   • पृथ्वी दिशे दिशे (printf() )
• स्नेहमेंद्र इंजनर ( Scanf() )
• वैंस इंजनर ( Cos() )
• गोलमग्रह इंजनर ( Exp() )
• प्रेम इंजनर ( Pow() )
• महर्षि इंजनर ( Sqrt() )
• वैभव इंजनर ( fmod() )
• देशांतर इंजनर ( Fabs() )
• मीठ इंजनर ( Ceil() )
• बदेह इंजनर ( floor() )
• हिस्सेजंग अद्वितीय हिस्सेजंग इंजनर ( islower() and isupper() )
• ट्रांसस्थ अद्वितीय ट्रांसस्थ इंजनर ( tolower() ) and ( toupper() )
• इंजनर ए क्रांप
Class-XII

6. पैमाने (छठवां विभाग)

प्रश्न: 3 प्रश्न

कुल मार्क: 100

पाठ-वर्ग | अंक
--- | ---
1. कथिती पॉइंट: 90 अंक
2. अन्तर्गतिय पॉइंट: 10 अंक

<table>
<thead>
<tr>
<th>पाठ-वर्ग</th>
<th>अंक</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. पैमाने-वांचि:- मूढ़ी-वांचि, तमांचि-वांचि, विवाह-वांचि आदि वांचि</td>
<td>40</td>
</tr>
<tr>
<td>2. पैमाने वांदः:- पैमाने मूढ़ीवांदः विवाह वांदः</td>
<td>22</td>
</tr>
<tr>
<td>3. मालिक कुपः:- वांचि,विवाह,वांदः,विवाह वांचि, सीवाड़ी, मूढ़ीवांदः, पैमाने-वांदः</td>
<td>13</td>
</tr>
<tr>
<td>4. लोक, आचार, उप</td>
<td>15</td>
</tr>
</tbody>
</table>

पृष्ठ संख्या: 10 अंक

पृष्ठ संख्या: 90
प्रश्न नं: 5  "अप-बीजीम" पढ़-प्रमाण अन्ते पढ़-अक्षरायां बोंजे आपणविड छोटे छुप्पलं गलंबं बच्चे मंटं पुढ़लं सादलं अन्ते छुप्पलं बिंचे विमे पनें दे छुप्पलं किष्ठतं कसी बिंचा सापेक्षा।

5×4=20 अंक

प्रश्न नं: 6  "मार्गव-बिंचे" पढ़-प्रमाण बिंचे विमे भिंच मयितव गुप्तं दे रंगे दे वे विमे भिंच बच्चे छोटे किष्ठतं कसी बिंचा सापेक्षा।

12 अंक

प्रश्न नं: 7  "मार्गव-बिंचे" पढ़-प्रमाण बिंचे दे ब्लं दे वे विमे भिंच बचे छुप्पलं मयितव किष्ठतं कसी विंचा सापेक्षा।

4 अंक

प्रश्न नं: 8  "मार्गव-बिंचे" पढ़-प्रमाण बिंचे दे असंक्षप दे वे विमे भिंच बचे छुप्पलं मयितव किष्ठतं कसी विंचा सापेक्षा।

4 अंक

प्रश्न नं: 9  "मार्गव-बिंचे" पढ़-प्रमाण बिंचे दे कम दे वे विमे भिंच बचे छुप्पलं मयितव किष्ठतं कसी विंचा सापेक्षा।

4 अंक

बिंचा आपणविड पढ़-प्रमाणं :-

1. "अप-बीजीम" वेंतषी-बार (ब्लं दे विंचितम)

2. "अप-बीजीम"

3 मार्गव-बिंचे

पूर्णपर: वेंतष शब्दस्तिक शिक्षा बंधक।
7. HINDI

<table>
<thead>
<tr>
<th>नाम</th>
<th>पूर्णकाल</th>
<th>संख्या</th>
</tr>
</thead>
<tbody>
<tr>
<td>कविता: पाठ की</td>
<td>90</td>
<td>10</td>
</tr>
<tr>
<td>शिक्षा: हिंदी</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>विषय</th>
<th>संख्या</th>
</tr>
</thead>
<tbody>
<tr>
<td>भाषा-क : अनुवाद पुस्तक (संस्थापक पुस्तक)</td>
<td>10</td>
</tr>
<tr>
<td>भाषा-ख : पाठ / पुस्तक (पाठ पुस्तक-12)</td>
<td>30</td>
</tr>
<tr>
<td>भाषा-ग : हिंदी सृजन का उत्सव (हिंदीकला एवं अनुवाद का)</td>
<td>10</td>
</tr>
<tr>
<td>भाषा-घ : उपन्यासकथा लेखन : गीतेय सृजन</td>
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</tr>
<tr>
<td>भाषा-ङ : नाटकीय सृजन</td>
<td>15</td>
</tr>
<tr>
<td>1. पाठक यद्यपि का हिंदी अनुवाद</td>
<td>(3)</td>
</tr>
<tr>
<td>2. तथापतीक छत्तीसगढ़ (उपन्यास का तत्कालीन लेखन)</td>
<td>(6)</td>
</tr>
<tr>
<td>3. तिथिपत्र लेखन, गृहरूप परवर्तन</td>
<td>(4)</td>
</tr>
<tr>
<td>भाषा-च : शिक्षा एवं अलंकार</td>
<td>10</td>
</tr>
<tr>
<td>1. हिंदी (नोटिस,तीतर,मौखिक,वृत्ति,कृतियें)</td>
<td>(3)</td>
</tr>
<tr>
<td>2. अलंकार (अनुवाद,प्रत्यय,प्रज्ञान,प्रमाणों)</td>
<td>(12)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>पंजीकरण स्थल</th>
<th>क्रम</th>
<th>निर्देशित पाठ / पुस्तक</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. हिंदी पुस्तक-12</td>
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<td></td>
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<tr>
<td>2. हिंदी पाठ का अनुवाद (पाठकीय ओर व्यापक)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. हिंदी मूल्यवान का हिंदीकला (पाठकीय ओर व्यापक) का अनुवाद</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
प्रश्न-1 में (i) से (X) तक व्याख्याता द्वारा दिए गए शब्दों को उद्देश्य के अनुसार सही रूप से वर्गीकृत करें।

<table>
<thead>
<tr>
<th>संख्या</th>
<th>शब्द</th>
<th>वर्गीकरण</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IIT</td>
<td>(i)</td>
</tr>
<tr>
<td>2</td>
<td>JEE</td>
<td>(ii)</td>
</tr>
<tr>
<td>3</td>
<td>CBSE</td>
<td>(iii)</td>
</tr>
<tr>
<td>4</td>
<td>NEET</td>
<td>(iv)</td>
</tr>
<tr>
<td>5</td>
<td>AIIMS</td>
<td>(v)</td>
</tr>
<tr>
<td>6</td>
<td>WBJEE</td>
<td>(vi)</td>
</tr>
<tr>
<td>7</td>
<td>AIPMT</td>
<td>(vii)</td>
</tr>
<tr>
<td>8</td>
<td>JEE Main</td>
<td>(viii)</td>
</tr>
<tr>
<td>9</td>
<td>NDA</td>
<td>(ix)</td>
</tr>
<tr>
<td>10</td>
<td>SET</td>
<td>(x)</td>
</tr>
</tbody>
</table>

प्रश्न-2 में (i) तक व्याख्याता द्वारा दिए गए शब्दों को उद्देश्य के अनुसार सही रूप से वर्गीकृत करें।

<table>
<thead>
<tr>
<th>संख्या</th>
<th>शब्द</th>
<th>वर्गीकरण</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>अर्थशास्त्र</td>
<td>(i)</td>
</tr>
<tr>
<td>2</td>
<td>जीवविज्ञान</td>
<td>(ii)</td>
</tr>
<tr>
<td>3</td>
<td>साहित्य</td>
<td>(iii)</td>
</tr>
<tr>
<td>4</td>
<td>इतिहास</td>
<td>(iv)</td>
</tr>
<tr>
<td>5</td>
<td>राजनीति</td>
<td>(v)</td>
</tr>
<tr>
<td>6</td>
<td>रामायण</td>
<td>(vi)</td>
</tr>
<tr>
<td>7</td>
<td>महाभारata</td>
<td>(vii)</td>
</tr>
<tr>
<td>8</td>
<td>स्वास्थ्य</td>
<td>(viii)</td>
</tr>
<tr>
<td>9</td>
<td>विज्ञान</td>
<td>(ix)</td>
</tr>
<tr>
<td>10</td>
<td>एवं</td>
<td>(x)</td>
</tr>
</tbody>
</table>

प्रश्न-3 में (i) तक व्याख्याता द्वारा दिए गए शब्दों को उद्देश्य के अनुसार सही रूप से वर्गीकृत करें।

<table>
<thead>
<tr>
<th>संख्या</th>
<th>शब्द</th>
<th>वर्गीकरण</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>दिल्ली</td>
<td>(i)</td>
</tr>
<tr>
<td>2</td>
<td>उत्तर प्रदेश</td>
<td>(ii)</td>
</tr>
<tr>
<td>3</td>
<td>बिहार</td>
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<td>4</td>
<td>गोवा</td>
<td>(iv)</td>
</tr>
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<td>5</td>
<td>मुंबई</td>
<td>(v)</td>
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<td>6</td>
<td>कोलकाता</td>
<td>(vi)</td>
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<td>7</td>
<td>चेन्नई</td>
<td>(vii)</td>
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<tr>
<td>8</td>
<td>तमिल नाडु</td>
<td>(viii)</td>
</tr>
<tr>
<td>9</td>
<td>अन्य</td>
<td>(ix)</td>
</tr>
<tr>
<td>10</td>
<td>एवं</td>
<td>(x)</td>
</tr>
</tbody>
</table>

प्रश्न-4 में (i) तक व्याख्याता द्वारा दिए गए शब्दों को उद्देश्य के अनुसार सही रूप से वर्गीकृत करें।

<table>
<thead>
<tr>
<th>संख्या</th>
<th>शब्द</th>
<th>वर्गीकरण</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>प्रासंगिक</td>
<td>(i)</td>
</tr>
<tr>
<td>2</td>
<td>व्यासित</td>
<td>(ii)</td>
</tr>
<tr>
<td>3</td>
<td>संरचनात्मक</td>
<td>(iii)</td>
</tr>
<tr>
<td>4</td>
<td>साधनात्मक</td>
<td>(iv)</td>
</tr>
<tr>
<td>5</td>
<td>विश्वासशील</td>
<td>(v)</td>
</tr>
<tr>
<td>6</td>
<td>विश्वासवान</td>
<td>(vi)</td>
</tr>
<tr>
<td>7</td>
<td>विश्वास करने</td>
<td>(vii)</td>
</tr>
<tr>
<td>8</td>
<td>विश्वास नहीं करने</td>
<td>(viii)</td>
</tr>
<tr>
<td>9</td>
<td>अन्य</td>
<td>(ix)</td>
</tr>
<tr>
<td>10</td>
<td>एवं</td>
<td>(x)</td>
</tr>
</tbody>
</table>

प्रश्न-5 में (i) तक व्याख्याता द्वारा दिए गए शब्दों को उद्देश्य के अनुसार सही रूप से वर्गीकृत करें।

<table>
<thead>
<tr>
<th>संख्या</th>
<th>शब्द</th>
<th>वर्गीकरण</th>
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</thead>
<tbody>
<tr>
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<td>संवेदनशील</td>
<td>(i)</td>
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<tr>
<td>2</td>
<td>बुद्धिमंत्र</td>
<td>(ii)</td>
</tr>
<tr>
<td>3</td>
<td>साजिश-प्रतिश्रुत</td>
<td>(iii)</td>
</tr>
<tr>
<td>4</td>
<td>बुद्धिमत्ता</td>
<td>(iv)</td>
</tr>
<tr>
<td>5</td>
<td>साजिश</td>
<td>(v)</td>
</tr>
<tr>
<td>6</td>
<td>प्रतिश्रुति</td>
<td>(vi)</td>
</tr>
<tr>
<td>7</td>
<td>साजिश-प्रतिश्रुति</td>
<td>(vii)</td>
</tr>
<tr>
<td>8</td>
<td>बुद्धिमत्ता</td>
<td>(viii)</td>
</tr>
<tr>
<td>9</td>
<td>अन्य</td>
<td>(ix)</td>
</tr>
<tr>
<td>10</td>
<td>एवं</td>
<td>(x)</td>
</tr>
</tbody>
</table>
उपन्यास-6  पत्र-पत्रक में संकेतित “पहला” भाग में से कोई भी प्राप्त पत्र पूरी तरह शर्तियों से एक पत्र का उसका समय 50 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-7  पत्र-पत्रक में संकेतित “कहानी” भाग में से कोई भी प्राप्त पत्र पूरी तरह शर्तियों से एक पत्र का उसका समय 50 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-8  पत्र-पत्रक में संकेतित “प्रकाश” भाग में से कोई भी प्राप्त पत्र पूरी तरह शर्तियों से एक पत्र का उसका समय 50 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-9  हिंदी साहित्य का इतिहास (देशी सहित अन्य भाषाओं का)

उपन्यास-10  इस प्रकार के पत्रों में संकेतित “प्रायद्वयांक” के पत्र का उसका समय 80 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-11  इस प्रकार के पत्रों में संकेतित “प्रायद्वयांक” के पत्र का उसका समय 80 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-12  इस प्रकार के पत्रों में संकेतित “प्रायद्वयांक” के पत्र का उसका समय 80 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-13  इस प्रकार के पत्रों में संकेतित “प्रायद्वयांक” के पत्र का उसका समय 80 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-14  इस प्रकार के पत्रों में संकेतित “प्रायद्वयांक” के पत्र का उसका समय 80 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-15  इस प्रकार के पत्रों में संकेतित “प्रायद्वयांक” के पत्र का उसका समय 80 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।

उपन्यास-16  इस प्रकार के पत्रों में संकेतित “प्रायद्वयांक” के पत्र का उसका समय 80 शब्दों में शिक्षा के लिए स्वीकार किया जाएगा।
CLASS-XII
8. ENGLISH ELECTIVE

Time: 3Hrs
Theory: 90Marks
CCE: 10 Marks
Total: 100 Marks

STRUCTURE OF QUESTION PAPER

Part -A

Objective type question No.1 will be compulsory (10 marks)
I. It will consist of 10 objective type questions carrying one mark each.
   Objective type questions may include questions with one word to one sentence answer or fill in the blank or true/false or multiple choice type questions.
   • Dear to All the Muses 3
   • The Literary Petals 3
   • Select One Act Plays/ Pride and Prejudice 2
   • Grammar 2

PART B- DEAR TO ALL THE MUSES

Text for detailed study (19 marks)
II. Comprehension of a passage: 10
   Comprehension to be tested with the help of the following techniques:
   (i) Three short- answer questions 3
   (ii) Matching exercise (three words to be matched out of four words) 3
   (iii) Fill in the blanks (Two sentences) 2
   (iv) Finding one word for a given expression from the passage. 2

III. 3 out of 4 short answer type questions based on the contents of different lessons (to be answered in 50-60 words each). 3×3=9
   Along with the Exercises, the questions can be asked from content also.

PART C- THE LITERARY PETALS (24 marks)

Text for detailed study
IV. (a) Four short answer type questions (to be answered in 50-60 word each) 2 from stories and 2 from poems as suggested at the end of each lesson, with internal choice in each question. 3×4=12
   (b) One essay type (long answer type) comprehension question (with internal choice) as suggested in the exercises at the end of each story. 6

V. Explanation with Reference to the Context (POEMS ONLY) of a given stanza/lines.

OR

A question on summary/substance/development of thought etc. of a poem (with internal choice) 6

PART D-SELECT ONE-ACT PLAYS/PRIDE AND PREJUDICE

Text for non-detailed study (15 marks)

SELECT ONE-ACT PLAYS

VI (a) Explanation with Reference to the Context. 5
PART-E COMPOSITION & VOCABULARY

VII Paragraph Writing (one out of five) 6

VIII Do as directed type questions covering the following items:
   I. Change of Voice 2
   II. Change of Narration 2
   III. Combining two simple sentences into one use linkers etc. 2
   IV. Use of Modals 2
   V. Transformation of sentences (use of gerunds, to-infinitive, participles, adverbials) 2

Note: The above question will be based as far as possible, on the text books.

IX TRANSLATION (Need not be text based, should be simple, can be from anywhere outside text books.) 6
   From Vernacular into English
      A small running passage of about 5/6 sentences.

Note: A special question in lieu of translation for foreign students:
   Paragraph/Composition

SYLLABUS

DEAR TO ALL THE MUSES

PART-A

LESSON
1. The Horse
2. Warrior against Weeds
3. A Most Forgiving Ape
4. A Young Turkish Catastrophe
5. A Tiny Sanctuary
6. Mano Majra
7. Jamaican Fragment
8. The Heritage of India
9. Gold in the North
10. My Greatest Olympic Prize
11. The Green Revolution
12. The Snob
13. Most Dear to All the Muses
14. The Case For the Defence
15. On My Seventieth Birthday
LITERARY PETALS:

LESSON:
1. Hind ki Chadar Sri Guru Teg Bahadur
2. Border Guards (Poem)
3. My Heart Leaps when I Behold (Poem)
4. The Gambling Match
5. The Quality of Mercy (Poem)
6. The Fancy Dress Show (Poem)
7. The Eternal Why
8. What Though the Field be Lost (Poem)
9. The Song of India (Poem)
10. After Twenty Years
11. The Tree Fell down (Poem)
12. The World Today is Wild with the Delirium of Hatred (Poem)
13. Attacked by Pit Bulls
14. Slave ? No Master (Poem)
15. The Unrest of Desire (Poem)
16. The Boy Who Broke the Bank
17. Still Life (Poem)
18. Is This The End? (Poem)
19. The Conjuror’s Revenge
20. Guru (Poem)
21. A River Tern on the Ganga (Poem)
22. The Ant and the Grasshopper
23. A Psalm of Life (Poem)
24. Hymn of Swaraaj (Poem)

SELECT ONE-ACT PLAYS
1. The Bishop’s Candlesticks
2. The Miracle-Merchant
3. The King’s Warrant
4. The Man Who Wouldn’t Go to Heaven
5. The Monkey’s Paw

Novel: Pride & Prejudice

PART-B

COMPOSITION, VOCABULARY, APPLIED GRAMMAR
Paragraph Writing/ Extended Composition
Translation : 1 Paragraph from Hindi/Punjabi to English.

APPLIED GRAMMAR: Do as directed type questions covering the following items

(i) Change of Narration
(ii) Change of Voice
(iii) Joining two simple sentences into one using linkers etc
(iv) Use of Modals
(v) Transformation of Sentences (Use of gerunds, Infinities, Participles adverbials)

The books Prescribed & Published by the Punjab School Education Board.

1. Dear to All the Muses
2. The Literary Petals
3. Select One Act Plays
4. Pride and Prejudice

**Note:** All the lessons in the above books are included in the syllabus. No part has been deleted.
## SYLLABUS OF URDU ELECTIVE

### CLASS 12th

**NCERT NEW DELHI**

### Details:

- **Goal:** To develop a comprehensive understanding of Urdu language and literature.
- **Grade:** Class XII

### Topics:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>خانے میں ہجری کے مطابق حساب کیا جاتا ہے</td>
</tr>
<tr>
<td>2.</td>
<td>اوراہوانا</td>
</tr>
<tr>
<td>3.</td>
<td>ضرور</td>
</tr>
<tr>
<td>4.</td>
<td>کیا کہ اگر اوراہوانا ہو</td>
</tr>
<tr>
<td>5.</td>
<td>ناٹاپے</td>
</tr>
<tr>
<td>6.</td>
<td>کیا بہت پری اوراہوانا ہے</td>
</tr>
</tbody>
</table>

### Weightage:

- **Total:** 100 marks
- **Question Distribution:**
  - **5x2:** 10 questions, 10 marks each
  - **5x2:** 10 questions, 10 marks each
  - **10:** Total: 100 marks

### Instructions:

- **Multiple Choice Questions:**
  - Q1: 
  - Q2: 
  - Q3: 
  - Q4: 
  - Q5: 

- **Subjective Questions:**
  - Q6: 
  - Q7: 
  - Q8: 
  - Q9: 
  - Q10: 

- **Translation:**
  - Translate the following sentence into Urdu:
  - جب ہمارے ہاؤس میں ہوجائے گے، حاضر ہویں۔
34
10. विषय : संस्कृत
कक्षा : बालकवी
पाठ्यक्रम 2018-19

- प्रश्नपत्र में कुल 11 प्रश्न होंगे।
- प्रश्न पत्र में लीन भाग (क से ग तक) होंगे।

**भाग - क**

अंत लघुप्रश्न (वस्तुनिष्ठ प्रश्न)

प्रश्न-1 में (i) से (x) तक वस्तुनिष्ठ प्रश्न पूछे जायेगे। प्रश्नक्रम प्रश्न एक अंक का होगा। ये प्रश्न एक शब्द से एक वाक्य तक के उत्तरों के लिए अध्याय का होंगा। यह प्रश्न पाठ्यक्रम में हो पूछे जायें।

(i) से (ii) तक मोटा समूह (पुलिंग, स्थिर लिंग तथा नुयुक्तकलंक) से समझन के तो वस्तुनिष्ठ प्रश्न पूछे जायेंगे।

(ii) से (iv) तक स्थानीय (लोटलकार, लोटलकार, लोटलकार, विधिलिंग) तथा रुटर्लकार से समझन के तो वस्तुनिष्ठ प्रश्न पूछे जायेंगे।

(iii) से (vi) तक समस्या तत्पुष्ट (समन्वित तत्प्रक्त) नहीं, अलङ्कार से समझन के तो वस्तुनिष्ठ प्रश्न पूछे जायेंगे।

(iv) से (vii) तक कृदन्त प्रश्न (समन्वित तो वस्तुनिष्ठ प्रश्न पूछे जायेंगे।

(v) से (x) तक अलङ्कार से समझन के तो वस्तुनिष्ठ प्रश्न पूछे जायेंगे।

<table>
<thead>
<tr>
<th>भाग - ख</th>
<th>(पाठ्य पुस्तक के 1 से 19 तक पाठ)</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>गद्यांशों का हिन्दी या पंजाबी या अंग्रेज़ी में अनुवाद।</td>
</tr>
<tr>
<td>3</td>
<td>पाठों का हिन्दी या पंजाबी या अंग्रेज़ी में प्रसंग महत्व अर्थ।</td>
</tr>
<tr>
<td>4</td>
<td>पाठों के अभ्यासों में से हिन्दी में प्रश्न।</td>
</tr>
<tr>
<td>5</td>
<td>पाठों के अभ्यासों में से संक्षेप व्यास।</td>
</tr>
<tr>
<td>6</td>
<td>पाठों के अभ्यासों में से संक्षेप शब्दों का वाक्यों में प्रयोग।</td>
</tr>
<tr>
<td>7</td>
<td>व्याकरणिक संक्षेप शब्दों का हिन्दी में अनुवाद।</td>
</tr>
<tr>
<td>8</td>
<td>पाठों के अभ्यासों में से व्याकरणिक परिस्थित।</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>भाग-ग (व्याकरण भाग)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 (क) शब्द रूप : (पु.) गो, धितु, राजु, चन्द्रमा,।</td>
</tr>
<tr>
<td>(नु.) भिन्न, अभिश, परस्पर।</td>
</tr>
<tr>
<td>(श्री.) बाला, श्री, वृहु।</td>
</tr>
<tr>
<td>(ख) शालु रूप : (लोटलकार, लोट, लुट, विधिलिंग, लुटर्लकार)</td>
</tr>
<tr>
<td>भवादिग्लण : (परस्पर) भू, रूढ, व्रत, ग्रा।</td>
</tr>
<tr>
<td>अदादिग्लण : (प.) अमू, हनु।</td>
</tr>
<tr>
<td>चुगडिग्लण : (प.) दण।</td>
</tr>
<tr>
<td>तनादिग्लण : (प.) कृ।</td>
</tr>
<tr>
<td>कार्यालय : (प. ) जा , ग्रह ।</td>
</tr>
<tr>
<td>(ग) कारक : अभूषण- शुद्ध वाक्यों पर आधारित ।</td>
</tr>
<tr>
<td>(क) समास : तत्पुरुष ( सत्तमी विभक्ति तक ) नहीं, अल्पक ।</td>
</tr>
<tr>
<td>(ख) फ़्रयाय: कृदन्त फ़्रयाय- तथ्यत, अनीयर, यत्न, ल्यूट, तुपुत ।</td>
</tr>
</tbody>
</table>

| (ग) अलंकार: और छंद - |
| (i) शब्दालंकार - अनुप्रास, यमक। |
| (ii) अवलंकार - रूपक, उपेशा, उपमा, अर्थनारसंधास। |
| अथवा |
| छन्द :- अनुंदपु, वंडसप, मालिनी, शिखरिनी, पंचचामरस , वस्मन्तलचक। |

| मिति : नौच लिख विषयों पर संस्कृत में सस्त्र निवास ( लघभग 100 शालों में ) |
| सरसंगित, परोपकार, आदर्श - छात्र, मम प्रिय- \(\text{मम प्रिय- } \), कवितद, महापुरम, कवितद, उस्मः, समाचार पत्राणां लोभः। |

| अथवा |
| हिंदी वाक्यों का संस्कृत में अनुवाद । (1 से 15 अभ्यास तक ) |
| मिति राज्य पुस्तक : संस्कृत नौरभद - 12 पंजाब स्कूल शिक्षा बोर्ड द्वारा प्रकाशित । |
भाग क
1 अंत लम्बूनर प्रवर्तन ( संस्कृत प्रवर्तन )

भाग ख
( पाठ्य पुस्तक )
2 तौर सदिध दिया जाए जिनमें से दो का अनुवाद हिंदी या पंजाबी या अंग्रेज़ी में करने को कहा जाए।
3 तौर पद्धति दिया जाए जिनमें से दो का प्रयोग सहित अर्थ हिंदी या पंजाबी या अंग्रेज़ी में लिखने को कहा जाए। तौर अंक प्रयोग के तौर अंक अर्थ के निर्देश के हैं 5x2=10
4 पाठों के अभ्यासों में से पांच प्रवर्तन हिंदी में पूरे जाएं, जिनमें से तौर का उच्च हिंदी में लिखने को कहा जाए। 3x2=6
5 पाठों के अभ्यासों में से संस्कृत में पांच लघु प्रवर्तन दिए जाएं। जिनमें से तौर का उच्च संस्कृत में लिखने को कहा जाए। 3x2=6
6 पाठों के अभ्यासों में से च: संस्कृत शब्द दिए जाएं जिनमें से चार शब्दों का वाक्यों में प्रयोग करने को कहा जाए।

अभ्यास
आठ व्याकरणिक संस्कृत शब्द दिए जाएं जिनमें से चार शब्दों का हिंदी में अनुवाद करने को कहा जाए।
7 यादित्तिक परिवर्तन के 4: वाक्य दिया जाएं जिनमें से चार वाक्यों में परिवर्तन करने को कहा जाए। 1x4=4
8 प्राचीन लेखिकाओं के साहित्यिक परिष्ठ में संबंधित सात प्रवर्तन पूरे जाएं जिनमें से पाँच का उच्च लिखने को कहा जाए। 1x5=5

भाग=म (सामाजिक भाग)
9 (क) पाठ्यप्रवर्तक में दिए गए शब्द रूपों में से च: शब्दों के रूप किसी एक विशेषज्ञ के तौर वहन में पूरे जाएं जिनमें से केवल चार शब्दों के रूप लिखने हों। 4x1½=6
(ख) पाठ्यप्रवर्तक में दिए गये धातु स्रोत के रूप किसी एक विशेषज्ञ के एक पुस्तक के तौर वहन में पूरे जाएं जिनमें से केवल धातुओं के रूप लिखने हों। 4x1½=6
(ग) कारक समस्याओं अनुसार बाल वाक्य दिये जायें जिनमें से पाँच वाक्यों को शुद्ध करने को कहा जायें।
10 (क) पाठ्यप्रवर्तक में दिए गए समाजों से संबंधित पाँच समय पत्र दिए जाएं जिनमें से तौर का निम्नाखंड करने को कहा जाए। 3x1=3
(ख) पाठ्यप्रवर्तक में दो गई धातुओं के साथ प्रयोग लगाने के लिए पाँच धातुओं तथा प्रयोग दिये जाएं जिनमें से तौर करने को कहा जाए। 3x1=3
(ग) पाठ्यप्रवर्तक में दिए भेद रहित अलंकारों से संबंधित चार प्रवर्तन दिए जाएं जिनमें
से दो ढंगांकार तथा दो अथवा ढंगांकार हीं तो उचित है। चार अलंकारों में से केवल दो को परिभाषा तथा उदाहरण लिखने अपेक्षित हो। परिभाषा तथा उदाहरण का एक-एक अंक निर्धारित है।

अभ्यास
पाठ्यक्रम में निर्धारित छः वर्गों में संगठित चार प्रमाण दिए जाएं जिनमें से दो मात्रक तथा दो व्रत्मक छः हीं तो उचित है। चार छः वर्गों में से केवल दो को परिभाषा तथा उदाहरण लिखने अपेक्षित हो परिभाषा तथा उदाहरण का एक-एक अंक निर्धारित है।

पाठ्यक्रम में निर्धारित तीन निम्न देशक किसी एक विषय पर लगभग 100 शब्दों में निम्न देशक लिखने को कहा जाए।

अभ्यास
13 हिंदी वाक्य दिए जाएं जिनमें से आठ वाक्यों का संस्कृत में अनुवाद करने को कहा जाए।
<table>
<thead>
<tr>
<th>Syllabus of Arabic Class XII</th>
</tr>
</thead>
<tbody>
<tr>
<td>نسخ من الشعارات (1-25 لغة)</td>
</tr>
<tr>
<td>قسم (1-5 لغة)</td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>300 لغة</td>
</tr>
<tr>
<td>(15)</td>
</tr>
<tr>
<td>10 لغة</td>
</tr>
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<td>(10)</td>
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<tr>
<td>(5)</td>
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<tr>
<td>5 لغة</td>
</tr>
<tr>
<td>(5)</td>
</tr>
</tbody>
</table>
## Syllabus of Persian

### Class XII

<table>
<thead>
<tr>
<th>Unit</th>
<th>Topics</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Translations</td>
<td>30</td>
</tr>
<tr>
<td>II</td>
<td>Narration</td>
<td>30</td>
</tr>
<tr>
<td>III</td>
<td>Reading Comprehension</td>
<td>30</td>
</tr>
<tr>
<td>IV</td>
<td>Literature</td>
<td>30</td>
</tr>
<tr>
<td>V</td>
<td>Grammar</td>
<td>15</td>
</tr>
<tr>
<td>VI</td>
<td>Vocabulary</td>
<td>10</td>
</tr>
<tr>
<td>VII</td>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Total marks for the year are 100.
CLASS-XII
13. FRENCH

Time: 3 Hrs
Time : 9 minutes per Student

Theory: 70 Marks
Oral/Practical:20Marks
CCE: 10 Marks
Total: 100 Marks

THEORY

1. Six (6) multiple-choice questions on general topic (civilization, grammar, vocabulary...) on lesson 1 to 13 of the text book to be asked and answered in French. Students are required to attempt all 10 questions. Each question will carry 1 mark. 10 Marks

2. Ten (10) Brief questions pertaining on lesson 1 to 13 of the text books to be asked and answered in French. Students are required to attempt any 5 questions. Each question will carry 1 mark. 10 Marks

3. Making of sentences in French with idiomatic expressions occurring in the text, 15 questions will be asked. Students are required to attempt any 10 questions. 10 Marks

4. Questions on applied grammar based on the prescribed text (Refer of pages 252-253) of the prescribed text. 10 Marks

5. Translation from English, Hindi, Punjabi or Urdu to French of an unseen passage of 10 short sentences. 10 Marks

6. Translation from French into English, Hindi, Punjabi or Urdu of an unseen passage of 10 short sentences. 10 Marks

7. Composition of an essay of about 200 words based on the vocabulary of text book. 10 Marks

Book Prescribed

"Le francais et la Vie II"

Author-G, MAUGER/BRUEZIERE, Publication Hachette

Course of Reading:
Lesson 1to 26

ORAL

Note: A group of 20 students will be examined in a 3 hours session.

1. Dictation from the prescribed passage. 5 Marks
2. Reading a passage in French from the text and putting question on it and some general questions to be asked.  

3. Self Introduction

Book Prescribed

"Le francais et la Vie II"
Author-G, MAUGER/BRUEZIERE, Publication Hachette

Course of Reading:
Lesson 1 to 26
14. GERMAN

Time: 3 Hrs
Time: 9 minutes per Student

Theory: 70 Marks
Oral/Practical: 20 Marks
CCE: 10 Marks
Total: 100 Marks

THEORY

Note: The question paper will be set in German.

1. 20 objective type questions (True/False, Jumbled words, Multiple Choice etc.) 20
2. Question of applied grammar based on the prescribed text book. 15
3. Comprehension of an unseen passage in German (Attempt One out of Two). 10
4. Official Letters of about 40 words with internal choice. 10
5. Write a short paragraph of about 100 words (attempt one out of three). 15

Book Prescribed
"Tangram aktuell 2" (Kursbuch + Arbeitsbuch)" by Hueber. Niveau A2/ 1.

ORAL

Note: A Group of 20 students will be examined by the examiner in a three hours sessions.

1. Lesen - Reading of a passage or an extract from the text book. 10
2. Vorstellung (Self Introduction): For example: Name, age, profession, place of living, family. 10

Book Prescribed
"Tangram aktuell 2" (Kursbuch + Arbeitsbuch)" by Hueber. Niveau A2/1.
CLASS-XII
15. RUSSIAN

Time : 3 Hrs
Time : 9 minutes per Student

Theory: 70 Marks
Oral/Practical: 20 Marks
CCE: 10 Marks
Total: 100 Marks

THEORY

NOTE: THE QUESTION PAPER WILL BE SET IN RUSSIAN.

1. 15 Objective type questions (True/False, One word answer, multiple choices etc.) 15

2. Grammar (Attempt 4 questions out of 7)
   i. The numerals: their classification, declension -Pages 191-199 25
   ii. The verb, verb aspect, mood -Pages 207, 213, 251, 257
   iii. The participle -Pages 364-368
   iv. The verbal adverb -Pages -386 -391

3. Translation of an unseen passage (Attempt 1 out of 2) or sentences (Attempt 15 out of 20) from Russian into Hindi/ English/ Punjabi/ Urdu. 15

4. Translation of an unseen passage (Attempt 1 out of 2) or sentences (Attempt 15 out of 20) from English/ Hindi/ Punjabi/ Urdu into Russian. 15

Book Prescribed

1. "Basic Russian" by G. Mukherjee, (2nd edition, 1979) Published by MacMillian & Co., New Delhi (Lesson 15 to 33)
2. 'Russia'n' by I.M. Pulkina, E. Zakhova-Nekrasova "Russky Yazyk" available at People's Publishing House, Rani Jhansi, New Delhi, 2nd Edition (Pages Mentioned Above)

Book Recommended for Consultation

2. 'Rusi Vyakhya Ki Sankshipat Vyakhya' by I.M. Pulkina, Videshi Bhasha Prakashan Grih, Moscow.

Books Recommended for Additional reading

3. 'A Chrestomathy of Russian Literature' by C.N. Chakravati and N.S. Burlakoy, Jawarharlal Nehru University, New Delhi.
4. 'Russian as we speak it' by S. Skhavronina, Foreign Languages publishing House Moscow.

Note: The question paper should not include words or constructions which have not been covered in the prescribed texts. However, if it absolutely necessary to give new words or construction, then they should be given with translation into English/Punjabi/Hindi/Urdu. There should not be in all given five new words/constructions in one question paper.
1. Reading of a passage or a extract from the text book.  
2. Topics will be given to the students at the time of exam (Oral). They will be divided into two groups and discuss about the given topic and speak. Give positive as well negative statements and at last come to some conclusion.  
3. Self Introduction : For example : Name, age, profession, place of living, family.

**Book Prescribed**

1. "Basic Russian" by G. Mukherjee, (2nd edition, 1979) Published by Mac Millian & Co., New Delhi (Lesson 15 to 33)
2. 'Russia'n' by I.M. Pulkina, E. Zakhova-Nekrasova "Russky Yazyk" available at People's Publishing House, Rani Jhansi, New Delhi, 2nd Edition (Pages Mentioned Above)

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**Note:** The question paper should not include words or constructions which have not been covered in the prescribed texts. However, if it absolutely necessary to give new words or construction, then they should be given with translation into English / Punjabi / Hindi / Urdu. There should not be in all given five new words/constructions in one question paper.
CLASS-XII
16. KOREAN

Time: 3 hrs           Theory: 70 Marks
Time: 9 min. per student Oral/Practical: 20 Marks
C.C.E.: 10 Marks
Total: 100 Marks

THEORY
Note: The question paper will be set in Korean.

1. Question of applied grammar based on the prescribed text book.  
   20
   10
3. Translation of an unseen passage or sentences from Korean into English.  
   15
4. Translation of an unseen passage or sentences from English into Korean.  
   10
5. Composition of an essay of about 200 words based on the vocabulary of text Book.  
   15

Text book prescribed
Korean II By Sang Oak Lee
Publication HOLLIM

ORAL
Note: A GROUP OF 20 STUDENTS WILL BE EXAMINED IN A 3 HOURS SESSION.

1. Reading of a passage from the text book.  
   10
2. Simple conversation. (Question regarding name, age, family, school or daily routine may be asked).  
   10

Text book prescribed
Korean II By Sang Oak Lee
Publication HOLLIM
STRUCTURE OF QUESTION PAPER

1. All questions are compulsory.
2. The question paper will comprise of 4 sections A, B, C and D of 33 sub parts (questions) in total. The question paper will carry:

**SECTION- A**

**Objective Type Questions:** Question No. 1 comprises of 10 sub parts (questions) I to X carry 1 mark each (ten questions). This type may include questions with one word to one sentence answer/ fill in the blanks/ true or false/ multiple choice type questions.

\[ 1 \times 10 = 10 \]

**SECTION- B**

**Very Short Answer Type Questions:** Question No. 2 comprises of 10 sub parts (questions) I to X carrying 2 marks each. Answer to each question should be in about 30-35 words. Out of 10 questions 4 question will be numerical i.e. 2 from Part A and 2 from Part B.

\[ 2 \times 10 = 20 \]

**SECTION- C**

**Short Answer Type Questions:** Question No. 3 comprises of 9 sub parts (questions) I to IX carrying 4 marks each. Three questions out of 6 questions will be of internal choice and three questions will be numerical that is 1 from Part A and 2 from Part B. Answer to each question should be in about 60-70 words.

\[ 4 \times 9 = 36 \]

**SECTION- D**

**Long Answer Type Questions:** Question No. 4 comprises of 4 sub parts (questions) I to IV carrying 6 marks each. Answer to each question should be in about 150-200 words. Three will be 100% internal choice in these questions. From Part B out of two questions 1 question will be numerical.

\[ 4 \times 6 = 24 \]

**Note:-** All units of the syllabus should be given adequate representation in the question paper.

<table>
<thead>
<tr>
<th>Typology of Questions</th>
<th>Number of Questions</th>
<th>Marks Division</th>
<th>Division of Syllabus Part A Unit 1 to 4</th>
<th>Division of Syllabus Part B Unit 5 to 9</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section-A Objective Type Questions</td>
<td>Q.1 (Q.I to X)</td>
<td>01 mark</td>
<td>5</td>
<td>5</td>
<td>10 Marks</td>
</tr>
<tr>
<td>Section-B Very Short Answer Type questions</td>
<td>Q.2 (Q.I to X)</td>
<td>02 marks</td>
<td>5</td>
<td>5</td>
<td>20 Marks</td>
</tr>
<tr>
<td>Section-C Short Answer Type Questions</td>
<td>Q.3 (Q.I to IX)</td>
<td>04 marks</td>
<td>5</td>
<td>4</td>
<td>36 marks</td>
</tr>
<tr>
<td>Section-D Long Answer Type Questions</td>
<td>Q.4 (Q.I to IV)</td>
<td>06 marks</td>
<td>2</td>
<td>2</td>
<td>24 Marks</td>
</tr>
<tr>
<td>Total</td>
<td>33</td>
<td>---</td>
<td>17</td>
<td>16</td>
<td>90</td>
</tr>
</tbody>
</table>
SYLLABUS
PART-A (INTRODUCTORY MICRO ECONOMICS)

Unit-1 INTRODUCTION

Micro Economics: Meaning; Difference between Micro and Macro Economics, Central Problems of an Economy, Production Possibility Curve and Opportunity Cost.

Unit-2 CONSUMER BEHAVIOUR AND DEMAND


ii. Theory of Demand: Meaning of Demand, Types of Demands: Individual and Market Demand, Determinants of Demand, Demand Schedule, Demand Curve, Movement Along and Shift in Demand Curve.


Unit-3 PRODUCER BEHAVIOUR AND SUPPLY

i. Production-Meaning, Concept of Production, Function: Returns to Factor and Returns to Scale.


iii. Concepts of Costs: Short Run Cost Curves; Fixed and Variable Costs, Total, Average and Marginal Costs.

Concepts of Revenue: Total, Average and Marginal Revenue and their relationship.

iv. Producer's Equilibrium with the help of MC and MR.

Unit-4 FORMS OF MARKET AND PRICE DETERMINATION

i. Forms of Market: Perfect Competition, Monopoly, Monopolistic Competition-Their Meaning and Features.


PART-B (INTRODUCTORY MACRO ECONOMICS)

Unit-5 NATIONAL INCOME AND RELATED AGGREGATE

i. Basic Concept and Measurement of National Income (introduction only)
ii. Macro Economics: Meaning, Circular flow of Income, Concepts of GDP, GNP, NDP, NNP (at market price and factor cost), National Disposable Income (Gross & Net); Private Income, Personal Income and Personal Disposable Income.


**Unit-6 DETERMINATION OF INCOME AND EMPLOYMENT.**

i. Aggregate Demand, Aggregate Supply and their Components.

ii. Propensity to Consume and Propensity to Save (Average and marginal).

iii. Meaning of Involuntary-Unemployment, Concept of Full Employment.

iv. Determination of Equilibrium level of Income and Employment-Two sector model.

v. Concept of Investment Multiplier and its working.

vi. Problems of Excess and Deficient Demand. Measures to Correct Excess and Deficient Demand, Availability of Credit, Change in Government Spending.

**Unit-7 MONEY AND BANKING**

i. Money: Meaning, Evolution and Functions.

ii. Central Bank: Meaning and Functions.

iii. Commercial Banks: Meaning and Functions.

iv. Recent significant reforms and issues in Indian Banking System; Privatisation and Modernization.

**Unit-8 GOVERNMENT BUDGET AND THE ECONOMY**


iv. Balance Budget, Surplus Budget and Deficit Budget: Their Meaning and Implications; Types of Deficit Budget-Revenue Deficit, Fiscal Deficit and Primary Deficit(meaning and implications); Measures to contain different Deficits. Downsizing the role of Government: Meaning and Implications.

**Unit-9 BALANCE OF TRADE AND BALANCE OF PAYMENTS.**

i. Foreign Exchange Rate: Meaning, Fixed and Flexible Exchange Rate System-Meaning, Merits and Demerits.
ii. Determination of Flexible Exchange Rate System through Demand and Supply.

iii. Balance of Payment Accounts; Meaning and Components.

iv. A brief analysis about recent Exchange Rate Issue.
1. All Questions are Compulsory.
2. Q 1 will consist of 10 parts and each part will carry one (1) Mark.
3. Q 2 to Q 9 each will be of 2 Marks.
4. Q 10 to Q 19 each will be of 4 marks.
5. Q 20 to 23 each will of 6 marks.
6. There will be no overall choice. There will be an internal choice in any 3 questions of 4 marks each and all questions of 6 marks. (Total of 7 internal choices)
7. Use of Calculator is not allowed.

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Topic</th>
<th>Q. Carrying 1-Marks</th>
<th>Q. Carrying 2-Marks</th>
<th>Q. Carrying 4-Marks</th>
<th>Q. Carrying 6-Marks</th>
<th>Total Marks</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Relations &amp; Functions</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>05</td>
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<tr>
<td>2.</td>
<td>Inverse Trigonometric Functions</td>
<td>1</td>
<td>-</td>
<td>1</td>
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<td>3.</td>
<td>Matrices</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>13</td>
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<td>4.</td>
<td>Determinants</td>
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<tr>
<td>5.</td>
<td>Continuity &amp; Differentiability</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>08</td>
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<td>6.</td>
<td>Applications of Derivatives</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>10</td>
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<tr>
<td>7.</td>
<td>Integrals</td>
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<td>2</td>
<td>1</td>
<td>-</td>
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<tr>
<td>8.</td>
<td>Applications of the Integrals</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>04</td>
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<tr>
<td>9.</td>
<td>Differential Equations</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>09</td>
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<tr>
<td>10.</td>
<td>Vectors</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>05</td>
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<tr>
<td>11.</td>
<td>Three-dimensional Geometry</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>09</td>
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<tr>
<td>12.</td>
<td>Linear Programming</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>06</td>
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<tr>
<td>13.</td>
<td>Probability</td>
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<td>1</td>
<td>1</td>
<td>-</td>
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<td></td>
<td>Total Questions</td>
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<td>8</td>
<td>10</td>
<td>4</td>
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<td></td>
<td>Total Marks</td>
<td>10</td>
<td>16</td>
<td>40</td>
<td>24</td>
<td>90</td>
</tr>
</tbody>
</table>

SYLLABUS

1. Relations and Functions:
   Types of relations: Reflexive, symmetric, transitive and equivalence relations. One to one and onto functions, composite functions, inverse of a function. Binary operations.

2. Inverse Trigonometric Functions:
   Definition, Range, Domain, Principal value branches. Graphs of inverse trigonometric functions. Elementary properties of inverse trigonometric functions.
3 **Matrices:**
Concept, notation, order, equality, types of matrices, zero matrix, transpose of a matrix, symmetric and skew symmetric matrices. Addition, multiplication and scalar multiplication of matrices, simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Concept of elementary row and column operations. Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).

4 **Determinants:**
Determinant of a square matrix (up to 3×3 matrices), properties of determinants, minors, cofactors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equation by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

5 **Continuity and Differentiability:**
Continuity and Differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions, derivative of implicit function. Concepts of exponential and logarithmic functions. Derivatives of \( \log x \) and \( e^x \). Logarithmic differentiation. Derivative of functions expressed in parametric forms. Second order derivatives. Rolle’s and Lagrange’s Mean Value Theorems (without proof) and their geometric interpretations.

6 **Applications of Derivatives**
Applications of derivatives: rate of change, increasing/decreasing functions, tangents and normal, approximation, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real life situations).

7 **Integrals:**
Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, only simple integrals of the type:

\[
\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2 - x^2}}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}, \int \frac{dx}{ax^3 + bx + c}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}
\]

\[
\int \frac{(px + q)}{ax^2 + bx + c} \, dx, \int \frac{(px + q)}{\sqrt{ax^2 + bx + c}} \, dx, \int \frac{dx}{\sqrt{a^2 \pm x^2}} \, dx \text{ and } \int \frac{dx}{\sqrt{x^2 - a^2}} \, dx
\]

\[
\int \frac{dx}{\sqrt{ax^2 + bx + c}} \text{ and } \int (px + q)\sqrt{ax^2 + bx + c} \, dx
\]

to be evaluated.
Definite integrals as a limit of a sum. Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

8 **Applications of the Integrals:**
Applications in finding the area under simple curves, especially lines, areas of circles/parabolas/ellipses (in standard form only), area between the two above said curves (the region should be clearly identifiable).

9 **Differential Equations:**
Definition, order and degree, general and particular solutions of a differential equation. Formation of differential equation whose general solution is given. Solution of differential equations by method of separation of variables, homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type:
\[
\frac{dy}{dx} + Py = Q \\
\frac{dx}{dy} + Px = Q
\]
where P and Q are functions of x or constant.

10 **Vectors:**

11 **Three-dimensional Geometry:**
Direction cosines/ ratios of a line joining two points. Cartesian and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Angle between (i) two lines, (ii) two planes, (iii) a line and a plane. Distance of a point from a plane.

12 **Linear Programming:**
Introduction, definition of related terminology such as constraints, objectives function, optimization, different types of linear programming (L.P.) problems, mathematical formulation of L.P problems, graphical method of solution for problems in two variables, feasible and infeasible regions, feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constrains)
13 **Probability:**

Multiplication theorem on probability. Conditional probability, independent events, total probability, Baye's theorem, Random variable and its probability distribution, mean and variance of haphazard variable. Repeated independent (Bernoulli) trials and Binomial distribution.

**Note:** The subtopics which are printed in the books published by Punjab School Education Board but are not mentioned in syllabus, should be considered as part of syllabus.
STRUCTURE OF QUESTION PAPER

1. The question paper will cover whole of the syllabus.
2. 26 Questions will be set in the question paper. Students will attempt 24 questions.
3. All units of the syllabus should be given adequate representation in the question paper.

Section-A
4. Question No. 1 consists of 10 sub parts carrying 1 mark each. Answer of each Part should be given in 1-15 words. Objective type questions may include questions with one word to one sentence answer/fill in the blank/true or false/multiple choice type questions.

Section-B
5. Question No. 2 to 11 will carry 2 marks each. Answer of each question should be given in 5-10 lines.

Section-C
6. Do any 9 question out of 11 questions. Question No. 12 to 22 will carry 4 marks each. Answer of each question should be given in 15-20 lines.

Section-D
7. Question No. 23 to 26 will carry 6 marks each with internal choice. Answer of each question should be given in 3-5 pages. Internal choice question should not be set from the same unit.

Detail of questions set from each unit

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Name of the unit</th>
<th>Section-A</th>
<th>Section-B</th>
<th>Section-C</th>
<th>Section-D</th>
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<tbody>
<tr>
<td>1.</td>
<td>Nature &amp; Significance of Management</td>
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<td>(i) 1Q from unit 1&amp;2 with a from unit 3&amp;4 as internal choice</td>
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<td>2.</td>
<td>Business Environment</td>
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<td>1</td>
<td>1</td>
<td>(ii) 1Q from unit 5&amp;6 with 1Q from unit 8&amp;9 as internal choice</td>
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<td>Planning</td>
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<td>3.</td>
<td>Organisation</td>
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<td>1</td>
<td>1</td>
<td>(iii) 1Q from unit 10&amp;11 with 1Q from unit 13&amp;14 as internal choice</td>
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<td>1</td>
<td>(iv) 1Q from unit 7 with 1Q from unit 12 as internal choice</td>
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<td>Coordination</td>
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<td>1</td>
<td>1</td>
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<td>9.</td>
<td>Controlling</td>
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<td>13.</td>
<td>Consumer Protection</td>
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<td>14.</td>
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<td></td>
<td>Development</td>
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SYLLABUS
PRINCIPLES AND FUNCTIONS OF MANAGEMENT

UNIT-1: NATURE AND SIGNIFICANCE OF MANAGEMENT.
(a) Management Concept, Objectives and Importance.
(b) Management as an Activity, Process, Discipline and as a Group.
(c) Nature of Management as a Science, as an Art and as a Profession.
(d) Management and Administration Comparison.
(e) Level of Management-Top, Middle & Supervisory.
(f) Management Function-Planning, Organising, Staffing, Directing Coordinating and Controlling.

UNIT-2: PRINCIPLES OF MANAGEMENT
(a) Principles of Management: Meaning, Nature & Significance.
(b) Fayol's Principles of Management.
(c) Taylor's Scientific Management-Principles & Techniques.

UNIT-3: BUSINESS ENVIRONMENT
(a) Business Environment - Meaning & Importance.
(b) Dimensions of Business Environment-Political, Economic, Social Legal and Technological.
(c) Economic Environment in India, Impact of Govt. Policy changes on business & industry with Reference to Liberalization, Privatization and Globalization (since 1991).

UNIT-4: PLANNING
(a) Meaning, Features, Process, Importance & Limitations.
(b) Goals, Objectives, Policy, Procedures, Strategy, Methods, Rules, Budgets and Programmes-Meaning and Distinction.

UNIT-5: ORGANISATION
(a) Meaning and Importance
(b) Process of Organizing
(d) Delegation: Meaning, Elements and Importance, Barriers in the way of delegation, Step to make delegation effective.
(e) Decentralization: Meaning and Importance
(f) Difference between Centralization and Decentralization.
(g) Difference between Delegation and Decentralization.

UNIT-6: STAFFING
(a) Staffing: Meaning, Need and Importance
(b) Steps in Staffing Process:
   (i) Recruitment: Meaning and Sources.
   (ii) Selection: Meaning and Process.
   (iii) Training & Development: Meaning, Need, Types and Methods.
(c) Methods of Wage Payment: Time Rate & Price Rate.
(d) Types of Compensation and Incentives: Monetary & Non Monetary.

UNIT-7: DIRECTING
(a) Directing: Meaning and Importance.
(b) Elements of Direction:
(i) Supervision: Meaning and Importance
(iii) Leadership: Meaning, Importance, Quality of a good leader.
(iv) Communication: Meaning and Importance, Types of Communication and Barriers to Effective Communication.

UNIT-8: COORDINATION
Coordination: Meaning, Nature & Importance.

UNIT-9: CONTROLLING
(a) Controlling: Meaning and Importance.
(b) Relationship between Planning and Controlling.
(c) Steps in the process of Control.

BUSINESS FINANCE AND MARKETING

UNIT-10: BUSINESS FINANCE
(a) Meaning and Objectives of Finance Functions, Profit Maximization vs Wealth Maximization.
(b) Financial Planning: Meaning & Importance
(c) Capital Structure: Meaning & Factors
(d) Working Capital: Meaning, Importance, Types & Factors affecting its requirements.

UNIT-11: FINANCIAL MARKETS
(c) Distinction between Capital Market and Money Markets.
(d) Stock Exchange; Meaning, Functions, NSEI, OCTEI, Training Procedure.
(e) Securities and Exchange Board of India (SEBI): Objectives and Functions.

UNIT-12: MARKETING
(a) Marketing: Meaning, Function & Role.
(b) Distinction between Marketing & Selling.
(c) Marketing Mix: Concept & Elements-
   (ii) Physical Distribution: Meaning, Role, Channels of Distribution:-
        Meaning, Types, Factors determining choice of channel.
   (iii) Promotion: Meaning and Role, Promotion Mix, Role of Advertising and Personal Selling, Objectives of Advertising.
   (iv) Price: Factors influencing Pricing.

UNIT-13: CONSUMER PROTECTION
(a) Importance of Consumer Protection,
(b) Consumer Rights.
(c) Consumer Responsibilities.

(e) Role of Consumer Organization and NGO’s.

UNIT-14 ENTREPRENEURSHIP DEVELOPMENT

(a) Entrepreneurship: Concept, Characteristics, Needs and Functions.
(b) Process of Entrepreneurship Development.
(c) Entrepreneurial Values, Attitudes and Motivation: Meaning & Concept.
STRUCTURE OF QUESTION PAPER (THEORY)

1. The question paper will cover whole of the syllabus.
2. There are 4 sections in the question paper i.e. Section A, Section B, Section C and Section D.
3. 26 Question will be set in the question paper. Out of which students will have to attempt 24 questions.
4. All units of the syllabus should be given adequate representation in the question paper.
5. There is no word, line or page limit for numerical questions.
6. The use of non-programmable simple calculator is allowed.

SECTION-A

7. Question No. 1 consists of 10 sub parts carrying 1 mark each. Answer of each part should be given in 1-15 words. Objective type questions may include questions with one word or one sentence answer/fill in the blanks/true or false/multiple choice type questions.

SECTION-B

8. Question No. 2 to 11 (of which 5 questions will be numerical and 5 question will be theoretical) will carry 2 marks each. Answer of theoretical questions should be given in 5 to 10 lines.

SECTION-C

9. Question No. 12 to 22 will carry 4 marks each. Question No.12 to 22 (of which 6 questions will be numerical and 5 questions will be theoretical) and students will attempt any 9 questions out of these 11 questions.

SECTION-D

10. Question No. 23 to 26 will carry 6 marks each with internal choice. Of these, any two questions will have internal choice between theoretical and numerical questions and other two will have only numerical question as internal choice. Answer of theoretical questions should be given in 3-4 pages of the answer book.

SYLLABUS

UNIT 1: ACCOUNTING FOR NOT-FOR-PROFIT ORGANIZATION.
1. Meaning, Basic Concepts
2. Receipts and Payments : Meaning and Concept of Fund Based and Non Fund Based Accounting
3. Preparation of Income and Expenditure Account and Balance Sheet from Receipt and Payment Account with additional information.

UNIT 2: ACCOUNTING FOR PARTNERSHIP
1. Nature of Partnership Firm, Partnership Deed (Meaning and Importance)
2. Final Accounts of Partnership: Fixed v/s Fluctuating Capital, Division of Profit among Partners (excluding guarantee and past adjustments). Preparation of Profit and Loss Appropriation Account
UNIT 3: RECONSTITUTION OF PARTNERSHIP
1. Change in Profit Sharing Ratio among the existing Partners- Sacrificing Ratio and Gaining Ratio
2. Accounting for Revaluation of Assets and Liabilities and Distribution of Reserves and Accumulated Profits
4. Admission of a Partner:- Effect of Admission of Partner, Change in Profit Sharing Ratio, Accounting Treatment of Goodwill (as per accounting standard 10). Revaluation of Assets and Liabilities, Reserves (Accumulated profits) and Adjustment of Capitals

UNIT 4 : DISSOLUTION OF PARTNERSHIP FIRM

UNIT-5: ACCOUNTING FOR SHARE CAPITAL AND DEBENTURES
1. Share Capital: Meaning, Nature and Types
2. Accounting for Share Capital: Issue and Allotment of Equity and Prefer Shares, Over Subscription and under Subscription, Issue at Par Securities Premium and at Discount, Calls in Advance, Calls in Arrears, Issue of Shares for Consideration other than cash.
3. Forfeiture of Shares: - Accounting Treatment, Reissue of Forfeited Shares.
4. Presentation of Share and Debenture, Capital in Company's Balance Sheet

UNIT 6: ANALYSIS OF FINANCIAL STATEMENTS
1. Financial Statement of Company: - Balance Sheet of a Company in the prescribed form with major heading only (schedule VI)

4. **Accounting Ratio:** - Meaning, Objectives and Types of Ratios:
   a. **Liquidity Ratio:** - Current Ratio, Liquidity Ratio.
   b. **Solvency Ratio:** - Debt to Equity, Total Assets to Debt, Proprietary Ratio.
   c. **Activity Ratio:** Inventory Turnover, Debtors Turnover, Creditors Turnover, Working Capital Turnover, Fixed Assets Turnover, Currents Assets Turnover.
   d. **Profitability Ratio:** - Gross Profit, Operating Profit Ratio, Net Profit Ratio, Return on Investment, Earning Per Share Dividend Per Share, Price Earning Ratio.

**UNIT 7: STATEMENT OF CHANGES IN FINANCIAL POSITION**

Cash Flow Statement: - Meaning and Objectives, Preparation, Adjustments related to Depreciation, Dividend, Tax, Purchase and Sale of non current assets (as per revised standard issued by ICAI)
CLASS-XII
22. POLITICAL SCIENCE

Time: 3 Hrs
Theory: 90 Marks
CCE: 10 Marks
Total: 100 Marks

STRUCTURE OF QUESTION PAPER

1. All questions are compulsory.
2. The question paper will comprise of 4 sections A, B, C and D of four questions with 34 sub parts to be attempted.
3. All units of the syllabus should be given adequate representation in the question paper.

SECTION- A

Objective Type Questions: Question No. 1 will have ten Parts (I to X) and each Part will carry 1 mark. This section will include questions with one word answer/ fill in the blank/ true or false/multiple choice type questions.

10×1= 10

SECTION- B

Very Short Answer Type Questions: Question No. 2 comprises of 12 sub parts (questions I to XII) carrying 2 marks each. Answer to each question should be in about 20-30 words. All Questions are compulsory.

12×2= 24

SECTION- C

Short Answer Type Questions: Question No. 3 comprises of 10 sub parts (I to X) out of which students have to attempt any 8 question carrying 4 marks each. Answer to each question should be in about 50-60 words.

8×4= 32

SECTION- D

Long Answer Type Questions: Question No. 4 comprises of 4 sub parts (questions I to IV) carrying 6 marks each. Answer to each question should be in about 150-200 words. Three will be 100% internal choice in these questions.

4×6= 24

<table>
<thead>
<tr>
<th>Typology of Questions</th>
<th>Number of Questions</th>
<th>Marks Division</th>
<th>Division of Syllabus</th>
<th>Total Marks</th>
</tr>
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<tbody>
<tr>
<td>Section-A Objective Type Questions</td>
<td>Q.1 (Q.1 to X)</td>
<td>01 mark</td>
<td>5</td>
<td>10</td>
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<tr>
<td>Section-B Very Short Answer Type questions</td>
<td>Q.2 (Q.1 to XII)</td>
<td>02 marks</td>
<td>6</td>
<td>24</td>
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<tr>
<td>Section-C Short Answer Type Questions</td>
<td>Q.3 (Q.1 to X) Attempt any eight</td>
<td>04 marks</td>
<td>5</td>
<td>32 marks</td>
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<tr>
<td>Section-D Long Answer Type Questions</td>
<td>Q.4 (Q.1 to IV) 100% internal choice</td>
<td>06 marks</td>
<td>2 100% internal choice</td>
<td>24 Marks</td>
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<td>Total</td>
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<td>18</td>
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</table>
SYLLABUS

PART-A POLITICAL THEORY

Unit I: Political System
(i) Meaning, Characteristics and functions.
(ii) Difference between state and political system.
(iii) Comparative Politics: Meaning and Nature.
(iv) Modern concepts:
   a) Political Culture: Meaning and Characteristics.
   b) Political Socialisation: Meaning and Agents.

Unit II: Some major contemporary Political Theories
(i) Liberalism
(ii) Marxism
(iii) Political ideas of Mahatama Gandhi

Unit III: Bureaucracy (Civil Services)
(i) Meaning and importance
(ii) Recruitment
(iii) Role and functions
(iv) Distinction between Political Executive and Permanent Executive and their respective roles

Unit IV: Electorate
(i) Adult Suffrage
(ii) Systems of Representation
(iii) Direct and Indirect Elections

Unit V: Public opinion
(i) Role and importance of Public Opinion in a Democratic Polity.
(ii) Agencies for the formulation and expression of Public Opinion

Unit VI: Party System
(i) Political parties – their functions and importance
(ii) Basis of formation of Political Parties
(iii) Types of Party System
(iv) The Role of Opposition

Unit VII: Interest and Pressure Groups
(i) Interest Groups and Pressure Groups – their nature types and functions
(ii) Ways of functioning of pressure groups

PART –B

INDIAN POLITICAL SYSTEM

Unit VIII: Indian Democracy
(i) Parliamentary Model.
(ii) Socio-Economic Factors Conditioning Indian Democracy
(iii) Problems and challenges to Indian Democracy
   a) Inequality, Social and Economic/poverty
   b) Illiteracy
   c) Regionalism
Unit IX: Democracy at Grass root
(i) Concept of Panchayati Raj
(ii) Structure and Working of Panchayati Raj
(iii) Panchayati Raj – Some problems
(iv) Local Bodies in Urban Areas

Unit X: Party System in India
(i) Nature of Party System in India
(ii) Study of major national political parties – their programmes and policies
(iii) Problems facing the Indian Party System

Unit XI: Electoral System
(i) Adult Franchise and people’s participation
(ii) Voting behaviour – meaning and determinants
(iii) Election Commission and Election Procedure

Unit XII: National Integration
(i) Problems of National Integration
(ii) Steps taken to promote National Integration

Unit XIII: Foreign Policy of India
(i) Determinants of Foreign Policy
(ii) Basic principles of Foreign Policy
(iii) India and the United Nations, India and SAARC

Unit XIV: India and the World
(i) India’s relations with her Neighbours: Nepal, Sri Lanka, China, Bangla Desh and Pakistan
(ii) India’s relation with U.S.A. and Russia
(iii) India’s approach to major world issues: Human Rights, Disarmament and Globalization.
CLASS-XII
23. SOCIOLOGY

Time: 3 Hrs                                                                   Theory: 90 Marks
                                CCE: 10 Marks
                                Total: 100 Marks

STRUCTURE OF QUESTION PAPER
1. All questions are compulsory.
2. The question paper will comprise of 4 sections A, B, C and D of four questions with 32 sub parts to be attempted.
3. All units of the syllabus should be given adequate representation in the question paper.

SECTION- A
Objective Type Questions: Question No. 1 will have ten Parts (I to X) and each Part will carry 1 mark. This section will include questions with one word answer/ fill in the blank/ true or false/multiple choice type questions.

\[1 \times 10 = 10\]

SECTION- B
Very Short Answer Type Questions: Question No. 2 comprises of 10 sub parts (questions I to X) carrying 2 marks each. Answer to each question should be in about 20-30 words. All Questions are compulsory.

\[2 \times 10 = 20\]

SECTION- C
Short Answer Type Questions: Question No. 3 comprises of 6 sub parts (I to VI) out of which students have to attempt any 6 question carrying 4 marks each. Answer to each question should be in about 50-60 words.

\[4 \times 6 = 24\]

SECTION- D
Long Answer Type Questions: Question No. 4 comprises of 6 sub parts (questions I to VI) carrying 6 marks each. Answer to each question should be in about 100-150 words. Three will be 100% internal choice in these questions.

\[6 \times 6 = 36\]

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<th>Typology of Questions</th>
<th>Number of questions</th>
<th>Marks Division</th>
<th>Division of Syllabus</th>
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<td>A. Objective Type Questions</td>
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<td>Part B Unit 3 and 4</td>
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<td>B. Very Short Answer Type Questions</td>
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<td>C. Short Answer Type Questions</td>
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</table>
SYLLABUS

PART-A

Unit : I  Tribal, Rural and Urban Societies in India

1. **Tribal Society**: Meaning, Features; Classification of Tribes; Marriage System; Issues- Deforestation and Displacement; Changes in Tribal Society.


3. **Urban Society**: Meaning Features; Issues Housing and Slums

Unit : II  Inequalities in Indian Society

4. **Caste Inequalities**: Concept, Features; Caste and Social Stratification, Theories of Origin of Caste, Caste Inequality and Indian Society

5. **Class Inequalities**: Concept of class, Features of Class; Relations between caste, class, status Group and class Hierarchy, Views of Sociologists on class structure, Classes in Rural and Urban India.

6. **Gender Inequalities**: Concept, Gender Inequality, Theories of Feminism, Gender; Gender Discrimination: Meaning and Nature; Problems of Women, Role of Gender relation in Societal Development

Unit : III  Structural and Cultural Change in India

7. **Westernisation and Sankritisation**: Westernisation: Meaning, Carrier of process, Features, Impact; Sanskritisation: Meaning, Sanskritisation preferred as against Brahminisation, Dominant Caste, Impact


9. **Social Movement**: Meaning Types, Stages Caste Based Movements, Class Based Movements, Women's movements, Environmental movements

Unit : IV  Social Problems in Indian Society

10. **Social Problems**: Alcoholism and Drug Addiction

11. **Violence Against Women**: Female Foeticide and Domestic Violence: Female Foeticide: Meaning, India Scenario, Causes, Consequences, Strategies to Combat Female Foeticide; Domestic Violence- Meaning, Forms, Factors, Causes, Effects, Remedies

STRUCTURE OF QUESTION PAPER

All questions are compulsory.

The question paper will comprise 4 sections A, B, C and D of 27 questions in total. Student will attempt 25 questions. The question paper will have:

SECTION-A

Objective Type Questions: This section will include questions with one word answer/ fill in the blank/ true or false/ multiple choice type questions. Question No. 1 will have ten Parts (A to J) and each Part will carry 1 mark.  

10×1=10

SECTION-B

Very Short Answer Type Questions: This section will have 12 questions (from Q no.2 to 13) Each question will carry 2 marks. All Questions are compulsory. Answer of each question should be in 20-30 words.  

12×2= 24

SECTION-C

Short Answer Type Questions: This section will have 10 questions from 14 to 23. Each question will carry 4 marks Student have to attempt any eight out of ten questions Each question should be in 50-60 words.  

8×4=32

SECTION-D

Long answer Type Questions: This section will have 4 questions (24 to 27) with internal choice. Each question will carry 6 marks. Answer of each question should be in 150-200 words. There will be 100% internal choice in these questions.  

6×4= 24

Note:- Weightage to each unit must be given in each type of questions as appropriate.

<table>
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<tr>
<th>Typology of Questions</th>
<th>Number of questions</th>
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<th>Division of Syllabus Part A</th>
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<tr>
<td>A. Objective Type Questions A to J</td>
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<td>B. Very Short Answer questions</td>
<td>12</td>
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<td>6</td>
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<tr>
<td>C. Short Answer Questions (To be attempted = 8)</td>
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<td>D. Long Answer Questions (with internal choice)</td>
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</table>
SYLLABUS

UNIT -1 Personnel Administration
   b) Promotion and Position Classification.
   c) Conduct and Discipline.
   d) Morale.
   e) Joint Consultative Machinery: Employer-Employee Relations

UNIT -II Financial Administration
   a) Budget-Meaning, Principles and Importance. The budget as an instrument of Public Policy. The budgetary process.
   c) Public Accounts Committee at the central level.
   d) Estimates Committee at the central level.
   e) Performance Budgeting.

UNIT -III Audit and Its Role
   a) Comptroller and Auditor General of India.
   b) Accounting: Its Importance and Organization.

UNIT -IV Selected Approaches
   a) Scientific Management.
   b) Human Relations Approach.

UNIT - V Functional Aspects of Administration
   a) Communication.
   b) Supervision.
   c) Coordination.
   d) Centralization.
   e) Decentralization.
   f) Field Headquarter Relationship.

UNIT - VI
   a) Leadership.
   b) Policy Formation.
   c) Planning and Decision Making.

UNIT - VII Administration Improvement
   a) O & M (Organization and Methods).
   b) Administrative Reforms.

UNIT - VIII Administrative Law
   a) Administrative Law.
   b) Rule of Law.
   c) Delegated Legislation
   d) Administrative Tribunals - Role, Structure and Working.
STRUCTURE OF QUESTION PAPER
1. The question paper will comprise of 32 questions in total.
2. All questions will be compulsory to attempt.
3. The question paper will consist of four parts with each part representing all sections and all religions.

Part-I will consist of ten (10) objective type questions (Q. no. 1 to 10) carrying one mark each. Objective type questions may include questions with one word to one sentence answer or fill in the blank or true/false or multiple choice type questions.

\[ 10 \times 1 = 10 \]

Part-II will consists of eight (8) short answer type-I questions (Q. no. 11 to 18) carrying 2 marks each. Answer of each question should be given within 30-35 words.

\[ 8 \times 2 = 16 \]

Part-III will consist of ten (10) short answer type-II questions (Q. no. 19 to 28) carrying 4 marks each. Answer of each question should be given within 60-70 words. Out of ten, three Questions will have internal choice.

\[ 10 \times 4 = 40 \]

Part-IV will consist of four (4) long answer type questions with internal choice (Q. no. 29 to 32) carrying 6 marks each. Answer of each question should be given in approximately 1½ to 2 pages of the answer sheet.

\[ 4 \times 6 = 24 \]

SECTIONWISE DISTRIBUTION OF QUESTIONS AND MARKS

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SYLLABUS

SECTION A: (HISTORICAL)
2. Budhist movement (up to Ashoka Period).

SECTION B: (LITERARY)
1. Introduction to Vedic Literature (name and main features of the four Vedas).
2. General Introduction to Puranas, Upanishads, Shastras.
3. The Adi-Granth – its editing scheme.
SECTION C : (REFLECTIVE)

(1) Ashta marga of Buddhism.
(2) Ethical teachings of Jainism.
(3) The Sikh way of life.

BOOK PRESCRIBED
An Introduction to Indian Religion by Harbans Singh & L.M. Joshi (Punjabi University, Patiala).

BOOK SUGGESTED (for general reading)
Punjabi University, Patiala
Budhism
Jainism
Sikhism

SYLLABUS (THEORY)

STRUCTURE OF QUESTION PAPER (THEORY)

1. The question paper will comprise of 22 questions in total.
2. All questions will be compulsory to attempt.
3. The question paper will consist of three parts with each part representing both sections.

Part-I will consist of 7 objective type questions (Q. no. 1 to 7) carrying one mark each. Objective type questions may include questions with one word to one sentence answer.  

7×1=7 Marks

Part-II will consist of 11 short answer type questions (Q. no. 8 to 18) carrying three (3) marks each. Answer of each question should be given within 60-80 words.

11×3=33 Marks

Part-III will consist of 4 long answer type questions (Q. no. 19 to 22) with internal choice (from section A and B) carrying 5 marks each. Answer of each question should be given within 150-200 word.

4×5=20 Marks

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SECTION-A

1. Brief history of modern period of Hindustani music.
2. Detailed knowledge of Tabla and Harmonium.
3. Time theory of Ragas.
4. Define and explain the following terms:
   - Varna, Kan, Khatka, Murki, Gamak, Gayak, Gayaki, shudh Raj, Chhayalg Rag, Sankiran Rag, Lakshan geet.
5. Gayak ke gun aur dosh.
7. Essay:- (1) Importance of Tal in Music
   (2) Place of Fine Arts in Music.
8. Contribution towards music by the following scholars:-
   (1) Bade Gulam Ali Khan.
   (2) Bhim Sain Joshi.
   (3) Prof: Baldev sharan Narang
   (4) Faiyaz Khan
9. Shastri gayan shailies:-
   Dharupad, Dhamar, Tarana, Dhumri, Khayal, Tappa.
   i. Assa Singh Mastana
   ii. Surinder Kaur
   iii. Narinder Biba
   iv. Kuldeep Manak
   v. Lal Chand Yamala Jat
   vi. Didar Sandhu
   vii. Parkash Kaur

SECTION-B
1. 10 Alankaras
2. To write the notations of Drut Khyals in prescribed.
   Raags: Bhairav Bhiplasi, Malkauns, Khamaj.
4. Recognition of Raags from given Swar Sangaties.
5. Description of prescribed Raags.

STRUCTURE OF QUESTION PAPER (PRACTICAL)
Time: 20 minutes                                                    Mark: 30

There should not be more than 9 students in a batch of practical examination. Harmonium is allowed as accompaniment in music (Vocal). The examiner will set the question paper on the spot. While setting the question paper in practical, the examiner must consider the syllabus in theory and will follow the following instructions.

1. Demonstration/performance of any one Raag out of the prescribed syllabus. The students can exercise the choice of Raags. It will be for 4 minutes and shall carry 7½ marks.
2. Demonstration/performance of one Raag from prescribed syllabus. The choice will be of examiner. It will be for 4 minutes and will carry 7½ marks.
3. Demonstration/performance of prescribed Taals in Ikgun and Dugun Layakaries by hand. It will be for 4 minutes and will carry 5 marks.
4. Recognition of one Taal and one Raag out of the prescribed syllabus. It will be for 4 minutes and will carry 5 marks.
5. Demonstration/performance regarding Tarana/Tappa/ Lok geet/Patriotic song. It will also be for 4 minutes and will carry 5 marks.
SYLLABUS (PRACTICAL)

1. One Drut Khayal with Alaap- Taan the following Raags:
   Bhairav, Bhimplasi, Malkauns, Khamaj.
2. One slow Khyal with short Alaaps and Taans in any of the prescribed Raags.
3. One Tarana only Sathai and Antra in any of the prescribed Raags.
4. Ability to demonstrate Rupak tal, jhaptal, Sul tal, Tilwara tal, dhamar tal with reciting bols by hands in Ikgun and Dugun layakari.
5. One Camposition of Patriotic song.
6. Ability to recognise the prescribed Raag from the passages of swaras.
8. 10 Alankaras.

Note:- The book Published and Prescribed by the Punjab School Education Board:-

Sangeet Gayan-12
**CLASS-XII**

**27. GURMAT SANGEET**

**Time:** 3 Hrs  
**Theory:** 60 Marks  
**Practical:** 30 Marks  
**CCE:** 10 Marks  
**Total:** 100 Marks

**STRUCTURE OF QUESTION PAPER (THEORY)**

1. The question paper will comprise of 22 questions in total.
2. All questions will be compulsory to attempt.
3. The question paper will consist of three parts with each part representing both sections.
   - **Part-I** will consist of 7 objective type questions (Q. no. 1 to 7) carrying one mark each. Objective type questions may include questions with one word to one sentence answer.  
     
   $7 \times 1 = 7$ Marks
   - **Part-II** will consist of 11 short answer type questions (Q. no. 8 to 18) carrying three (3) marks each. Answer of each question should be given within 60-80 words.  
     
   $11 \times 3 = 33$ Marks
   - **Part-III** will consist of 4 long answer type questions (Q. no. 19 to 22) with internal choice (from section A and B) carrying 5 marks each. Answer of each question should be given within 150-200 words.  
     
   $4 \times 5 = 20$ Marks

**SECTIONWISE DISTRIBUTION OF QUESTIONS AND MARKS**

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</table>

**SYLLABUS (THEORY)**

**SECTION-A**

2. Contribution towards Gurmat Sangeet by Guru Arjun Dev Ji.
3. Introduction of Choukie :-
   - Asa Di Var
   - Sodar
   - Bhai Mardana
   - Bhai Shahzad
   - Bhai Sata.
   - Bhai Balwand.
5. Raag Parkar and Mishrit (mixed) Raags of Guru Granth Sahib.
6. Life sketch and contribution of towards Gurbani Sangeet.
   - Bhai Chand
   - Prof. Tara Singh
c. Bhai Hira Singh
7. Definition of following music terms used in Gurmat Sangeet Raag: Mahalla, Shabad Ank, Rahao, Dhun (Dhuni), Partal, Ghar.

SECTION-B
1. Description of the prescribed Raags: Todi and Dhanasari, Sarang, Baharaiv.
2. Description with Ikgun, Dugun and Chougun of Ek Taal, Jhap Taal, Rupak Taal and Teen Taal.
3. Recognition of prescribed Raags: Asavari, Dhanasari, Bhairav, Sarang Raags from given Swar- Sangaties.
4. Notation of Shabad- Gayan only Sathai Antra.

STRUCTURE OF QUESTION PAPER (PRACTICAL)
There should not be more than 9 students in a batch of practical examination of Gurmat Sangeet. Harmonium will be allowed as a accompaniment. The examiner will set the question paper on the spot. While setting the question paper in practical examination, the examiner must consider the syllabus in theory and will follow the following instructions.
1. Demonstration/performance of Shabad Gayan in any one Raag out of the prescribed Raags in the syllabus. The choice of the Raags will be done by the student. It will be for 6 minutes and shall carry 10 marks.
2. Demonstration/performance of Shabad Gayan in any one Raag out of the prescribed Raags in the syllabus. The examiner will do the choice of the Raags. It will be for 4 minutes and shall carry 5 marks.
3. Demonstration/performance of Taals in Ikgun and Dugun layakaries by hand. It will be for 4 minutes and shall carry 5 marks.
4. Recognition of one Taal and one Raag out of the prescribed Taals and Raags in syllabus. It will be for 2 minutes and will carry 5 marks.
5. Demonstration/performance regarding Alankaara/Shand (Chhant) and Salok. It will be for 4 minutes and carry 5 marks.

SYLLABUS (PRACTICAL)
1. Shabad Gayan in Bhairav, Sarang, Asavari and Dhansari according to the traditional style of Gurbani Gayan.
2. Capability to demonstrate: Ek Taal, Jhap Taal, Rupak Taal and Teen Taal.
3. Five Alankaras: (Sargam and Akaar) in Bhairav and Todi Raags.
4. Recognition of prescribed Raags by given Swar-Sangities.
5. Gayan of one Gurbani Salok in vilambat laya according to Vandana style.
STRUCTURE OF QUESTION PAPER (THEORY)

1. The question paper will comprise of 22 questions in total.
2. All questions will be compulsory to attempt.
3. The question paper will consist of three parts with each part representing both sections.

**Part-I** will consist of 7 objective type questions (Q. no. 1 to 7) carrying one mark each. Objective type questions may include questions with one word to one sentence answer. 7×1=7 Marks

**Part-II** will consist of 11 short answer type questions (Q. no. 8 to 18) carrying three (3) marks each. Answer of each question should be given within 60-80 words. 11×3=33 Marks

**Part-III** will consist of 4 long answer type questions (Q. no. 19 to 22) with internal choice (from section A and B) carrying 5 marks each. Answer of each question should be given within 150-200 words. 4×5=20 Marks

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<td><strong>11</strong></td>
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SYLLABUS (THEORY)

**PART-A**

2. Detailed knowledge of the following instruments:- Sitar, Tabla.
3. Time Theory of Ragas.
4. Definition of the following music terms:-
   - Varna, kan, meend, mizrab, jhalla, chikari, gamak, soot, krintan,
   - zamjama, Shudh, chyalag, sankeeran raags.
5. Vadak ke Gun our Dosh.
   - Comparision between raags and thats rules.
7. (a) Importance of taal in music
(b) Music and other Fine-Arts

8. Contribution towards music by the following scholars:
   (a) Ustad Allaudin Khan
   (b) Sh. Nikhil Banerjee
   (c) Pandit Harwinder Kumar Sharma
   (d) Ustad Vilayat Khan


10. Instruments used in solo performance in Indian Music.
    Sitar, Sarood, Sarangi, Dilruba, Shanai, Flute, Jattarang, Harmonium, Tabla, Dhol

**PART-B**

1. 10 Alankaars.

2. To write the notation of Razakhani Gats in Bhairav, Malkauns, Bhipiplasi and Khamaj Raags.

3. One slow Gat in prescribed Raags.

4. One composition in Ek Taal or Jhap Taal in prescribed Raags.

5. One Dhun in any Raag.

6. Description of Rupak Tal, Ek Taal, Tilwada Taal, Dhamaar Taal, Sultal and Jhap Taal with Ekgun and Dugan layakaries.


**STRUCTURE OF QUESTION PAPER (PRACTICAL)**

**Time: 20 Minutes 30 Marks**

There should not be more than 9 students in a batch of practical examination. The examiner will set the question paper on the spot. While setting the question paper in practical examination, the examiner must consider the syllabus in theory and will follow the following instructions.

1. Demonstration/performance of any one Raag out of the prescribed syllabus. The student will do the choice of the Raags. It will be for 4 minutes and shall carry 7½ marks.

2. Demonstration/performance of one Raag out of the prescribed syllabus. The examiner will do the choice of the Raag. It will be for 4 minutes and shall carry 7½ marks.

3. Demonstration/performance of Taals in Ikgun and Dugun layakaries by hand. It will be for 4 minutes and shall carry 5 marks.

4. Recognition of one Taal and one Raag out of the prescribed Taals and Raags in syllabus. It will be for 4 minutes and will carry 5 marks.

5. Demonstration /performance regarding Alankara/ Dhun. It will be for 4 minutes and carry 5 marks.
SYLLABUS (PRACTICAL)

1. One Drut Gat with short Alaap, Toras and Jhalla in each of the following Raags.
   i. Bhairav
   ii. Malkauns
   iii. Bhopal
   iv. Khamaaj

2. One slow Gat with short Alaap and Toras in any of the prescribed Raags in the syllabus.

3. Ability to demonstrate Ek taal, Tilwara Taal, Dhamar taal, Sultal and jhap taal by hand with reciting bols in Ikgun and Dugun layakari.

4. Ability to play one gat in Ek Taal or Jhap Taal.

5. Ten Alankars.

6. One Dhun in any Raag.

Note:- The book Published and Prescribed by the Punjab School Education Board:-

Sangeet Vadan-12 (Instrumental)
STRUCTURE OF QUESTION PAPER (THEORY)

1. The question paper will comprise of 22 questions in total.
2. All questions will be compulsory to attempt.
3. The question paper will consist of three parts with each part representing both sections.

**Part-I** will consist of 7 objective type questions (Q. no. 1 to 7) carrying one mark each. Objective type questions may include questions with one word to one sentence answer. 7×1=7 Marks

**Part-II** will consist of 11 short answer type questions (Q. no. 8 to 18) carrying three (3) marks each. Answer of each question should be given within 60-80 words. 11×3=33 Marks

**Part-III** will consist of 4 long answer type questions (Q. no. 19 to 22) with internal choice (from section A and B) carrying 5 marks each. Answer of each question should be given with in 150-200 word. 4×5=20 Marks

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SYLLABUS (THEORY)

**PART-A**

1. Definition of the following :- Uthan, Peshkar, Paran, Tehai, Dupalli, Tippali, Rela, Nagma.
2. Principles of formation of Taal.
3. Essay on importance of Laya and Taal in music and importance of Tabla in music.
5. Taal and its ten Parans.
8. Biographical sketches of the following Tabla maestro:
   a. Pt. Kanthe Maharaz
   b. Pt. Shamta Prasad
   c. Ustad Zakir Hussian
PART-B

1. Introduction and notation of the following Taals with Ikgun, Dugun, Tigun and Chougun Layakaries : (i) Rupak Taal (ii) Jhap Taal (iii) Ek Taal (iv) Deepchandi (v) Teen Taal (vi) Punjabi Theka (Chhota Teen Taal)

2. Description and comparison of the following Taals:
   a. Teen Taal- Punjabi Theka
   b. Deepchandi- Dhamar Taal
   c. Rupak Taal- Tivra Taal

3. Notation of the following material in Teen Taal, Jhap Taal, Rupak Taal: Peskhar, Kayada, Tehai, Paran, Rela and Tukra.

4. Recognition of Teen Taal, Deepchandi, Punjabi Theka, Dhamar, Rupak, Tivra Taals through some Bols.

5. Notation of Nagama in prescribed Taals.

STRUCTURE OF QUESTION PAPER (PRACTICAL)

There should not be more than 9 students in a batch of practical examination. The examiner will set the question paper on the spot. While setting the question paper in practical examination, the examiner must consider the syllabus in theory and will follow the following instructions.

1. Demonstration/performance of any one Taal out of the prescribed syllabus. The choice of the Taal will be of the student. It will be for 6 minutes and shall carry 7½ marks.

2. Demonstration/performance of any one Taal out of the prescribed syllabus. The choice will be of the examiner. It will be for 4 minutes and shall carry 7½ marks.

3. Demonstration/performance of Padhant (pronouncing the Bols of Taal) in Ikgun and Dugun layakaries. It will be for 4 minutes and carry 5 marks.

4. Students will be given 4 varans of prescribed Taals. He/she will have to recognize any two. It will be for 2 minutes and will carry 5 marks.

5. Any two laggies with Tihai in Rupak Taal. It will be for 4 minutes and carry 5 marks.
SYLLABUS (PRACTICAL)

1. System solo performance of the following Taals: Ek Taal and Teen Taal, Teewra Taal, Rupak Taal.
2. Few Laggis in Rupak Taal.
3. To play Thekas in Ikgun and Dugun Layakaries in Deepchandi, Teen Taal and Chhota Teen Taal, Rupak, Jhap Taal and Ek Taal.
4. Recognition of Taals.
5. Tuning of Tabla.
6. Ability to play Nagama on Harmonium in any Taal of your syllabus.
7. Ability to Padhant showing Tali and Khali of Taals in Ikgun and Dugun Layakaries.
STRUCTURE OF QUESTION PAPER (THEORY)

1. The question paper will comprise of 22 questions in total.
2. All questions will be compulsory to attempt.
3. The question paper will consist of three parts with each part representing both sections.

**Part-I** will consist of 7 objective type questions (Q. no. 1 to 7) carrying one mark each. Objective type questions may include questions with one word to one sentence answer. 7×1=7 Marks

**Part-II** will consist of 11 short answer type questions (Q. no. 8 to 18) carrying three (3) marks each. Answer of each question should be given within 60-80 words. 11×3=33 Marks

**Part-III** will consist of 4 long answer type questions (Q. no. 19 to 22) with internal choice (from section A and B) carrying 5 marks each. Answer of each question should be given within 150-200 words. 4×5=20 Marks

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**SYLLABUS (DANCE)**

**PART-A**

1. Knowledge of the Kathak dance.
2. Definition of the following terms: Laya, Taal, Theka, Paran, Chakkardaraparan, Kavit, Gat-nikas.
3. Knowledge of Hasta Mudras (Sanyukta) based on Abhinaya Darpana.
4. Knowledge of the following Dances:
   i. Bharata Natayam
   ii. Lasya
5. Life sketch of Udey Shanker.
6. Knowledge of Rasa and Bhava and their application in Dance.
PART-B

8. Definition and comparative study of Teen Taal and Jhap Taal.
9. Ability to write the following material in prescribed Taals given below:
   i. Teen Taal: One Thaat, one Amad, Two Tukras, one Salami, one Paran, two Toras, one Kavit.
   ii. Jhap Taal: One Thaat, one Tehai, one Amad, one Salami, one Tora.
10. Ability to recognize the Layakari (Ikgun, Dugun, Tigun and Chougun) through some Bole from Teen Taal and Jhap Taal.

STRUCTURE OF QUESTION PAPER (PRACTICAL)

There should not be more than 9 students in a batch of practical examination. The examiner will set the question paper on the spot. While setting the question paper in practical examination, the examiner must consider the syllabus in theory and will follow the following instructions.

1. A systematic dance performance in any Taal out of the prescribed syllabus as per the choice of student. It will be for 6 minutes and shall carry 7½ marks.
2. A systematic dance performance in any Taal out of the prescribed syllabus as per the choice of the examiner. It will be for 4 minutes and will carry 7½ marks.
3. Demonstration/performance of any Taal in Ikgun, Dugun layakaries. It will be for 4 minutes and shall carry 5 marks.
4. Student will be given some Bols out of the prescribed Taals. He/She will have to recognize two out of these. It will be for 2 minutes and will carry 5 marks.
5. Padhant of prescribed Taal and layarkries on hand. It will be for 4 minutes and carry 5 marks.

SYLLABUS (PRACTICAL)

Systematic performance of the following Taals:

I. (a).Teen Taal:
   (i) Four varaties of advance Tatkar, in Ikgun and Dugun layakaries.
   (ii) One Thaat
   (iii) One Amad
   (iv) two simple Tukras
   (v) One Salami
   (vi) One Paran
   (vii) One Kavit.
(b) Jhap Taal:-
   (i) One Thaat
   (ii) one Tehai
   (iii) one Amad
   (iv) one Salami
   (v) one Tora.

II. Padhant of Thekas of Teen Taal and Jhap Taal in Ikgun, Dugun and Chougun layakaries by hand.

III. Padhant of all material in Teen Taal by hand.
CLASS-XII
31. PHILOSOPHY

Time: 3 Hrs                                                                  Theory: 90 Marks
CCE: 10 Marks                                                              Total: 100 Marks

STRUCTURE OF QUESTION PAPER
1. All questions are compulsory.
2. The question paper will comprise of 4 sections A, B, C and D of four questions with 32 sub parts to be attempted.
3. All units of the syllabus should be given adequate representation in the question paper.

SECTION- A

Objective Type Questions: Question No. 1 will have ten Parts (I to X) and each Part will carry 1 mark. This section will include questions with one word answer/ fill in the blank/ true or false/multiple choice type questions.

$1 \times 10 = 10$

SECTION- B

Very Short Answer Type Questions: Question No. 2 comprises of 10 sub parts (questions I to X) carrying 2 marks each. Answer to each question should be in about 20-30 words. All Questions are compulsory.

$2 \times 10 = 20$

SECTION- C

Short Answer Type Questions: Question No. 3 comprises of 6 sub parts (I to VI) out of which students have to attempt any 6 question carrying 4 marks each. Answer to each question should be in about 50-60 words.

$4 \times 6 = 24$

SECTION- D

Long Answer Type Questions: Question No. 4 comprises of 6 sub parts (questions I to VI) carrying 6 marks each. Answer to each question should be in about 100-150 words. Three will be 100% internal choice in these questions.

$6 \times 6 = 36$

Note:- Weightage to each unit must be given in each type of questions as appropriate.

<table>
<thead>
<tr>
<th>Typology of Questions</th>
<th>Number of questions</th>
<th>Marks Division</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Objective Type Questions</td>
<td>10</td>
<td>01 mark</td>
</tr>
<tr>
<td>B. Very Short Answer questions</td>
<td>10</td>
<td>02 marks</td>
</tr>
<tr>
<td>C. Short Answer Questions</td>
<td>06</td>
<td>04 marks</td>
</tr>
<tr>
<td>D. Long Answer Type Questions</td>
<td>06</td>
<td>06 marks</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>---</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Division of Syllabus</th>
<th>Part A</th>
<th>Part B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1,2,3,4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Unit 5,6,7,8</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

| Total marks            | 16     | 16     |

| Total                   | 90     |        |
SYLLABUS (PART-A)

UNIT I  Scientific Method: its nature; difference between this method and common sense thinking.

UNIT II  Hypothesis: Its meaning, its place in scientific method; formulation of a relevant hypothesis.

UNIT III  Explanation: its meaning, popular and scientific explanation, kinds and limits of scientific explanation.


UNIT V  Knowledge: Sources of Knowledge, Nature and theories of truth.

UNIT VI  Schools of Philosophy: Idealism and Materialism.

UNIT VII  Indian Philosophy: Its nature and salient features.

UNIT VIII  (a) The Philosophy of Bhagwad-Gita-Karma Yoga.

(b) Sikhism: Its salient features; concepts of Sewa
STRUCTURE OF QUESTION PAPER

1. All questions are compulsory.
2. The question paper will comprise of 4 sections A, B, C and D of four questions with 32 sub parts to be attempted.
3. All units of the syllabus should be given adequate representation in the question paper.

SECTION- A

Objective Type Questions: Question No. 1 will have ten Parts (I to X) and each Part will carry 1 mark. This section will include questions with one word answer/ fill in the blank/ true or false/multiple choice type questions.

\[1 \times 10 = 10\]

SECTION- B

Very Short Answer Type Questions: Question No. 2 comprises of 10 sub parts (questions I to X) carrying 2 marks each. Answer to each question should be in about 20-30 words. All Questions are compulsory.

\[2 \times 10 = 20\]

SECTION- C

Short Answer Type Questions: Question No. 3 comprises of 6 sub parts (I to VI) out of which students have to attempt any 6 question carrying 4 marks each. Answer to each question should be in about 50-60 words.

\[4 \times 6 = 24\]

SECTION- D

Long Answer Type Questions: Question No. 4 comprises of 6 sub parts (questions I to VI) carrying 6 marks each. Answer to each question should be in about 100-150 words. Three will be 100% internal choice in these questions.

\[6 \times 6 = 36\]

Note:- Weightage to each unit must be given in each type of questions as appropriate.

<table>
<thead>
<tr>
<th>Typology of Questions</th>
<th>Number of questions</th>
<th>Marks Division</th>
<th>Division of Syllabus</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Objective Type Questions</td>
<td>10</td>
<td>01 mark</td>
<td>5</td>
<td>10 Marks</td>
</tr>
<tr>
<td>B. Very Short Answer questions</td>
<td>10</td>
<td>02 marks</td>
<td>5</td>
<td>20 Marks</td>
</tr>
<tr>
<td>C. Short Answer Questions</td>
<td>06</td>
<td>04 marks</td>
<td>3</td>
<td>24 marks</td>
</tr>
<tr>
<td>D. Long Answer Questions</td>
<td>06</td>
<td>06 marls</td>
<td>3</td>
<td>36 Marks</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>---</strong></td>
<td><strong>16</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>
SYLLABUS
Principles and Techniques of Education.

UNIT-I  Education in Ancient and Modern India. Education and Society: Relation between the two.

UNIT-II (a) Educational Structure: Primary to University (10+2+3):
(b) Teaching Aids- Chart, Models, Computers, Radio & Television, Chalk, Black Board, Posters, Cartoon, and Projections.
(c) Methods of Teaching: Lecture-method, Discussion-method, Project- method, Demonstration- method.
(d) Teacher, his qualities and preparation.

Unit-III Educational Psychology: Its meaning and Scope: its importance for the teacher.

Unit-IV Management of Education:
(a) District Level : D.E.O Secondary
: D.E.O Primary
: B.P.E.O.
(b) State Level : Education Ministry, Education Directorates, College Secondary Education, Primary Education
Allied organizations: (a) S.C.E.R.T., (b) S.I.S.E.
(c) Centre Level : Ministry of Education, Central Secretariat and allied institutions. N.C.E.R.T, C.B.S.E. and U.G.
CLASS-XII
33. GEOGRAPHY

Structure of Question Paper

1. First question shall have 8 sub-parts, all objective type compulsory questions from Unit-II to Unit-IV. Each question shall carry one mark and shall be answered in a few words or a sentence or may be of multiple choice. Atleast two questions to be set from each unit i.e. from Unit-II to Unit-IV.  
   \[1 \times 8 = 8\]

2. Second question shall have 8 sub-parts, each carrying 2 marks. Answer of each question shall run into 2 to 3 sentences. Atleast one question shall be set from Unit-I to Unit-V.  
   \[2 \times 8 = 16\]

3. Third question shall contain 8 sub-parts, out of which 5 shall be to be answered in 60 to 80 words. One question shall be set from Unit-I to Unit-V atleast, in this part.  
   \[4 \times 5 = 20\]

4. Question no. 4 to 6 shall be pairs of questions covering all the five units and one from each pair shall be answered in 150 to 250 words by the examinee.  
   \[6 \times 3 = 18\]

5. Question No.7 & 8 relate to map work related to India.(4 marks for labeling and 4 marks for marking on outline map of India)  
   \[2 \times 4 = 8\]

Note: Blind students shall answer the questions related to map work in lieu of map filling.

<table>
<thead>
<tr>
<th>Forms of Questions</th>
<th>Objective Multiple Questions</th>
<th>type of Questions</th>
<th>Short Answer-I</th>
<th>Short Answer-II</th>
<th>Map Work</th>
<th>Long Answer Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Questions</td>
<td>08</td>
<td>08</td>
<td>05</td>
<td>08</td>
<td>03</td>
<td>03</td>
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<tr>
<td>Marks allotted</td>
<td>08</td>
<td>16</td>
<td>20</td>
<td>08</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Percentage of Marks</td>
<td>12.5</td>
<td>23</td>
<td>27</td>
<td>12.5</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

Syllabus

Unit-I

Nature & Scope of Geography & its branches:
- Geographical thoughts, Brief introduction of determinism and possibilism, Radical and post modern geography.
- Contribution of A.V. Humboldt, Carl Ritter, Paul Vidal de La Blache and E.C. Sample and all branches of Geography in brief.
Unit-II

Human resources:

- Population; Distribution, Density & Growth, Age-sex ratio, Urbanisation, Literacy
- Determinants of population change, Geography of Indian Diaspora, Migration Causes & consequences Demographic transition theory
- Human development concept; Selected indicators, International comparison, Punjab’s rank in national HDI

Unit-III

Economic Geography: Types of Economic Activities

Primary Activities:

- Concept of changing trends; gathering; pastoral; mining, subsistence agriculture, Modern trends in agriculture with special reference to Punjab, Organic farming.
- Geographical distribution of major crops in India (Wheat, Rice, Tea, Coffee, Jute, Sugarcane)

Secondary Activities

- Concept, Manufacturing types (House hold, Small scale, Large scale, Agro based and Mineral based industries with special reference to Punjab) Distribution of Metallic (Iron-ore, Copper, Bauxite, Maganese), Non-metallic, Conventional (Coal, Petroleum, Natural Gas), Non-Conventional (solar, wind, tidal) resources and their conservation
- Industries: Types, Distribution of selective industries (Iron & steel, Cotton textile, Sugar, Pharmaceutical Petrochemical and Knowledge based Industries) FDI and its impact on Indian industries, Industrial Corridors, Dedicated Freight Corridors

Tertiary Activities:

- Quaternary activities, Quinery Services, People engaged in tertiary industries, A case study from Punjab.

Unit-IV

Transport, Communication & Trade

- Land transport: Roads (North-South & East-West corridors, Golden Quadrilateral), Railways; Transcontinental Railways, New Numbering Scheme of National highways.
• Water Transport; Inland, Major ocean routes in the world.
• Air Transport, Oil and Natural Gas pipelines (TAPI, HBJ, Indo-Iranian Naharkatia-Nunmati-Barauni, Bathinda-Kandla pipeline, L.P.G. Gaspipelines)
• International and National trade, Sea-port and their Hinterlands and major airports)
• International trade bases and changing patterns, International Organisations with special reference to India, Role of WTO in International trade.

Unit-V

• Geographical Perspective on selective issues and problems
• Environmental pollution; Land, water, air
• Geography of superlatives in India

Unit-VI (Practical Work)

• Types of data: Primary, Secondary & other sources
• Representation of data; Construction of diagrams; Bars, Circle and Flow charts
• Thematic Maps; Construction of dot, choropleth and isopleths with base map of Punjab
• Data analysis and generation of diagrams graphs with the help of computers
• Field studies, Land use, Market survey, Traffic Flow survey
• Satellite Communication, Geographic Information System and Global Positioning system (GPS) definitions only.
CLASS-XII
34. DEFENCE STUDIES

Time : 3 Hrs               Theory : 70 Marks
Practical: 20 Marks        CCE: 10 Marks
Total: 100 Marks

STRUCTURE OF QUESTIONS PAPER (THEORY)

1. There will be 20 Questions in all.
2. All questions are compulsory.
3. There will be 10 questions of one Mark each & these questions will be
   objective type.                         10\times1=10 \text{ Marks}
4. There will be 8 questions of 5 Marks each.              8\times5=40 \text{ Marks}
5. There will be 2 questions of 10 Marks each with internal choice.     2\times10=20 \text{ Marks}

SYLLABUS

Group- A
1. Elements of Strategy: Various definitions, distinctions between grand
   strategy, strategy and tactics type of strategy.
2. Armed forces of India’s neighbours with special reference to Pakistan,
   China, Nepal, Bangladesh, and Sri Lanka.
3. Higher Defence Organization in India
   (a) Defence Minister’s committee.
   (b) Chief of Staff’s Committee.
4. Elements of Evolution of tactics: means of collection and interpreting
   information troop movements, operational and verbal orders, attack,
   defence and withdrawal.
5. Higher Defence organizations in India.
   (a) Defence Committee of the Cabinet.
   (b) National Defence Council.
   (c) Powers of the President in relation to armed forces.
6. Organization of India’s Armed forces.
   (a) Equivalent ranks in the Armed forces.
   (b) Role and Characteristic of Army, Navy and Air Force.
   (c) Army: Integrated Headquarters, static and field formation,
       Elementary knowledge of the following weapons.
       5.56mm INSAS Rifle, 7.62mm MMG, LMG 9 mm Carbine, Grenade,
       Morter, Rocket Launcher, Antitank weapons : Tanks and APC
   (d) Navy: Headquarters, Commands, Type of Ships and Submarines.
   (e) Air Force, Headquarters, Commands, Types of service, Air Crafts of
       India.
PAPER-II
VIVA VOCE (PRACTICAL)

Note: In viva voce paper the lecture will be of 10 Marks and interview of 10 Marks. Each student will give a lecture in presence of audience for 5-10 minutes on the topic of his own choice out of the topics in the syllabus.

1. **Lecture**: Each student will be required to give a talk (and not paper reading for 5-10 minutes) on any one of the under mentioned topics.
   
   (a) Strategy of indirect approach.
   (b) Elements of tactics.
   (c) Role of Navy in India's Defence.
   (d) Static and field formations.
   (e) Armed Forces of Pakistan.
   (f) Types of Service Air Crafts of India.
   (g) Armed Forces of China.

2. **Interview**: The examiner may ask the candidate any questions from topics mentioned in the list of topics for lecture.
STRUCTURE OF QUESTION PAPER

1. The Question paper will comprise of 26 questions in total.
2. All questions will be compulsory to attempt.
3. The question paper will consist of four parts:
   
   **Part-I** will consist of eight (8) objective type questions (Q.No.1 to 8) carrying 1 mark each. Objective type questions may include questions with one word to one sentence answer or fill in the blank or true/false or multiple choice type questions.
   
   **Part-II** will consist of eight (8) short answer type I, questions (Q. No. 9 to 16) carrying 2 marks each. Answer of each question should be given in 50-60 words.
   
   **Part-III** will consist of seven (7) short answer type II, questions (Q. No. 17 to 23) carrying 4 marks each. Answers of each question should be given in 80-90 words. Out of seven, two internal choice questions will be asked.
   
   **Part-IV** will consist of three (3) long answer type questions with internal choice (Q. No. 24 to 26) carrying 6 marks each. Answer of each question should be given in approximately two pages of the answer sheet.

UNITWISE DISTRIBUTION OF QUESTIONS AND MARKS

<table>
<thead>
<tr>
<th>Type of question</th>
<th>Marks per question</th>
<th>No. of questions</th>
<th>Unitwise Distribution Of Questions</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective type</td>
<td>1 Mark</td>
<td>8</td>
<td>1 1 1 1 1 1 1 1</td>
<td>8</td>
</tr>
<tr>
<td>Short answer type-I</td>
<td>2 Marks</td>
<td>8</td>
<td>1 1 1 1 1 1 1 1</td>
<td>16</td>
</tr>
<tr>
<td>Short answer type-II</td>
<td>4 Marks</td>
<td>7</td>
<td>1 1 1 1 1 1 -</td>
<td>28</td>
</tr>
<tr>
<td>Long answer type</td>
<td>6 Marks</td>
<td>3</td>
<td>- - - - - - 1 1 1</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>3 3 3 3 3 4 4 3</td>
<td></td>
<td>70</td>
</tr>
</tbody>
</table>

SYLLABUS


Unit III  Motivation: Meaning, Definition and Characteristics of Motivated behaviour, Classes and types of Motives and Needs, Maslow's Theory of Hierarchy of needs. Instincts, Drives, Incentives and goals as Motives. Frustrations and Conflicts of Motives.

Unit-IV  Thinking, Reasoning and Problem Solving: Definition, types and stages of Thinking-images and Thinking – Languages and Thinking. Reasoning – Definition, Characteristics, steps and types of Reasoning – Problem solving -Creative thinking - Concepts : Definition, type of formation of concepts.

Unit-V  Delinquency and Mental Health: Delinquent Behavior, Definition, Characteristics, Causes, Remedial and Preventive Measures - Mental Health: Meaning and Definition - Characteristics of a 'Mentally healthy person, Defence Mechanism.

Unit-VI  Intelligence : Definition, Nature and theories : Spearman's two theory and Thrnstone's Primary Mental Abilities theory - Concept of I.Q. Measurement of Intelligence - Intelligence Tests - Relative Role of Heredity and Environment on the development of Intelligence.


Unit-VIII Statistics: Frequency distribution, Mean, Median, Mode, Mean Deviation, Standard Deviation, Quartile Deviation. (Only numerical will be set from this unit.)

Experiments:

1. Muller Lyer Illusions
3. Card Sorting
4. Problem Solving
5. Intelligence test-Verbal
6. Intelligence test-Non-Verbal
7. Imagery Types.
8. Personality Inventory
CLASS-XII
36. HOME SCIENCE

Time: 3 Hrs                      Theory: 60 Marks
Time: 3 Hrs                  Practical: 30 Marks
CCE: 10 Marks
Total: 100 Marks

STRUCTURE OF QUESTION PAPER (Theory)
The question paper will comprise of 22 questions in total.

All questions will be compulsory to attempt.

The question paper will consist of three parts with each part representing both sections.

**Part-I** will consist of 7 objective type questions (Q. no. 1 to 7) carrying one mark each. Objective type questions may include questions with one word to one sentence answer or fill in the blank or true/false or multiple choice type questions. 7×1=7

**Part-II** will consists of 11 short answer type questions (Q. no. 8 to 18) carrying 3 marks each. Any four questions out of 11 will carry internal choice (two from each section). Answer of each question should be given within 60-80 words. 11×3=33

**Part-III** will consist of 4 long answer type questions (Q. no.19 to 22) with internal choice (from the same section) carrying 5 marks each. Answer of each question should be given within 150-200 words. 4×5=20

SECTIONWISE DISTRIBUTION OF QUESTIONS AND MARKS

<table>
<thead>
<tr>
<th>Type of question</th>
<th>Marks per question</th>
<th>No. of Questions</th>
<th>Section wise Distribution of questions</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective type</td>
<td>1 Mark</td>
<td>7</td>
<td>3</td>
<td>07</td>
</tr>
<tr>
<td>Short answer</td>
<td>3 Marks</td>
<td>11</td>
<td>6</td>
<td>33</td>
</tr>
<tr>
<td>Long answer type</td>
<td>5 Marks</td>
<td>4</td>
<td>2</td>
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<tr>
<td>Total</td>
<td></td>
<td>22</td>
<td>11</td>
<td>60</td>
</tr>
</tbody>
</table>

SYLLABUS (THEORY)

**SECTION – A**
(Food and Nutrition)

1. **Food, Nutrition and Health**
   ii. Classification of Food groups based on the recommendation of ICMR
   iii. Balanced Diet
   iv. Food Guide pyramid
2. **Nutrients and nourishment**
   Carbohydrates, Proteins, Fats, Minerals (calcium, Phosphorus, iron, zinc, iodine, fluorine), Vitamins (A,D,E,K,B and C) and Water
   i. Functions and sources
   ii. Health effects of too little and too much of nutrients
   iii. Enhancing nutritional value of foods

3. **Meal Planning**
   i. Meaning, importance and principles of meal Planning
   ii. Planning meals for the family- Children (Infants, pre schoolers and school going children), adolescents (boys and girls), adults (men and women), pregnant women, lactating mothers and elderly.

4. **Food selection, storage, preparation and preservation at home**
   i. Food selection and storage
   ii. Preparation of food: Different methods of cooking
   iii. Food preservation at home – importance and methods

5. **Food Safety**
   i. Food hygiene
   ii. Food Adulteration
   iii. Removal of the pesticide residues from food by different methods.

6. **Diet therapy**
   i. Principles of diet therapy
   ii. Adaptation of normal diet for therapeutic purpose

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**SECTION B (Human Development)**

1. **Beginning of Motherhood**
   i. Signs, discomforts and warning signs of pregnancy
   ii. Antenatal care of expectant mother (diet, rest, exercise, medical check-ups and immunization)
   iii. Alternative reproductive methods (in vitro fertilization, gamete intrafallopian transfer, zygote intrafallopian transfer and Surrogacy)

2. **Prenatal Physiological Processes**
   i. Stages of prenatal development (germinal, embryonic and fetal)
   ii. Fetal monitoring techniques (ultrasound, chorionic villus sampling, amniocentesis and foetoscopy)
   iii. Environmental influences on prenatal development (teratogens, diseases, harmful drugs and x-ray)

3. **Birth process**
   i. Stages of birth process (dilation, expulsion and placental stage)
   ii. Types of child birth (natural, instrument, breech and caesarean)
   iii. Categories of new born babies (pre term, term and post-term)

4. **Postnatal care of mother**
   i. Meaning and purpose of postnatal care
ii. Aspects of postnatal care
iii. Effects of parenthood on mother, father and other family members

5. Care of newborn
   i. Characteristics of new born
   ii. Neonatal reflexes
   iii. Feeding, bathing and clothing of newborn
   iv. Immunization
   v. Developmental milestones and delays

6. Infant stimulation
   i. Mother-child interaction
   ii. Developmentally appropriate play material
   iii. Common childhood ailments

HOME SCIENCE
STRUCTURE OF QUESTION PAPER (PRACTICAL)

Time: 3 Hours                 Marks:30

There should not be more than 25 candidates in a group. The Practical question paper will consist of two sections. Distribution of Marks will be as follows:

1. Viva Voce, Notebook & Record 10 Marks

Section-A
(Food and Nutrition)
2. Any one practical based on practical no. 2, 3, and 4 5 Marks
3. Any two tests based on practical no. 5 5 Marks

Section-B
(Child Development and Mother Craft)
4. Any one practical based on practical no. 4 and 5. 5 Marks
5. Any one practical based on practical no. 6 and 7. 5 Marks

SYLLABUS (PRACTICAL)
Section-A (Food and Nutrition)
1. Preparation of list of foods available in your home according to food groups.
2. Preparation of
   a) Healthy salads
   b) Dishes enhancing nutrition value of food (by Combination of cereals, pulses and vegetables, fermentation and sprouting)
   c) Protein rich snacks and desserts.
3. Freezing and sun drying of blanched vegetables.
4. Preparation of ORS solution.
5. Simple tests for checking adulteration in :
   a) Cereals : rice, semolina (suji).
   b) Pulses : Bengal Gram (channa dal)
c) Milk

d) Tea leaves

e) Coriander powder

f) Turmeric powder

g) Powdered sugar

h) Black pepper

Section-B

(Child Development and Mother Craft)

1. Showing a documentary on neo-natal reflexes and care and management of pre-term babies

(http://www.vhai.org/ceo/filmsforchange.php)

2. Recording of immunization schedule of infants and children

3. Demonstration on feeding, bathing and clothing of newborn

4. Preparing developmentally appropriate play material

5. Demonstration on sterilization of feeding bottles and disinfecting clothing of infants

6. Preparation of weaning foods- liquid and semi-solids

7. Preparation of visual aids related to developmental milestones of infancy

8. Showing a documentary on family planning methods

(http://www.vhai.org/ceo/filmsforchange.php)

Films: • Aparajita

• Anant

Oriented videos: • Neo-Natal

• Aaj Ki Na Samajhi Kal Ki Pareshani
CLASS-XII

37. MODELLING AND SCULPTURE

STRUCTURE OF QUESTION PAPER

1. उपेक्षा पुत्र
2. एच.एम.एस.
3. पूर्व-पूर्व
4. पूर्व-पूर्व
5. पूर्व-पूर्व

PART-I

भाग-1

1. भाग-1 में प्रत्येक पाठ पृष्ठ (P.O.P) दुसरी पंक्ति, तत्काल पढ़ने वाले छात्र/वाली से पुढ़ लिखित बनानी पड़ेगी।

PART-II

भाग-2 (Portrait Study)

1. भाग-2 में प्रत्येक पाठ पृष्ठ (P.O.P) दुसरी पंक्ति, तत्काल पढ़ने वाले छात्र/वाली से पुढ़ लिखित बनानी पड़ेगी।

PART-III

भाग-3

पाठ में प्रत्येक विषय कोई पाठ-पृष्ठ बोले से सारिए नहीं।
38. गीमेट्रिकल पर्स्पेक्टिव एंड एरचिटेक्चरल ड्राउंटिंग

सामग्री: 4 पृष्ठ

मिट्टी: 90 ओवर
मी. मी. डी.: 10 ओवर
ब्लूक: 100 ओवर

पूर्ण प्लैट की तुलना-नेशन

(सीएचएचएच अन्तर्गत विंच नेशन ड्राउंटिंग)

ब्लूक ओवर: 45

ब्लूक ओवर: 16

पृष्ठ में फाइल क्रम में चन पूर्ण मेंट करेंगे 8-8 ओवर दे वेटो, निर्देशों विंच है पूर्ण बनाए सुविधा उपचार। फाइल क्रम विंच नियम, जाल, आधार, धातु-धातु सहेलियों, शिल्पकला क्रम, चन्द्रगंगा पूर्ण, झुकें अन्तर्गत तिवेक, बाजा, प्लेट के अंतर्गत बनाए वहीं पूर्ण अन्तर्गत चन्द्रगंगा नियम क्रम गीमेट्रिकल ब्लूकिंग के पूर्ण वेटो।

उन्न अन्तर्गत विलोकन निर्देशयों:

विंच ओवर: 9

फाइल क्रम विंच विंच है पूर्ण मेंट बीड संबंधें दुए ही बनाए सुविधा उपचार। फाइल क्रम विंच नियम धातु धातु, शिल्पकला, धातु, धातु, धातु अन्तर्गत दे उत्तर अन्तर्गत ब्लूकिंग के पूर्ण उत्तर बनाए उपचार। उन्न के बायंक में बुधगढ़ की अप्रेटाइकों। फाइल पूर्ण 9 ओवर का वेटो।

विंच नेशन ड्राउंटिंग:

ब्लूक ओवर: 20

फाइल क्रम विंच विंच है पूर्ण मेंट बीड संबंधें दुए ही बनाए सुविधा उपचार। फाइल क्रम उन्न अन्तर्गत वेटो। फाइल क्रम बायंक, धातु, धातु, धातु, धातु क्रम विंच में विंच नियम ब्लूकिंग उपचार, निर्देशों की विंच बार पूर्ण उत्तर विंच नियम नियम।

सामग्री की लेख:-

विंच नेशन की लाइट - 9 ओवर
मीट्रिक नियम में विंच नेशन - 10 ओवर
मीट्रिक नियम में विंच नेशन - 12 ओवर
उत्तर नियम - 10 ओवर

ब्लूक = 21 ओवर

उन्न - 2

ब्लूक ओवर: 45

अन्वेषकेटिवकट क्रम ड्राउंटिंग:

फाइल क्रम विंच पृष्ठ मेंट बांटे विंच है अन्तर्गत बनाए दे सामग्री अंतर्गत पूर्ण, पूर्ण अन्तर्गत दूसरा पूर्णकारण संबंधें।

सामग्री की लेख:-

भंडार (ELEVATION) = 13 ओवर
पूर्ण (SIDE) = 13 ओवर
उत्तर (PLAN) = 13 ओवर
डिपार्टमेंट अन्तर्गत पूर्ण (W&S) = 6 ओवर

ब्लूक = 45 ओवर
Geometrical and Perspective Drawing

1. Geometrical and Perspective Drawing

2. Architectural Drawing
CLASS-XII
39. COMMERCIAL ART
वारियोग्य भाषा

पृष्ठः 8 पृष्ठ
भाषा: हिंदी
शी.शी.: 90 भाष
मूलांक: 100 मंक

खेत: ढाई घंटे धार्मिक मुद्रक कैलास स्टाइल, हिन्दी कलाम क्षेत्र के लिए जीवन थोरण व्याख्या साधन।

पृष्ठ-पृष्ठ दो पृष्ठ वेळा

1. हिंदी पेंटर कलात्मक पुस्तक लीबिया ने अपने पुस्तकों और विभिन्न विषयों में विशेष लिखने और इलेक्ट्रॉनिक ग्राफिक निर्माण किया जा रहा।

2. तुम्हारे समान जो मैं मैंने भिन्न विषयों पर कार्यक्रम किया पाए। विभिन्न पृष्ठों से मैं अपने विषयों के बारे में काम करता।

3. विचारण हिन्दी की चर्चा अहमदाबाद अभियान 38 अंशों के लिए किया जा रहा।

4. पुस्तकें कार्यालय रूप से पेंटर दी भूमिका बनाते हैं कित्तू वर्ण और अभियान की है।

5. क्राफ्टिंग रूपों के पेंटर का ग्राफिक रूप कठिन है जो आकर्षीत है।

पाठ-लघु

बागा-1

के-अपूर्व विज्ञानीतिक

आयाम: 38

1. यहाँ अगर हैं विंडी इंगरां विंड कैलास पेंटर विश्वास बनता।

2. भूमिका विश्वास से जुड़ा विषय चर्चा सम्बन्धी विषयक बनता।

3. इनपुट में ग्राफिक बार्टेंटे।

पेंटर रूप का- पुस्तक पेंटर 1/4 बागा 35 भाषा और 25 भाषा भाषा

बागा-II

पृष्ठ-पृष्ठ विज्ञानीतिक

आयाम: 38

1. हिंदी वेन्टों छिंदे छिंदे छिंदे छिंदे कैलास पेंटर विश्वास बनता है।

2. इन्हें अंग्रेजी दीवार पृष्ठों से विश्वास बनाते।

3. इन्हें अंग्रेजी दीवार पृष्ठों से विश्वास बनाते।

पेंटर रूप का- पुस्तक पेंटर 1/4 बागा 35 भाषा और 25 भाषा भाषा

बागा-III

आयाम: 14

गैटलबेड़- अपने साथ विभिन्न विषय बांटो बांटो विभिन्न अभियान से विद्यालयों को विभिन्न धाराएं और अंक द्वारा दिखाई देते।

खेत: विभिन्न बांटो आगे पेंटिंग का विंड बिंदु भाषा अंक बांटें।
CLASS-XII
40. DRAWING AND PAINTING

**STRUCTURE OF QUESTION PAPER**

<table>
<thead>
<tr>
<th>Part</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ftueko fJZe xzN/ d/ ;w/A ftZu gq:'rh gqhfyne, gqhfynko Eh d/  ;?ÙBb ezw dk w[beD eo/rk . fJ;d/ 14 nze  j'Dr/. gqhfyne ehs/ ezw nB[;ko nze d/t/rk.</td>
</tr>
<tr>
<td>2</td>
<td>&amp;ZpX eotkfJnk ikt/rk. fJ;dk ;wK uko xzN/ j't/rk. fJ;d/ 38 nze j'Dr/. gqÙB gZso dh o{g o/yk gqÙB gZso dh o{g o/yk gqÙB gZso dh o{g o/yk gqÙB gZso dh o{g o/yk</td>
</tr>
<tr>
<td>3</td>
<td>;ko/ g/go dk w[beD eoe/ gq:'rh gqhfyne Bzpo ;{uhnK ;pz Xs nfXekoh B{z nkgD/ j;skyo eoe/ G/i/rk.</td>
</tr>
<tr>
<td>4</td>
<td>;ko/ g/go dk w[beD eoe/ gq:'rh gqhfyne Bzpo ;{uhnK ;pz Xs nfXekoh B{z nkgD/ j;skyo eoe/ G/i/rk.</td>
</tr>
</tbody>
</table>

**PART I—DRAWING** (35;25)

1. ftueko fJZe xzN/ d/ ;w/A ftZu gq:'rh gqhfyne, gqhfynko Eh d/  ;?ÙBb ezw dk w[beD eo/rk . fJ;d/ 14 nze  j'Dr/. gqhfyne ehs/ ezw nB[;ko nze d/t/rk. |

**PART II—PAINTING** (35;25)

1. ftueko fJZe xzN/ d/ ;w/A ftZu gq:'rh gqhfyne, gqhfynko Eh d/  ;?ÙBb ezw dk w[beD eo/rk. fJ;d/ 14 nze  j'Dr/. gqhfyne ehs/ ezw nB[;ko nze d/t/rk. |

**PART III—GENERAL KNOWLEDGE** (14)

1. ftueko fJZe xzN/ d/ ;w/A ftZu gq:'rh gqhfyne, gqhfynko Eh d/  ;?ÙBb ezw dk w[beD eo/rk. fJ;d/ 14 nze  j'Dr/. gqhfyne ehs/ ezw nB[;ko nze d/t/rk. |
CLASS-XII
41. HISTORY AND APPRECIATION OF ART

STRUCTURE OF QUESTION PAPER

1. Choose any four questions from the following...
2. Answer any two questions from the following...
3. Answer any one question from the following...
4. Answer any two questions from the following...
5. Answer any two questions from the following...

PART-I

Q. 1. Explain the concept of art and its significance in society.
Q. 2. Discuss the role of art in promoting social change.
Q. 3. Analyze the influence of art on contemporary culture.
Q. 4. Evaluate the impact of art on economic development.
Q. 5. Discuss the importance of art education in modern society.

PART-II

Q. 1. Analyze the evolution of Indian art forms and their characteristics.
Q. 2. Compare and contrast the styles of Mughal and Rajput art.
Q. 3. Evaluate the contribution of Sikh art to the evolution of Indian art.
Q. 4. Discuss the impact of European influences on Indian art.
Q. 5. Analyze the role of contemporary art in addressing social issues.
Q. 6. Evaluate the significance of art in the development of national identity.

TEST

Choose the correct answer for the following multiple-choice questions...

रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा रेखा
CLASS-XII

42. साहित्यिक निगमन अनु चेतन

पुस्तक पृष्ठ से कु छ विषय

1. पुस्तक पृष्ठ विंच बुध 23 पुस्तक पृष्ठ बहुध अधे दिन गये। पुस्तक बदले सबकी रहा।

2. पुस्तक पृष्ठ 1 टे 10 उज विंच-विंच अव बस पुस्तक उठाया, हो दिवसावर राणी वी उ प काल आई। पुस्तक रुपरेखा रू पृष्ठ 10 उज बस उ पे सबका रहा।

3. पुस्तक पृष्ठ 13 टे 15 उज दे- दे अंगे बस पुस्तक उठाया। पत्र पुस्तक रू पृष्ठ रजापां 20

5। पुस्तक पृष्ठ 16 टे 20 उज विंच-विंच अव बस पुस्तक उठाया। पितृ रू पृष्ठ रजापां 30 टे 5

4. पुस्तक पृष्ठ 16 टे 20 उज विंच-विंच अव बस पुस्तक उठाया। पितृ रू पृष्ठ रजापां 30 टे 5

5. पुस्तक पृष्ठ 21 टे 23 पृष्ठ-पृष्ठ अंगे बस पुस्तक उठाया, पितृ रू विंच बुध 5 पुस्तक रुपरे बहु बदले सबकी रहा।

पन्ना (कितने हज़ार)

पुस्तक पृष्ठ - साहित्यिक जेनराल

(1) साहित्यिक पेंटर उ पर अव अनु अनु अनु

(2) साहित्यिक जेनराल दे घट (अंगे)

(3) साहित्यिक पेंटर टू पुस्तक बदले बनक

(4) साहित्यिक पेंटर दे विभाग दे मामला

पुस्तक पृष्ठ- मध्यवर्ती टोल्मेंट वियोजन अनु चेतन मामला

(1) साहित्यिक टू वाला टपर, ठंडा बताया अनु दिन दे मामला

(2) अठारूप

(3) अठारूप एकर्षिक उप विदेशिक की निगमन अनु दिन दे मामला

(4) सबमाम निकासी की निगमन

(5) दरभंग मर्याद की निगमन

(6) बर्बाद मर्याद की निगमन

(7) नाशन मर्यादा की मामला

(8) सबमाम निर्देश दे मामला

पुस्तक पृष्ठ - साहित्यिक निगमन

(1) विभिन्न साहित्य मंडल से विभागीय अनु अनु अनु अनु अनु अनु अनु अनु

(2) पंडेर मुद्र मर्यादा से मामलागाथ विभाग

(3) साहित्यिक निगमन विंच अवकाशी की निगमन अनु दिन दे मामला

(4) साहित्यिक निगमन अवकाशी मर्यादा की मामला

(5) साहित्यिक निगमन उपर रजपां विभाग

पुस्तक पृष्ठ असाधारण विविध अनु अनु अनु

(1) अधीन अनु अनु अनु अनु अनु अनु अनु अनु

(2) सांस्कृतिक अवकाशी उप पुस्तक उप विभाग अनु अव विभिन्न मर्यादा विभागीय

(3) अभासिक विभाग से मामला

(4) अभासिक पेंटर (पुस्तक) की अधीन, पेंटर अनु अभासिक कही पुस्तक विभागीय

पुस्तक पृष्ठ से अपने पृष्ठ में बनाया अनु अनु अनु

(1) पुस्तक पेंटर अनु अनु अनु अनु अनु अनु अनु अनु

(2) पुस्तक पेंटर अनु अनु अनु अनु अनु अनु अनु अनु
प्रथम भागें (पुष्पक)

पाठशाला (पुष्पक) :

पाठ : पाठशाला में प्राकृतिक वक्ताओं द्वारा विशेष देशों की स्थापना या विषयों पर बांध की होती है।

संख्या 4 पढ़ों   पुष्पक : 40 अंक

ह) टेबेल अनुसार बीड़ियों की स्थापना (जवाब अनुसार गडरी) उपरें शोधकर दे 6 अंक उपेक्षा के।

इ) टेबेल शोधकर देनें 100 भीतर दें, 200 भीतर दें, 300 भीतर दें, 400 भीतर दें, 500 भीतर दें।

ब) बीड़ियों का देश जवाब देनें।

संख्या 1. भारत, यूनाइटेड किंगडम, यूरोप, जापान, चीन, साउथ कोरिया, संयुक्त राज्य अमेरिका, जर्मनी, भारत, श्रीलंका।

संख्या 2. अमेरिका, यूनाइटेड किंगडम, यूरोप, जापान, चीन, साउथ कोरिया, संयुक्त राज्य अमेरिका, जर्मनी, भारत, श्रीलंका।

व) संबंधी पुष्पक-पुष्पक 20 अंक दें। वेक फिक्शन अनुसार अंक दें।

"ABC एम एम" शुभ क्षमा लें।
STRUCTURE OF QUESTION PAPER

All questions are compulsory.

The question paper will comprise 4 sections A, B, C and D of 26 questions in total. Student will attempt 24 questions. The question paper will have:

SECTION-A

Objective Type Questions: This section will include questions with one word answer/ fill in the blank/ true or false/ multiple choice type questions. Question No. 1 will have ten Parts (A to J) and each Part will carry 1 mark.

\[10 \times 1 = 10\]

SECTION-B

Very Short Answer Type Questions: This section will have 10 questions (from Q no.2 to 11) Each question will carry 2 marks. All Questions are compulsory. Answer of each question should be in 20-30 words.

\[10 \times 2 = 20\]

SECTION-C

Short Answer Type Questions: This section will have 11 questions from 12 to 22. Each question will carry 4 marks Student have to attempt any nine out of eleven questions Each question should be in 50-60 words.

\[9 \times 4 = 36\]

SECTION-D

Long answer Type Questions: This section will have 4 questions (23 to 36) with internal choice. Each question will carry 6 marks. Answer of each question should be in 150-200 words. There will be 100% internal choice in these questions.

\[6 \times 4 = 24\]

Note:- Weightage to each unit must be given in each type of questions as appropriate.

<table>
<thead>
<tr>
<th>Typology of Questions</th>
<th>Number of questions</th>
<th>Marks Division</th>
<th>Total marks</th>
<th>Division of Syllabus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unit 1 to3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unit 4 to 9</td>
</tr>
<tr>
<td>A. Objective Type Questions A to J</td>
<td>1 (In Parts A to J)</td>
<td>10 1 mark each part</td>
<td>10 Marks</td>
<td>4</td>
</tr>
<tr>
<td>B. Very Short Answer questions</td>
<td>10</td>
<td>02 marks each</td>
<td>20 Marks</td>
<td>4</td>
</tr>
<tr>
<td>C. Short Answer Questions (To be attempted = 9)</td>
<td>11</td>
<td>04 marks</td>
<td>36 marks</td>
<td>4</td>
</tr>
<tr>
<td>D. Long Answer Questions (with internal choice)</td>
<td>4</td>
<td>06 marks</td>
<td>24 Marks</td>
<td>2 (Internal choice)</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td></td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>
SYLLABUS

Unit-1  **Introduction to General Insurance:**

Unit-2  **Fire Insurance:**
1. Introduction: Origin and Object of Fire Insurance and scope of cover of special perils under Fire Insurance.

Unit-3  **Marine Insurance:**

**Miscellaneous Insurance:**

Unit-4  **Motor Insurance:**
II. Classification of Motor Vehicles: Private Car, Motor Cycles, Commercial Vehicles and miscellaneous types of vehicles.
IV. Motor Insurance Claims:

Unit-5  **Insurance of Persons:**
Personal Accident (P.A.) Janta Personal Accident (J.P.A.); Gramin Personal Accident Policy (G.P.A.); Accident Policy for School Going Children group; Personal Accident Air Travel (P.A.A.T.) Insurance Policies and Health Insurance Scheme (H.I.S.)

Unit-6  **Insurance of Property:**
Unit-7 Insurance of Liability and Interest:

Unit-8 Package Policy:

Unit-9 Loss Prevention:
    Introduction: Method of Loss Prevention, Loss Prevention Association India (L.P.A.I.)
CLASS-XII
44. RURAL DEVELOPMENT AND ENVIRONMENT

Time: 3 Hrs                                     Theory: 90 Marks
CCE: 10 Marks
Total: 100 Marks

STRUCTURE OF QUESTION PAPER

All questions are compulsory.

The question paper will comprise 4 sections A, B, C and D of 27 questions in total. Student will attempt 25 questions. The question paper will have:

SECTION-A

Objective Type Questions: This section will include questions with one word answer/ fill in the blank/ true or false/ multiple choice type questions. Question No. 1 will have ten Parts (A to J) and each Part will carry 1 mark.

10×1= 10

SECTION-B

Very Short Answer Type Questions: This section will have 12 questions (from Q no.2 to 13) Each question will carry 2 marks. All Questions are compulsory. Answer of each question should be in 20-30 words.  12×2= 24

SECTION-C

Short Answer Type Questions: This section will have 10 questions from 14 to 23. Each question will carry 4 marks. Student have to attempt any eight out of ten questions Each question should be in 50-60 words. 8×4=32

SECTION-D

Long answer Type Questions: This section will have 4 questions (24 to 27) with internal choice. Each question will carry 6 marks. Answer of each question should be in 150-200 words. There will be 100% internal choice in these questions. 6×4= 24

Note:- Weightage to each part must be given in each type of questions as appropriate.

<table>
<thead>
<tr>
<th>Typology of Questions</th>
<th>Number of questions</th>
<th>Marks Division</th>
<th>Total marks</th>
<th>Division of Syllabus Part -I</th>
<th>Part -II</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Objective Type Questions A to J</td>
<td>1</td>
<td>10</td>
<td>10 Marks</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>(In Parts A to J)</td>
<td>1 mark each part</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. Very Short Answer questions</td>
<td>12</td>
<td>02 marks each</td>
<td>24 Marks</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>C. Short Answer Questions (To be attempted = 8)</td>
<td>10</td>
<td>04 marks</td>
<td>32 marks</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>To be attempted 8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Long Answer Questions (with internal choice)</td>
<td>4</td>
<td>06 marks</td>
<td>24 Marks</td>
<td>2</td>
<td>2</td>
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<tr>
<td>(with internal choice)</td>
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<td>(Internal choice)</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>90</strong></td>
<td></td>
<td></td>
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</tbody>
</table>
SYLLABUS
PART-1

Unit-1 Environment:
(a) Nature and scope of Environment Education: Objective of environment studies, the need of environment studies at local, regional and national levels.
(b) The logic behind the Holistic view of environment. Man as a culturally contributing activist either positively or passively.
(c) Ecology: Ecological cycle and ecological principles, Relationship between Ecology and Economics, Political and Social implications of Environmental issues.

Unit-2 Geographical Features of the State (Punjab)
(a) Physical situation: Annual rainfall, total cropped area: land under trees and forests.
(b) Agro-climate regions: effects of weather and climate on growth, maturity and harvesting of crops,
(c) Physical properties of the Soil, Structure and its types.

Unit-3 Conservation of Natural resources of the State (Punjab)
(a) Land and mineral resources.
(b) Major water and power resources.
(c) Forest wealth of Punjab. Paucity of natural forests in the State. Forest policy of the State Govt.

Unit-4 Pollution
(a) Environment pollution through industrial products and wastes, insecticides and pesticides.
(b) Pollution of air and water in rural areas; various ways and means to check it.

Unit-5 Population distribution
(a) Size and rate of growth of population: causes and effects of rapidly growing population, family welfare and other measures to check population growth.
(b) Population Education: highlighting the problems of large families and propagating the idea of small families.

PART -II
AGRICULTURE
(With special reference to Punjab)

Unit-6 Agro-industries
(a) Dairy Farming.
(i) Importance of dairy as an industry for the rural development.
(ii) Important Breeds of Cattle i.e. Cows, Buffaloes, Sheep, and Goats reared in the states and improvement in their breeds.
(iii) Improvement of their yield through proper nutrients in feed and feeding stuff.
(iv) Major animal diseases and their control.
(v) Marketing of milk products in the rural areas.

(b) **Poultry Farming**

(i) Importance of poultry farming as an industry for rural development

(ii) Poultry houses and equipment.

(iii) Proper feeding of poultry birds and improvement in their breeds.

(iv) Major poultry diseases and their remedies.

(v) Packing and marketing of poultry products.

(c) **Piggery and Fisheries**

(i) Scope of piggery and fisheries in the state.
Communication media have undergone big changes during a
couple of decades and made its importance more meaningfully and
abundantly felt. This has made our society awake in era of various new
concepts and phenomena such as globalization, social media, civil
society, new media and so on. It is being felt that communication media
are playing an important role in shaping young minds, hence
introductory information and practice is to be provided to students in
this subject, at this stage.

STRUCTURE OF QUESTION PAPER (THEORY)

1. The questions shall be set keeping in mind that the subject
   matter is for beginners.
2. There will be 30 questions in all.
3. Part-I of the question paper shall consist of 8 questions of 1 mark
each all objective type, to be set from whole of syllabus.
   \[1 \times 8 = 8\]
4. Part-II of the question paper shall consist of 10 short answer
   questions of 2 marks each. The answer to such questions may
   run into two to three sentences. All questions shall cover whole of
   the syllabus.
   \[2 \times 10 = 20\]
5. Part-III of the question paper shall consist of 9 questions of 4
   marks each, the examinees shall attempt any 6 of them in a
   paragraph or two in size or length. Paper setter shall select four
   questions each from each unit.
   \[4 \times 6 = 24\]
6. Fourth part of the question paper shall contain 3 questions of 6
   marks each, with 100% internal choice, atleast 3 chosen from
   each unit. Each answer shall run into 300 words minimum.
   \[6 \times 3 = 18\]
SYLLABUS

Unit- I  History and Development of Media

Group – A

1. Brief history and development of media in India,
   with Special reference of Punjab
   - Evolution of Print Media - Evolution of Radio - Evolution of Television
   - Evolution of Cinema - Evolution of Internet.
2. History of Punjabi Journalism;
   - Evolutionary period – 1850 A.D. to 1900 A.D. - 1900 A.D. to 1947 A.D.
   - 1947 A.D. to 2000 A.D. – After 2000 A.D.

Group – B

3. Radio Programmes – Characteristics, Types and Impact
   (Expected and Achieved)
   (Expected and Achieved)
5. Script writing for Radio and Television programmes.

Unit- II  Films and Cyber Journalism

Group – C

6. Indian Cinema; Types (Commercial & Art), Characteristics and Impact.
7. Punjabi Cinema; Characteristics and Impact
   (Special Reference to: Nanak Naam Jahaz, Chann Pardesi, Marhi da diva, Desh hoeya Pardeis, Nabar and Semi-Punjabi films;
   Pinjar & Udta Punjab)
8. Cyber/Online Journalism:
   (i) Social Networking; Facebook, Twitter, Blogging, Websites, Portal, Instagram
   (ii) Communication through Cell phones; Whatsapp, SMS

Group-D

9. Media Advertising; Selling and Marketing products through advertising.
10. Introduction to Media ethics.
1. Printed material or aired programmes: Each student shall have to send their articles, features and letters to various newspapers or magazine and (Or) they may take part in any of the radio programmes. They shall have to maintain record of their practical work. Printed/Broadcasted/Telecasted materials in accordance with syllabus shall be assessed out of maximum 6 marks.

2. Teleboard Display and news reading. Display of teleboard and putting the candidate any questions out of topics mentioned in syllabus shall also be awarded out of maximum 6 marks.

Viva: The examiner may ask the candidate questions on visit to any Radio or T.V station and Current Affairs related to running academic session period. 8 marks
STRUCTURE OF QUESTION PAPER (THEORY)

1. There will be one theory paper comprising of 26 questions.
2. Question no. 1 to 8 will be of one mark each.
3. Question no. 9 to 16 will be of two marks each.
4. Question no. 17 to 23 will be of four marks each. These will be internal choice in any two questions.
5. Question no. 24 to 26 will be of six marks each. There will be internal choice in them.
6. Distribution of marks over different dimensions of the paper will be as follows.

<table>
<thead>
<tr>
<th>LEARNING OUTCOMES</th>
<th>MARKS</th>
<th>PERCENTAGE OF MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNOWLEDGE</td>
<td>26</td>
<td>36%</td>
</tr>
<tr>
<td>UNDERSTANDING</td>
<td>30</td>
<td>44%</td>
</tr>
<tr>
<td>APPLICATION</td>
<td>14</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100%</td>
</tr>
</tbody>
</table>

7. In the category of one mark question there will be questions of the objective type such as Yes/No, tick/cross, fill in the blanks, multiple choice, true/false etc.

8. Use of un-programmable calculator is allowed. The log tables can be used.

9. Total weightage of numerical will be 20% i.e 14 marks. There will be three numericals of 2 marks each & 2 numericals of 4 marks each.

UNIT WISE DISTRIBUTION OF MARKS

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Title</th>
<th>Marks</th>
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<tbody>
<tr>
<td>UNIT-I</td>
<td>Electrostatics</td>
<td>10</td>
</tr>
<tr>
<td>UNIT-II</td>
<td>Current Electricity</td>
<td>07</td>
</tr>
<tr>
<td>UNIT-III</td>
<td>Magnetic effects of current and magnetism</td>
<td>09</td>
</tr>
<tr>
<td>UNIT-IV</td>
<td>Electromagnetic Induction &amp; current</td>
<td>07</td>
</tr>
<tr>
<td>UNIT-V</td>
<td>Electromagnetic waves</td>
<td>03</td>
</tr>
<tr>
<td>UNIT-VI</td>
<td>Optics</td>
<td>14</td>
</tr>
<tr>
<td>UNIT-VII</td>
<td>Dual nature of matter</td>
<td>05</td>
</tr>
<tr>
<td>UNIT-VIII</td>
<td>Atoms and Nuclei</td>
<td>05</td>
</tr>
<tr>
<td>UNIT-IX</td>
<td>Electronics devices</td>
<td>07</td>
</tr>
<tr>
<td>UNIT-X</td>
<td>Communication Systems</td>
<td>03</td>
</tr>
<tr>
<td><strong>Total Marks</strong></td>
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<td><strong>70</strong></td>
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</tbody>
</table>
SCHEMATIC DISTRIBUTION OF MARKS

<table>
<thead>
<tr>
<th>UNIT</th>
<th>Title</th>
<th>1 Mark Question</th>
<th>2 Marks Question</th>
<th>4 Marks Question</th>
<th>6 Marks Question</th>
<th>Total Marks</th>
</tr>
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<tr>
<td>1</td>
<td>Electrostatic</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>10</td>
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<tr>
<td>2</td>
<td>Current Electricity</td>
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<td>1</td>
<td>1</td>
<td>-</td>
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<td>3</td>
<td>Magnetic effects of current &amp;</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>09</td>
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<td>1</td>
<td>1</td>
<td>-</td>
<td>07</td>
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<td>Alternating current</td>
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<td>5</td>
<td>Electromagnetic waves</td>
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<td>1</td>
<td>-</td>
<td>-</td>
<td>03</td>
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<td>1</td>
<td>1</td>
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<td>Dual Nature of matter</td>
<td>1</td>
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<td>05</td>
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<td>8</td>
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<td>1</td>
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<td>9</td>
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<td></td>
<td><strong>Total Questions</strong></td>
<td><strong>8</strong></td>
<td><strong>8</strong></td>
<td><strong>7</strong></td>
<td><strong>3</strong></td>
<td><strong>26</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total Marks</strong></td>
<td><strong>8</strong></td>
<td><strong>16</strong></td>
<td><strong>28</strong></td>
<td><strong>18</strong></td>
<td><strong>70</strong></td>
</tr>
</tbody>
</table>

INSTRUCTION FOR PAPER SETTER

Note: There will be one theory paper consisting of total 26 questions.

1. Question no.1 to 8 will be of 1 mark each. There will be 4 questions of the objective type such as yes/no, multiple choice questions, fill in the blanks.
2. Question no.9 to 16 will be of 2 marks each. There will be 3 numerical questions of 2 marks each.
3. Question no. 17 to 23 will be of 4 marks each. There will be two four marks questions of internal choice. Each of these questions will have one theory question & other part will be numerical from the same unit. These questions should not be lengthy.
4. Question No.24 to 26 will be 6 marks and their will be 100% internal choice in them. These questions must have two parts: part (a) will be of one mark and part (b) will be of 5 marks. Part (a) may cover any topic from same unit as of long 5 marks question of part (b).
5. Questions paper should cover all the syllabus.
6. No question or topic should be repeated in the question paper.
7. Questions in the paper can be asked only from mentioned PSEB syllabus. Questions from any topic which is not mentioned in the syllabus will be considered as out of syllabus question.
8. All 3 sets must be of equal standard and difficulty level questions.
9. At the end of each question, paper setter must write detailed distribution of marks of each sub-question.
10. Vague, many possible answer questions, confusing answer question etc type of question will not be asked in the paper. One mark questions, answer should be of one word or one line only.
11. Language used should be clearly understood & specific.
12. Time and length limit of paper should be kept in mind.
13. Time and length limit of paper should be kept in mind while setting the paper.
14. Questions paper should be made to according to knowledge, understanding and applications part marks distribution.

**THEORY**

**Unit-I: Electrostatics**

Electric Charges; charging by induction, basic properties of electric charge (addition of charges, quantisation of charges and their Conservation) Coulomb’s law-force between two point charges, forces between multiple charges; superposition principle and cotinuous charge distribution.

Electrical field, electric field due to a point charge, electric field due to system of charge, physical significance of electric field, electric-field lines; electric dipole, electric field due to a dipole;(on its axis,on equatorial plane)physical significance of dipoles; torque on a dipole in uniform electric field.Electric field due to continuous charge distribution.

Electric flux, statement of Gauss's theorem proof of Gauss’s theorem for a charge enclosed in sphere, and its applications to find electric field due to infinitely long straight wire, uniformly charged infinite thin plane sheet and uniformly charged thin spherical shell (Field inside and outside).

Electric potential, potential difference, electric potential due to a point charge, potential due to an electric dipole with special cases for axis and equatorial plane and system of charges; equipotential surfaces,its properties,relation between field and potential electrical potential energy of a system of two point charges potential energy in external field and of electric dipole in an electrostatic field.

Conductors and insulators, electrostatics of conductors, free charges and bound charges inside a conductor. Electrostatic shielding its uses, Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor, Van de Graaf generator.

**Unit-II: Current Electricity**

Electric current, flow of electric charges in a metallic conductor, drift velocity, drift of electron mobility and their relation with electric current: Ohm’s law, electrical resistance. V-1 characteristics (linear and non linear), electrical energy and power, electrical resistivity and conductivity. Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance and resistivity/Internal resistance of a cell, potential difference and emf of cell, combination of cells in series and in parallel.
Kirchhoff’s laws and simple applications of Wheatstone bridge, meter bridge. Potentiometer-principle and its applications to measure potential difference and for comparing emf of two cells, measurement of internal resistance of a cell.

**Unit-III: Magnetic Effects of Current and Magnetism**

Concept of magnetic field. Oersted’s experiment; Biot-savart law and its application to find magnetic field on the axis of a current carrying circular loop, Ampere’s circuitual law (no proof) and its applications to infinitely long straight wire, straight and toroidal solenoids.

Force on a moving charge in uniform magnetic and electric fields. Motion in a magnetic field, motion in combined electric and magnetic field (velocity selector) Cyclotron.

Force on a current-carrying conductor in a uniform magnetic field. Force between two parallel current-carrying conductors, definition of ampere. Torque experienced by a current loop in uniform magnetic field; moving coil galvanometers - its current sensitivity and conversion to ammeter and voltmeter.

Current loop as a magnetic dipole and its magnetic dipole moment. Magnetic dipole moment of a revolving electron. Magnetic field intensity due to a magnetic dipole (Bar magnet) along its axis and perpendicular to its axis. Torque on a magnetic dipole (bar magnet) in a uniform magnetic field; bar magnet as an equivalent solenoid, magnetic field lines; magnetism and Gauss’s law; Earth’s magnetic field and magnetic elements, magnetisation and magnetic intensity, magnetic properties of materials, Para-, dia- and ferromagnetic substances with examples, Electromagnets and factors affecting their strengths. Permanent magnets.

**Unit-IV: Electromagnetic Induction and Alternating Currents**

Electromagnetic induction, Faraday’s and henry experiments, magnetic flux, Faraday laws, induced emf and current, Lenz’s Law and conservation of energy, motional emf, Eddy currents: Self and mutual inductance.

Alternating current, peak and rms value of alternating current/voltage; reactance and impedances; phasors, ac applied across resistance, ac applied across inductor, as applied across capacitor, ac applied across LCR, LC oscillations, across inductor, ac applied across capacitor, ac applied across LCR oscillations, (qualitative treatment only), LCR series circuit resonance; power in AC circuit, wattless current.

AC generator and transformer.

**Unit-V: Electromagnetic Waves**

Need for displacement current, Electromagnetic waves and their characteristics (qualitative ideas only). Transverse nature of electromagnetic waves.
Electromagnetic spectrum (Radio waves, Radio-microwaves, infra-red, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

**Unit-VI: Optics**

Reflection of light, spherical mirrors, mirror formula. Refraction of light, total internal reflection and its applications, optical fibers, refraction at spherical surfaces, refraction by lens, lenses, thin lens formula/equation, lens-maker's formula. Magnification, power of a lens, combination of thin lenses in contact, combination of lens and mirror. Refraction and dispersion of light through a prism. Some natural phenomenon due to sunlight, Scattering of light-blue colour of the sky and reddish appearance of the sun at sunrise and sunset.

**Optical instruments:**

Human eye, image formation and accommodation, correction of eye defects (myopia, hypermetropia) using lenses. Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.

**Waves optics:**


**Unit-VII: Dual nature of Matter and Radiation**

Electron emission, Photoelectric effect, Hertz and Lenard's observations; experimental study of photoelectric effect, and wave theory of light, Einstein's photoelectric equation, particle nature of light, the photon, Matter waves-wave nature of particles, de Broglie relation. Davission-Germer experiment (experimental details should be omitted; only conclusion should be explained).

**Unit-VIII: Atoms & Nuclei**

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr modal of hydrogen atom, expression for radius, velocity and energy of electron in orbit, energy levels, line spectrum of hydrogen atom, atomic spectra, de-Broglie's explanation of Bohr's second postulate of quantization.

Composition and size of nucleus, atomic masses, isotopes, isobars; isotones. Radioactivity- alpha, beta and gamma particles/rays and their properties; radioactive decay law, alpha, beta and gamma decay. Mass-energy
relation, mass-defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear force, nuclear reactor, Nuclear energy.

**Unit-XI: Electronic Devices**

Classification of metal insulator and semiconductor, Energy bands in solids (qualitative idea only) conductor, insulators and Semiconductors; intrinsic and extrinsic semiconductors, p-n junction, semiconductor Diode-1-V characteristics in forward and reverse bias, diode as a rectifier, 1-V characteristics of LED, photodiode, solar cell and Zener diode, Zener diode as a voltage regulator. Junction transistor, transistor action; characteristics of a common emitter transistor: transistor as an amplifier (common emitter configuration) and oscillator, digital electronics and Logic gates (OR, AND, NOT, NAND and NOR). Transistor as a switch, integrated circuits.

**Unit-X: Communication Systems**

Elements of a communication system (block diagram only); basic terminology Used in Electronic Communication Systems, bandwidth of signals (speech, TV and digital data); bandwidth of transmission medium-Propagation of electromagnetic waves in the atmosphere, Sky and space wave propagation. Need for modulation. Production and detection of an amplitude modulated wave.

NOTE:- TOPICS GIVEN BELOW ARE IN PRESCRIBED SYLLABUS OF P.S.E.B BUT NOT MENTIONED IN BOOK SUBSCRIBED BY PSEB. SO THESE TOPICS ARE TO BE DONE WITH STUDENTS AND PAPER WILL INCLUDE THESE TOPICS AND QUESTIONS FROM THESE TOPICS WILL NOT CONSIDERED AS OUT OF SYLLABUS.

1. Electric flux
2. Potentiometer and its applications to measure potential difference
3. Magnetic field intensity due to a magnetic dipole (Bar magnet) along its axis and perpendicular to its axis.
4. Combinations of lens and mirror
5. Poor of laws of reflection and refraction using Huygens ‘Principle’.
6. Alpha-beta and gamma particles/rays and their properties.

**PHYSICS**

**STRUCTURE OF PAPER (PRACTICAL)**

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<td><strong>Total</strong></td>
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PRACTICALS SYLLABUS

Experiments

SECTION-A

1. To determine resistance per unit length of a given wire by plotting a graph of potential difference versus current.
2. To find resistance of a given wire using meter bridge and hence determine the specific resistance of its material.
3. To verify the laws of combination (series/parallel) of resistance using a meter bridge.
4. To compare the emf of two given primary cells using potentiometer.
5. To determine the internal resistance of given primary cell using potentiometer.
6. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.
7. To convert the given galvanometer of known resistance and figure of merit into an ammeter and voltmeter of desired range and to verify the same.
8. To find the frequency of the A.C. mains using a sonometer and electromagnet.

SECTION-B

1. To find the value of v for different values of u in case of a concave mirror and find their focal length.
2. To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and 1/v.
3. To find the local length of a convex mirror, using a convex lens.
4. To find the focal length of a concave lens, using a convex lens.
5. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
6. To draw the I-V characteristic curve of a p-n junction in forward bias and reverse bias.
7. To draw the characteristic curve of a zener diode and to determine its reverse breakdown voltage.
8. To study the characteristics of a common-emitter npn or pnp transistor and to find out the values of current and voltage gains.
9. To determine the reflective index of a glass slab using a traveling microscope.
10. To find refractive index of a liquid by using (i) Concave mirror. (ii) Convex lens and plane mirror.
ACTIVITIES

SECTION-A

1. To assemble the components of a given electrical circuit.
2. To draw the diagram of a given open circuit comprising at least a battery, resistor rheostat, key ammeter and volt meter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.
3. To assemble a household circuit comprising three, bulbs, three (on/off) switches, a – fuse and a power source.
4. To study the variation in potential drop with length of a wire for a steady current.
5. To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter.
6. To measure the resistance and impedance of an inductor with or without iron core.
7. To demonstrate
   (i) The use of an improvised fuse that melts with the flow of a certain current through it and
   (ii) Different kinds of fuses used in everyday life.
8. To demonstrate that a current measuring device has finite non-zero resistance. (measurement of resistance of an ammeter).
9. To demonstrate that a voltage measuring device has non-infinite resistance (measurement of resistance of an voltmeter).
10. To show that earth’s magnetic field has both vertical & horizontal components, by using dip needle.
11. To show the magnetic field lines with the help of iron fillings of bar magnet solenoid.
12. To show the production of induced emf. in a coil due to movement of (i) a magnet towards and away from it (ii) similar coil carrying current towards & away from it.
13. To show that there are two kinds of charges and that like charges repel and unlike charges attract each other.
14. To demonstrate that a large emf is induced when direct current is switched off in an inductive circuit.
15. Make a solenoid for study of its magnetic field.

SECTION-B

1. To identify a diode, an LED, a transistor and 1C, a resistor and a capacity from mixed collection of such items.
2. Use of multimeter to (i) identify base of transistor, (ii) distinguish between npn ad pnp type transistors, (iii) see the unidirectional flow of
current in case of a diode and an LED. iv) Check whether a given electronic component (e.g. diode, transistor or IC) is in working order.
3. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass stab.
4. To study the nature arid size of the image formed by (i) convex lens (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
5. To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.
6. To observe polarization of light using two Polaroids.
7. To observe diffraction of light due to a thin slit.
8. To study effect of intensity of light (by varying distance of the source) on an D.R.
STRUCTURE OF QUESTION PAPER (THEORY)

1. There will be one theory paper comprising of 26 questions. All questions are compulsory.

2. Question no. 1 to 8 will be of one mark each. All questions are compulsory.

3. Question no. 9 to 16 will be of two marks each. All questions are compulsory.

4. Question no.17 to 23 will be of four marks each. There will be internal choice in two questions.

5. Question no.24 to 26 will be of six marks each. There will be internal choice in them.

6. Distribution of marks over different dimensions of the paper will be as follows.

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7. There will be question of the objective type such as Yes/No, tick/cross, fill in the blanks, multiple choice, true/false and definition etc.

8. Use of un-programmable calculator is allowed. The log tables can be used.

9. Total weightage of numerical will around 20%

UNITWISE DISTRIBUTION OF MARKS

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**Total Question in paper = 26**

**T.Q=26  T.M=70**
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Total Question in paper = 26 including 5 choice questions

INSTRUCTIONS FOR PAPER SETTER

Note:

1. There will be one theory paper consisting of total 26 questions.
2. Question no.1 to 8 will be of 1 mark each. There will be 4 questions of the objective type such as yes/no, multiple choice questions, fill in the blanks.
3. Question no.9 to 16 will be of 2 marks each. There will be 3 numerical questions of 2 marks each.
4. Question no. 17 to 23 will be of 4 marks each. There will be two four marks questions of internal choice. These questions should not be lengthy.
5. Question No.24 to 26 will be 6 marks and their will be 100% internal choice in them. These questions must have two parts: part (a) will be of one mark and part (b) will be of 5 marks. Part (a) may cover any topic from same unit as of long 5 marks question of part (b).
6. Questions paper should cover all the syllabus.
7. No question or topic should be repeated in the question paper.
8. Questions in the paper can be asked only from mentioned PSEB syllabus. Questions from any topic which is not mentioned in the syllabus will be considered as out of syllabus question.
9. All 3 sets must be of equal standard and difficulty level questions.
10. At the end of each question, paper setter must write detailed distribution of marks of each sub-question.
11. Vague, many possible answer questions, confusing answer question etc type of question will not be asked in the paper. One mark questions, answer should be of one word or one line only.
12. Language used should be clearly understood & specific.
13. Time and length limit of paper should be kept in mind.
14. Time and length limit of paper should be kept in mind while setting the paper.

SYALLBUS (THEORY)

Unit-I: Solid, State
Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea), unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, points defects, electrical and magnetic properties. Band theory of metals, conductors, semiconductors and insulators and n and p type semiconductors.

Unit II: Solutions
Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties - relative lowering of vapour pressure, Raoult's Law, elevation of B.P., depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass. Vant Hoff factor.

Unit III: Electrochemistry
Redox reactions; conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and laws of electrolysis (elementary idea) dry cell-electrolytic cells and Galvanic cells; lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, fuel cells; corrosion. Relation between Gibbs Energy change and EMF of cell.

Unit IV: Chemical Kinetics
Rate of a reaction (average and instantaneous), factors affecting rates of reaction; concentration, temperature, catalyst; order and molecularity of a reaction: rate law and specific rate constant, integrated rate equations and half life (only for zero and first order reactions); concept of collision theory (elementary idea, no mathematical treatment). Activation Energy, Arrhenious equation.

Unit V: Surface Chemistry
Absorption physiorption and chemisorption; factors affecting adsorption of gases on solids; catalysis; homogenous and heterogeneous, activity and selectivity; enzyme catalysis; colloidal state: distinction between
true solutions, colloids and suspensions; lyophillic, lyophobic, multimolecular and macromolecular/colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation; emulsion-types of emulsions.

**Unit VI: General Principles and Processes of Isolation of Elements**
Principles and methods of extraction – concentration, oxidation, reduction electrolytic method and refining; occurrence and principles of extraction of aluminum, copper, zinc and Iron.

**Unit VII: p-Block Element**
- **Group 15 elements:** General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; nitrogen - preparation, properties and uses; compounds of nitrogen- preparation and properties of ammonia and nitric acids, oxides of nitrogen (structure only); Phosphorous-allotropic forms; compounds of phosphorous preparation and properties of phosphine, halides (PCl3,PCl5) and oxoacids (elementary idea only).
- **Group16 elements:** General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; dioxygen; preparation, properties and uses; classification of oxides; Ozone. Sulphur - allotropic forms; compounds of sulphur preparation, properties and uses of sulphur dioxide, sulphuric acid, industrial process of manufacture, properties and uses, oxoacids of sulphur (structures only).
- **Group 17 elements:** (General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens; preparation, properties and uses of chlorine and hydrochloric acid, interhalogen compounds, oxoacids of halogens (structures only).
- **Group 18 elements:** General introduction, electronic configuration. Occurrence, trends in physical and chemical properties, uses.

**Unit-VIII: d and f Block Elements**
General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals-metallic character, ionization, enthalpy, oxidation states, ionic radii, colour, catalytic properties, magnetic properties, interstitial compounds, alloy formation. Preparation and properties of K2Cr2O7, and KMnO4.

- **Lanthanoids** - electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and consequences.
- **Actenoids** - Electronic configuration, oxidation states.

**Unit-IX: Coordination Compounds**
Coordination compounds - introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of
mononuclear coordination compounds, bonding; Werner's theory VBT, CFT, Isomerism (structure and stereo) importance of coordination compounds (in qualitative analysis, extraction of metals and biological systems).

**Unit-X: Haloalkanes and Haloarenes.**

**Haloalkanes:** Nomenclature, nature of C-X bond, physical and chemical properties, mechanism of substitution reactions, optical rotation.

**Haloarenes:** Nature of C-X bond, substitution reactions (directive influence of halogen for monosubstituted compounds only)

Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.

**Unit –XI: Alcohols, Phenols and Ethers**

**Alcohols:** Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only); identification of primary, secondary and tertiary alcohols; mechanism of dehydration, uses, with special reference to - methanol and ethanol.

**Phenols:** Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.

**Ethers:** Nomenclature, methods of preparation, physical and chemical properties, uses.

**Unit-XII: Aldehydes, Ketones and Carboxylic Acids**

**Aldehydes and Ketones:** Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, and mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes; uses.

**Carboxylic Acids:** Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.

**Unit-XIII: Organic compounds containing Nitrogen**

**Amines:** Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

**Cyanides and Isocyanides** - will be mentioned at relevant places in context.

**Dizonium Salts:** Preparation, chemical reactions and importance in synthetic organic chemistry.

**Unit-XIV: Biomolecules**

**Carbohydrates** - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); importance

**Proteins** - Elementary idea of amino acids, peptide bond, polypeptides proteins, primary structure, secondary structure, tertiary
structure and quaternary structure (qualitative idea only), denaturation of proteins; enzymes.

**Vitamins:** Classification and functions.

**Hormones:** Elementary idea (excluding structure)

**Nucleic Acids:** DNA & RNA

**Unit-XV: Polymers**

Classification - natural and synthetic, methods of polymerization (addition and condensation), copolymerization. Some important polymers; natural and synthetic like polythene, nylon, polyesters, bakelite, rubber. Biodegradable and Non- Biodegradable Polymers.

**Unit-XVI: Chemistry in everyday life:**

1. **Chemicals in medicines** - analgesic, tranquilizers, antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines.

2. **Chemicals in food** - preservatives, artificial sweetening agents. Elementary idea of antioxidants.

3. **Cleansing agents** - soaps and detergents, cleansing action.

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**CHEMISTRY**

**STRUCTURE OF QUESTION PAPER (PRACTICAL)**

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**PRACTICAL SYLLABUS**

**A. Surface Chemistry**

a. Preparation of one lyophilic and one lyophobic sol. Lyophilic sol - starch, egg albumin and gum. Lyophobic sol - aluminum hydroxide, ferric hydroxide, arsenious sulphide.

b. Study of the role of emulsifying in stabilizing the emulsions of different oils.

**B. Chemical Kinetics**

a. Effect of concentration and temperature on the rate of reaction between sodium thiosulphate and hydrochloric acid.

b. Study of reaction rates of any one of the following:

i. Reaction of iodide ion with hydrogen peroxide at room temperature using different concentration of iodide ions.

ii. Reaction between potassium iodate, KIO₃, and sodium sulphite: (Na₂SO₃) using starch solution as indicator (clock reaction).
C. **Thermochemistry:** Any one of the following experiments
   a. Enthalpy of dissolution of copper sulphate or potassium nitrate.
   b. Enthalpy of neutralization of strong acid (HCl) and strong base (NaOH)
   c. Determination of enthalpy change during interaction (Hydrogen bond formation) between acetone and chloroform.

D. **Electrochemistry:** Variation of cell potential in Zn/Zn$^{2+}$/Cu$^{2+}$/Cu with change in concentration of electrolytes (CuSO$_4$ or ZnSO$_4$ at room temperature.

E. **Chromatography**
   a. Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of R$_f$ values.
   b. Separation of constituents present in an inorganic mixture containing two cations only (constituents having wide difference in R$_f$ values to be provided).

F. **Determination of concentration/morality of KMnO$_4$, solution by titrating it against a standard Solution of:**
   a. Oxalic acid.
   b. Ferrous ammonium sulphate.  
      (Students will be required to prepare standard solutions by weighing themselves).

G. **Preparation of Inorganic Compounds**
   a. Preparation of double salt of ferrous ammonium sulphate or potash alum.
   b. Preparation of potassium ferric oxalate.

H. **Preparation of Organic Compounds:** Preparation of any two of the following compounds
   a. Acetanilide
   b. Di-benzal acetone
   c. p-Nitroacetalnilide,
   d. Aniline yellow or 2-Napthol aniline dye.
   e. Lodoform

I. **Test for the functional groups present in organic compounds:**
   Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (primary) groups.

J. **Study of carbohydrates, fats and proteins in pure form and detection of their presence in given food stuffs.**

K. **Qualitative analysis:** Determination of one cation and one anion in a given salt.
   **Cations-** Pb$^{2+}$, Cu$^{2+}$, As$^{3+}$, Al$^{3+}$, Fe$^{3+}$, Mn$^{2+}$, Zn$^{2+}$, Co$^{2+}$, Ni$^{2+}$, Ca$^{2+}$, Sr$^{2+}$, Ba$^{2+}$, Mg$^{2+}$, NH$_4^+$
Anions-

$\text{CO}_3^{2-}, \text{S}^{2-}, \text{SO}_4^{2-}, \text{NO}_3^{-}, \text{NO}^{-1}, \text{Cl}^{-}, \text{Br}^{-}, \text{I}^{-}, \text{PO}_4^{3-}, \text{C}_2\text{O}_4^{2-}, \text{CH}_2\text{COO}^-$

(Note: Insoluble salts excluded)

**PROJECT**

Scientific investigations involving laboratory testing and collecting information from other sources.

**A few suggested Projects**

1. Study of presence of oxalate ions in guava fruit at different stages of ripening.
2. Study of quantity of casein present in different samples of milk.
3. Preparation of soyabean milk and its comparison with the natural milk with respect to curd formation, effect of temperature etc.
4. Study of the effect of potassium bisulphate as food preservative under various conditions (temperature, concentration, time etc.)
5. Study of digestion of starch by salivary amylase and effect of PH and temperature on it.
6. Comparative study of the rate of fermentation of following material wheat flour, gram flour, Potato juice, carrot juice etc.
7. Extraction of essential oils present in saunf (aniseed), Ajwain (carum) illaichi (cardamom).
8. Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.

**Note:** Any investigatory project, which involves about 10 periods of work, can be chosen with the approval of the teacher.
1. There will be one theory paper comprising of 26 questions.
2. Question no. 1 to 8 will be of one mark each and all are compulsory.
3. Question no. 9 to 16 will be of two marks each and all are compulsory.
4. Question no. 17 to 23 will be of four marks each. Question no. 17 to 21 are compulsory (one question from each unit). There will be 100% internal choice in question no 22 & 23. Q no. 22 will be from unit III and Q no. 23 will be from unit IV and all are compulsory.
5. Question no. 24 to 26 are of six marks each. There will be 100% internal choice in these questions.
6. Distribution of marks over different dimensions of the paper will be as follows.

<table>
<thead>
<tr>
<th>LEARNING OUTCOMES</th>
<th>MARKS</th>
<th>PERCENTAGE OF MARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KNOWLEDGE</td>
<td>25</td>
<td>36%</td>
</tr>
<tr>
<td>UNDERSTANDING</td>
<td>31</td>
<td>44%</td>
</tr>
<tr>
<td>APPLICATION</td>
<td>14</td>
<td>20%</td>
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<tr>
<td>Total</td>
<td>70</td>
<td>100%</td>
</tr>
</tbody>
</table>

7. Out of eight one mark questions, 4 questions can be of the objective type such as Yes/No, tick/cross, fill in the blanks, multiple choice, true/false etc. Other four should be of statement type.

UNIT WISE DISTRIBUTION OF MARKS

<table>
<thead>
<tr>
<th>Unit</th>
<th>Title</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Reproduction</td>
<td>14</td>
</tr>
<tr>
<td>II</td>
<td>Genetics &amp; Evolution</td>
<td>16</td>
</tr>
<tr>
<td>III</td>
<td>Biology and Human Welfare</td>
<td>13</td>
</tr>
<tr>
<td>IV</td>
<td>Biotechnology and its applications</td>
<td>13</td>
</tr>
<tr>
<td>V</td>
<td>Ecology and Environment</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Total Marks</td>
<td>70</td>
</tr>
</tbody>
</table>

SCHEMATIC DISTRIBUTION OF MARKS

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<tr>
<th>Unit</th>
<th>1 mark questions</th>
<th>2 marks questions</th>
<th>4 mark questions</th>
<th>6 mark questions</th>
<th>Total marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit-I</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Unit-II</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Unit-III</td>
<td>1</td>
<td>2</td>
<td>1+1 or 1</td>
<td>-</td>
<td>13</td>
</tr>
<tr>
<td>Unit-IV</td>
<td>1</td>
<td>2</td>
<td>1+1 or 1</td>
<td>-</td>
<td>13</td>
</tr>
<tr>
<td>Unit-V</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>14</td>
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<tr>
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<td>8</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>26</td>
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<tr>
<td>Total Marks</td>
<td>8</td>
<td>16</td>
<td>28</td>
<td>18</td>
<td>70</td>
</tr>
</tbody>
</table>
INSTRUCTIONS FOR PAPER SETTER

Note:
1. There will be one theory paper of total 26 questions. The paper setter will set questions according to schematic distributions of marks as given in the table.
2. Questions no.1 to 8 are compulsory and are of one mark each.
3. Question no 9-16 are compulsory and are of two marks each.
4. Questions no. 17-23 are of four marks each. Question no 17 to 21 are compulsory and there should be one question from each unit. Whereas question no 22 and 23 will have 100% internal choice. The paper setter will set question no 22 from unit-III and question no 23 from unit IV. Internal choice questions should be from same units.
5. Question No.24 to 26 are of six marks each and there is 100% internal choice in these questions.
6. Questions in the paper can be asked only from mentioned PSEB syllabus.
7. Questions in all 3 sets must be of equal standard and difficulty level.
8. At the end of each question, paper setter must write detailed distribution of marks of each sub-question.
9. Vague, questions with confusing answers and questions with many possible answers, will not be asked in the paper. In one mark questions, answer should be of one word or one line only.
10. Language used should be clearly understood & specific.
11. Time and length limit of paper should be kept in mind.

SYLLABUS (THEORY)

I. Reproduction

Reproduction in organisms: Reproduction, a characteristic feature of all organism for continuation of species; Modes of reproduction-Asexual and sexual reproduction; Modes –Binary fission, sporulation, budding, gemmule, fragmentation; vegetative propagation in plants.

Sexual reproduction in flowering plants: Flower structure; Development of male and female gametophytes; Pollination-types, agencies and examples; Outbreedings devices; Pollen-Pistil interaction; Double fertilization; Post fertilization events-Development of endosperm and embryo, Development of seed and formation of fruit; Special modes-apomixis, parthenocarpy, polyembryony; Significance of seed and fruit formation.

Human Reproduction: Male and female reproductive systems; Microscopic anatomy of testis and ovary; Gametogenesis-spermatogenesis & oogenesis; Menstrual cycle; Fertilisation, embryo development upto blastocyst formation, implantation; Pregnancy and placenta formation (Elementary idea); Parturition (Elementary idea); Lactation (Elementary idea).
Reproductive health: Need for reproductive health and prevention of sexually transmitted diseases (STD); Birth control – Need and Methods, Contraception and Medical Termination of Pregnancy (MTP); Amniocentesis; Infertility and assisted reproductive technologies-IVF, ZIFT, GIFT (Elementary ideas for general awareness).

II. Genetics and Evolution

Heredity and variation: Mendelian Inheritance; Deviations from Mendelism-Incomplete dominance, Co-dominance, Multiple alleles and Inheritance of blood groups, Pleiotropy; Elementary idea of polygenic inheritance; Chromosome theory of inheritance; Chromosomes and genes; Sex determination-In humans, birds, honey bee; Linkage and crossing over; Sex linked inheritance – Haemophilia, Colour blindness; Mendelian disorders in humans-Thalassemia; Chromosomal disorders in humans; Down’s syndrome, Turner’s and Klinefelter’s syndromes.

Molecular Basis of Inheritance: Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma; Transcription, genetic code, translation; Gene expression and regulation- Lac Operon; Genome and human genome project; DNA finger printing.

Evolution: Origin of life; Biological evolution and evidences for biological evolution (Paleontological, Comparative anatomy, embryology and molecular evidence); Darwin’s contribution, Modern Synthetic theory of Evolution; Mechanism of evolution-Variation (Mutation and Recombination) and Natural Selection with examples, types of natural selection; Gene flow and genetic drift; Hardy-Weinberg’s principle; Adaptive Radiation; Human evolution.

III. Biology and Human Welfare

Health and Disease: Pathogens; parasites causing human diseases (Malaria, Filariasis, Ascariasis, Typhoid, Pneumonia, common cold, amoebiasis, ring worm); Basic concepts of immunology-vaccines; Cancer, HIV and AID’s; Adolescence, drug and alcohol abuse.

Improvement in food production: plant breeding, tissues culture, sigle cell protein, Bifortification, Apiculture and animal husbandry.

Microbes in human welfare: In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilizers.

IV. Biotechnology and its applications

Principles and process of Biotechnology: Genetic engineering (Recombinant DNA technology).
Application of Biotechnology in health and agriculture: Human insulin and vaccine production, gene therapy; genetically modified organisms- Bt crops; Transgenic Animals; Biosafety issues-Biopiracy and patents.

V. Ecology and environment

Organisms and environment: Habitat and niche; Population and ecological adaptations; Population interactions-mutualism, competition, predation, parasitism; Population attributes-growth, birth rate and death rate, age distribution.

Ecosystems: Patterns, components; productivity and decompositions; Energy flow; Pyramids of number, biomass, energy; Nutrients cycling (carbon and phosphorous); Ecological succession; Ecological Services-Carbon fixation, pollination, oxygen release.

Biodiversity and its conversation: Concepts of Biodiversity; Patterns of Biodiversity; Importance of Biodiversity; Loss of Biodiversity; Biodiversity conservation; Hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, National parks and sanctuaries.

Environmental issues: Air pollution and its control; Water pollution and its control; Agrochemicals and their effects; Solid waste management; Radioactive waste management; Greenhouse effect and global warming; Ozone depletion; Deforestation; Any three case studies as success stories addressing environmental issues.

BIOLOGY

STRUCTURE OF QUESTION PAPER (PRACTICAL)

Time: 3.00 hrs. Total 20: Marks

1. Experiment and Spotting 12
2. Record of one investigatory and Viva based on the project 4
3. Class record and Viva based on experiments 4

Total 20

SYLLABUS (PRACTICAL)

1. Study of pollen grains on a slide.
2. Study of flowers adapted to pollination by different agencies (wind, insect)
3. Study of pollen germination on a slide.
4. Study and identify stages of gamete development i.e. T.S of testis and T.S of ovary through permanent slides.
5. Study meiosis in Onion bud cell or grasshopper testis through permanent slides.
7. Study mendelian inheritance using seeds of different colour/size of any plant.
8. Study prepared pedigree charts of genetic traits such as rolling of tongue, blood groups, window's peak, colour blindness.
9. Exercise on controlled pollination -Emasculation, tagging and bagging.
10. Study analogous and homologous organs in various plants and animals.
11. Collect and study soil from different sites and study them for texture and moisture content.
12. Study the pH and water holding capacity of soil correlate with the kinds of plants found in them.
13. Collect water from different water bodies around you and study them for pH clarity and presence of any living organisms.
14. Study the presence of any suspended particulate matter in air at the two widely different sites.
15. Study of plant population density by quadratic method.
16. Study of plant population frequency by quadrate method.
17. Study of plants and animals found in xerophytes conditions. Comment upon their adaptation ecosystem.
18. Study plants and animals found in aquatic conditions. Comment upon their adaptation ecosystem.
19. To identify common disease causing organisms like Ascaris, Endameba, Plasmodium, ringworm. Comment on symptoms of diseases that they cause through permanent slides or specious.

Information Sources.
Analysis using Bioinformatics, tools.

PRACTICAL

Time: 3 Hours  Marks: 20

List of Experiments
Bacterial transformation using any plasmid.
Multiplication of tobacco by nodal bulb culture.
Data retrieval and database search using internet site NCBI.
Production and estimation of ethanol from microbial culture.
Determination of LCG in Urine (Pregnancy Test).
Isolation of bacterial plasmid DNA and its detection by gel electrophoresis.
Restriction digestion of plasmid DNA and its analysis by gel electrophoresis.
Download a DNA and protein sequence from internal, analysis and comment on it.
Determination of N-terminal of a protein.
Ion-exchange chromatography for proteins.
Reading of DNA sequencing to get and arrive at the sequence.
Project work.

Note:- The subtopics which are printed in the books published by Punjab School Education Board but are not mentioned in syllabus, should be considered as part of syllabus.
CLASS-XII
49. GEOLOGY

Time : 3 hrs
Theory : 60 Marks
Time : 3 hrs
Practical : 30 Marks
CCE: 10 Marks
Total : 100 Marks

STRUCTURE OF QUESTION PAPER (THEORY)

There will be one theory paper comprising of 28 questions. All questions will be compulsory.

Marks for each question are indicated against it.

Question Nos. 1-10 are objective type questions carrying 1 mark each. Answer to each question will be in one line or few words only.  
1×10=10

Question Nos. 11-20 are very short answer type questions carrying 2 marks each. Answer to each question will be in 20-30 words.  
2×10=20

Question Nos. 21-25 are short answer type questions carrying 3 marks each. Answer to each question will be in 80-100 words.  
3×5=15

Question Nos. 26-28 are long answer type questions carrying 5 marks each. There will be 100% internal choice.  
5×3=15

There will be no objective type questions such as yes/no, tick/cross, fill in the blanks, multiple choice, true/false etc.

The question paper should be strictly from the prescribed syllabus subject to the above mentioned guidelines.

Candidates will be provided with one answer book of 32 pages only. No extra/continuation sheet will be provided.

Tme: 3 Hours (PRACTICAL) Marks : 30

The examiner will set the question paper on the spot. The distribution of marks in the paper will be as follows:

1. At least 8 minerals will be given to the students for identification. Students are required to attempt/identify 4 minerals out of these. The question will carry 4 marks.
2. 8 fossils will be given to the students for identification. Student will identify 4 fossils out of these. The question will carry 4 marks.
3. The examiner will ask the student to plot an outline map of India the distribution of deposits of any two minerals. The student will attempt any one. The question will carry 6 marks.
4. The examiner will give two geographical maps for study and for the identification of their various features. Students are required to attempt any one of these two maps. The question will carry 8 marks.
5. 8 marks are reserved for notebook and record.

A group of students for practical should not be more than 20 students.
SYLLABUS (THEORY)

Time: 3 Hours  
Marks: 60

1. Physical Geology:
The earth: origin, age and interior: Elementary idea.

2. Structural Geology:
Elementary ideas of folds, faults and unconformity-their identification by major features geometric classification, mountain, their types from Geosynclines to mountains.

3. Paleontology:

4. Stratigraphy:
The story of rocks of the Precambrian Era, the Paleozoic Era, the Mesozoic Era, the Cenozoic Era. A general survey of the Indian geographic sub-divisions. Configuration of India, their board divisions.

5. Petrology:
Subdivisions of rocks: Broad classification of the various types of rocks sedimentary, Igneous and Metamorphic. General idea of the important structure found in those rocks. General idea of the mineralogical, composition of these rocks.

6. Minerology:
Minerals as constituents of rocks. General survey of the rocks : forming minerals like quartz, feldspars, micas, pyroxenes, amphiboles. Some important physical properties of these minerals.

7. Crystallography:
The crystal, its type, general morphological characters of crystals of the cubic system. General idea of the various crystallographic system.

8. Economic Geology:
Mineral wealth, its economic significance. A general survey of the economic mineral deposits of India, their distribution particularly of coal, iron, petroleum, gold, copper, lead and zinc.

PRACTICAL

Time: 3 Hours  
Marks: 30

1. Reading and interpretation of geological maps and topographical sheets.

2. Preparation of cross section along given lives in the geological maps.

3. Megascopic identification of important rocks and minerals.

4. Distribution of mineral deposits in India and their location. Plotting on an outline map of India.

5. Identification of some important plants and animals (Vertebrate and invertebrate) Fossils.
STRUCTURE OF QUESTION PAPER THEORY

There will be one theory paper comprising of 28 questions. All questions will be compulsory.

Marks for each question are indicated against it.

Question Nos. 1-10 are objective type questions carrying 1 mark each. Answer to each question will be in one line or few words only.

Question Nos. 11-20 are very short answer type questions carrying 2 marks each. Answer to each question will be in 20-30 words.

Question Nos. 21-25 are short answer type questions carrying 3 marks each. Answer to each question will be in 80-100 words.

Question Nos. 26-28 are long answer type questions carrying 5 marks each. There will be 100% internal choice.

There will be no objective type questions such as yes/no, tick/cross, fill in the blanks, multiple choice, true/false etc.

The question paper should be strictly from the prescribed syllabus subject to the above mentioned guidelines.

Candidates will be provided with one answer book of 32 pages only. No extra/continuation sheet will be provided.

PRACTICAL

Distribution of marks:

1. One Experiment 8 marks
2. Practical record 5 marks
3. Viva on practical 5 marks
4. Project work
   (a) Write up 6 marks
   (b) Viva 6 marks

A group of students for practical should not be more than 20 students.

SYLLABUS (THEORY)

Unit – I: CELL CULTURE TECHNOLOGY

Chapter I: Microbial Culture and Applications.

   Introduction
   Microbial Culture Techniques.
   Measurement and Kinetics of microbial growth.
   Scale up of microbial process.
Isolation of microbial products.
Strain isolation and improvement.
Applications of microbial culture technology.
Bioethics in microbial technology.

Chapter II: Plant Cell Culture and Applications.
Introduction.
Cell and Tissue Culture Techniques.
Applications of Cell and Tissue Culture.
Gene Transfer Methods in Plants.
Transgenic in Agriculture and Molecular Breeding.
Bioethics in Plant Genetic Engineering.

Chapter III: Animal Cell Culture and Applications.
Introduction.
Animal Cell Culture Techniques.
Characterization of Cell Lines.
Scale-up of Animal Culture Process.
Applications of Animal Cell Culture.
Stem Cell Technology.
Bioethics of Genetic Engineering in Animals.

Unit – II: PROTEIN AND GENE MANIPULATION

Chapter I: Microbial Culture and Applications.
Introduction to the world of Proteins.
3-D shape of Proteins.
Structure Function relationship in Proteins.
Purification of Proteins.
Characterization of Proteins.
Protein based products.
Designing Proteins.
Proteomics.

Chapter II: Recombinant DNA Technology.
Introduction.
Tools of DNA Technology.
DNA Library.
Introduction of Recombinant DNA into host cells.
Identification of Recombinants.
Polymerase Chain Reaction (PCR).
DNA Probes.
Hybridization Techniques.
DNA Sequencing.
Site directed mutagenesis.
Chapter III: Genomics and Bioinformatics.

Introduction.
Genome sequencing projects.
Gene prediction and counting.
Genome similarity, SNP’s and comparative genomics.
Functional Genomics.
Sequences and Nomenclature.
Information Sources.
Analysis using Bioinformatics, tools.

PRACTICAL

Time: 3 Hours               Marks: 30
List of Experiments

Bacterial transformation using any plasmid.
Multiplication of tobacco by nodal bulb culture.
Data retrieval and database search using internet site NCBI.
Production and estimation of ethanol from microbial culture.
Determination of LCG in Urine (Pregnancy Test).
Isolation of bacterial plasmid DNA and its detection by gel electrophoresis.
Restriction digestion of plasmid DNA and its analysis by gel electrophoresis.
Download a DNA and protein sequence from internal, analysis and comment on it.
Determination of N-terminal of a protein.
Ion-exchange chromatography for proteins.
Reading of DNA sequencing to get and arrive at the sequence.
Project work.
CLASS-XII
51. COMPUTER APPLICATION
Instructions (Theory Paper)

Time: 3 hours

Theory : 60 Marks
CCE : 10 Marks
Practical : 30 Marks

Structure of Question Paper

1. There will be four sections of Question Paper (Part- A, Part- B, Part- C and Part- D).
2. In Part- A, there will be 6 objective type question from Question No. 1 to 6, each question will be of one marks each.
3. In Part -B, there will be 6 Questions from Question no. 7 to 12, each question will be of two marks.
4. In Part -C, there will be 6 Questions from Question no. 13 to 18, each question will be of four marks.
5. In Part –D, there will be three questions from Question no. 19 to 21, each question will be of 6 marks.
6. All questions of Part-A, Part-B, Part-C and Part-D are compulsory. However internal choice may be given in part-D.

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Chapter</th>
<th>Total Marks</th>
<th>marks 1 question</th>
<th>Marks 2 question</th>
<th>Marks 4 question</th>
<th>marks 6 question</th>
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<tbody>
<tr>
<td>1.</td>
<td>Introduction to C++</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>2.</td>
<td>Data types variables and constant</td>
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<td>1</td>
<td>1</td>
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<td>3.</td>
<td>Control statements</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>4.</td>
<td>Functions</td>
<td>6</td>
<td>1</td>
<td>1</td>
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<td>5.</td>
<td>Arrays</td>
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<tr>
<td>6.</td>
<td>Classes and Objects</td>
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<tr>
<td>7.</td>
<td>Constructor, Destructor and function overloading</td>
<td>6</td>
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<td>Inheritance</td>
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<tr>
<td>9.</td>
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<tr>
<td><strong>Total Marks</strong></td>
<td><strong>60</strong></td>
<td><strong>6</strong></td>
<td><strong>12</strong></td>
<td><strong>24</strong></td>
<td><strong>18</strong></td>
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</table>

Lesson 1: Introduction to C++
1.1 Introduction to Object Orientation
1.2 Difference between Structured & Object Oriented Language
1.3 Introduction to C++
1.4 Program Structure
1.5 Program Design & Implementation Issues
1.6 Character set of C++
1.7 C++ Basic Elements
1.8 Structure of a Program
1.9 What is meant by an Object?

Lesson 2: Data Types Variables and Constants
2.1 Concepts of Data Types
2.2 Data Types Modifiers
2.3 Constants
2.4 String Literals
2.5 Variables
2.6 Operators in C++
2.7 Expressions and Statements
2.8 Conditional Expression
2.9 Operators Precedence in C++

Lesson 3: Control Statements
3.1 Conditional Statements
3.2 Selection Statements: if and else
3.3 Nested if (Nested blocks)
3.4 Another selection statements: switch.
3.5 Jump statement
3.6 The break statement
3.7 The continue statement
3.8 The goto statement
3.9 Exit() Function
3.10 Iteration Statement (C++)
3.11 Loop & Nested Loops
3.12 Console I/O functions
3.13 Header Files

Lesson 4 Functions
4.1 Definition of function
4.2 Function Prototype
4.3 Objective of using function prototype
4.4 Accessing a function
4.5 Passing argument to a function
4.6 Default values for Parameters:
4.7 THE const ARGUMENT
4.8 C++ function call by value
4.9 C++ function call by reference
4.10 Parameter pass by reference
4.11 Return statement
4.12 Passing Arrays as Function Arguments in C++
4.13 C++ Variable Scope
4.14 Local Variables

Lesson 5 Arrays
5.1 Declaring Arrays
5.2 One Dimensional Array
5.3 Nature of subscript
5.4 Multidimensional Array
5.5 Two-Dimensional Arrays
5.6 Arrays of strings

Lesson 6: Classes and Objects
6.1 Classes
6.2 Access specifiers and default labels
6.3 Scope of class & its members
6.4 Member functions
6.5 Data hiding & encapsulation
6.6 Inline Functions
6.7 Nesting of Member Functions
6.7 Nesting of Member Functions
6.8 Arrays within a class
6.9 Static Function Members

Lesson 7: Constructors, Destructors and Function Overloading
7.1 Need for Constructors
7.2 Default Constructors
7.3 Parameterized Constructor:
7.4 Default Copy Constructor
7.5 Dynamic Initialization Using Constructors
7.6 The Class Destructor:
7.7 Function overloading in C++
7.8 Steps involved in finding the best match

Lesson 8: Inheritance
8.1 Inheritance: Extending Classes
8.2 Need for Inheritance
8.3 Defining Derived Class
8.4 Different Forms of Inheritance
8.5 Visibility Modes
8.6 Inherit private members of base class

Lesson 9: Information Technology
9.1 Introduction
9.2 Computer Networks
9.3 Network Topology
9.4 Advantages & Disadvantages of Network
9.5 Data Communication
9.6 Transmission Channel
9.7 Types of Networks

PRACTICAL

Time: 3 hrs                      Marks: 30

EVALUATION SCHEME FOR PRACTICAL

1. Programming in C++
   There will be 4 questions / Program will be set from which candidate
   has to attempt any Three program/ Questions. Each Program or
   Question will be of 5 marks. Mark for the programming are to be given
   on the basis of program documentation / indentation, algorithm and
   result (output)                                   5×3=15
   Marks

2. Viva-Voce
   Marks
   10

3. Practical record file
   Marks
   5
   Record of at least 20 programs in C++ (with listing and Outputs) based
   on programming concepts and on data base concepts

SYLLABUS: All the relevant practical exercise will be based upon the relevant
chapters mentioned in the Theory Syllabus.
STRUCTURE OF QUESTION PAPER (THEORY)

1. In all, 20 Questions will be set in the question paper, Out of which students will have to attempt 16 questions.

2. The question paper will comprise of three parts (Part-I, Part-II and Part-III).

3. The questions will be evenly distributed from the prescribed syllabus.

**Part-I** will consist of seven objective type questions carrying 1 mark each. All questions will be compulsory to attempt. The answer of each question should not exceed more than one sentence.

**Part-II** will consist of eight short answer type questions carrying 3 marks each. Candidate will attempt any six questions out of these. A question may have two or more parts. The answer of each question should not be more than one page of the answer sheet.

**Part-III** will consist of five questions carrying 5 marks each. Candidate will attempt any three questions out of these. The answer of each question should not be more than Two pages of the answer sheet.

**SYLLABUS**

1. **Modulation:**- Introduction, need of modulation, types with wave shapes, side bands production in A.M. and F.M. Phase modulation, Classification of A.M.

2. **Methods:** Typical circuit of A.M. modulators and their description.

3. **Detection:**- Introduction, needs of detection, Square law diode detection, grid leak detector, linear diode detection, anode bend detection.

   Types of video detectors and their typical circuits, Phase shift discriminator, Ratio detector, Unifiers and their detailed descriptions.

4. **Oscillators:**- Introduction, requirements, various types, detailed circuit description of Hartley and colpits oscillators, Multi Vibrators-Classification. Astable and Biastable multivibrators and their detailed circuit description.


**PRACTICAL**

**STRUCTURE OF QUESTION PAPER**

**Time:** 3 Hrs  
**Max Marks:** 50

The distribution of marks will be follows:

1. Viva-Voce  
   10 Marks
2. Note book/Sessional Work  
   10 Marks
3. Actual Performance  
   30 Marks

(a) **Major Practical**  
20 Marks  
The examiner shall set any three practicals from the practical Nos 1, 2, 3, 11, 13 and 14. The candidate shall choose any two from these. The examiner will ask the student to perform any one from the two chosen by him.

(b) **Minor Practical**  
10 Marks  
The examiner shall set any three practicals from the practical Nos. 4, 5, 6, 7, 8, 9, 10 and 12. The candidate shall choose any two of these. The examiner will ask the student to perform any one from the two chosen by him.

**SYLLABUS**

1. To construct an oscillator.
2. To wire an A.P amplifier.
3. To wire a circuit from a given blueprint.
5. Fault finding in different stages of a Radio - Receiver.
6. Tuning of a Radio-Receiver with the help of signal generation.
7. Study of selectivity in a Radio-Receiver.
10. Stage description of, T.V Receiver.
11. Fault finding in different stages of a T.V. Receiver.
13. Verification of basic truth tables.
14. To construct a Flip-Flop circuit.
STRUCTURE OF QUESTION PAPER

1. The question paper will cover whole of the syllabus.
2. 20 Questions will be set in the question paper.
3. All units of the syllabus should be given adequate representation in the question paper.

Section-A

4. Question No. 1 consists of 5 sub parts carrying 1 mark each. Answer of each Part should be given in 1-15 words. Objective type questions may include questions with one word to one sentence answer/fill in the blank/true or false/multiple choice type questions.

Section-B

5. Question No. 2 to 8 will carry 2 marks each. Answer of each question should be given in 5-10 lines.

Section-C

6. Do any 7 question out of 9 questions. Question No. 9 to 17 will carry 4 marks each. Answer of each question should be given in 15-20 lines.

Section-D

7. Question No. 18 to 20 will carry 6 marks each with internal choice. Answer of each question should be given in 3-5 pages. Internal choice question should not be set from the same unit.

Detail of questions set from each unit

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Name of the unit</th>
<th>Section-A</th>
<th>Section-B</th>
<th>Section-C</th>
<th>Section-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Nature &amp; Significance of Management</td>
<td>1 mark question</td>
<td>2 marks question</td>
<td>4 marks question</td>
<td>6 marks question</td>
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<tr>
<td>2.</td>
<td>Principles of Management</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>(i) 1Q. from units 1,2,3,4 with internal choice not from same unit.</td>
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<tr>
<td>3.</td>
<td>Business Environment Planning</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>(ii) 1Q. from units 5,6,7,8 and 9 with internal choice not from same unit.</td>
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<td>4.</td>
<td>Organisation Staffing</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>5.</td>
<td>Directing</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>6.</td>
<td>Coordinating Controlling</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>7.</td>
<td>Business Finance Financial Markets</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>(iii) 1Q. from units 10,11,12,13,14 with internal choice not from same unit.</td>
</tr>
<tr>
<td>8.</td>
<td>Marketing</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>9.</td>
<td>Consumer Protection Entrepreneurship Development</td>
<td>1</td>
<td>1</td>
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<td>Total</td>
<td></td>
<td>05</td>
<td>07</td>
<td>09</td>
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</table>
SYLLABUS

PRINCIPLES AND FUNCTIONS OF MANAGEMENT

UNIT-1: NATURE AND SIGNIFICANCE OF MANAGEMENT.
(a) Management Concept, Objectives and Importance.
(b) Management as an Activity, Process, Discipline and as a Group.
(c) Nature of Management as a Science, as an Art and as a Profession.
(d) Management and Administration Comparison.
(e) Level of Management-Top, Middle & Supervisory.
(f) Management Function-Planning, Organizing, Staffing, Directing Coordinating and Controlling.

UNIT-2: PRINCIPLES OF MANAGEMENT
(a) Principles of Management: Meaning, Nature & Significance.
(b) Fayol's Principles of Management.
(c) Taylor's Scientific Management-Principles & Techniques.

UNIT-3: BUSINESS ENVIRONMENT
(a) Business Environment - Meaning & Importance.
(b) Dimensions of Business Environment-Political, Economic, Social Legal and Technological.
(c) Economic Environment in India, Impact of Govt. Policy changes on business & industry with Reference to Liberalization, Privatization and Globalization (since 1991).

UNIT-4: PLANNING
(a) Meaning, Features, Process, Importance & Limitations.
(b) Goals, Objectives, Policy, Procedures, Strategy, Methods, Rules, Budgets and Programmes-Meaning and Distinction.

UNIT-5: ORGANISATION
(a) Meaning and Importance
(b) Process of Organizing
(d) Delegation: Meaning, Elements and Importance, Barriers in the way of delegation, Step to make delegation effective.
(e) Decentralization: Meaning and Importance
(f) Difference between Centralization and Decentralization.
(g) Difference between Delegation and Decentralization.

UNIT-6: STAFFING
(a) Staffing: Meaning, Need and Importance
(b) Steps in Staffing Process:
   (i) Recruitment: Meaning and Sources.
   (ii) Selection: Meaning and Process.
   (iii) Training & Development: Meaning, Need, Types and Methods.
(c) Methods of Wage Payment: Time Rate & Price Rate.
(d) Types of Compensation and Incentives: Monetary & Non Monetary.
UNIT-7: DIRECTING
(a) Directing: Meaning and Importance.
(b) Elements of Direction:
   i. Supervision: Meaning and Importance
   iii. Leadership: Meaning, Importance, Quality of a good leader.
   iv. Communication: Meaning and Importance, Types of Communication and Barriers to Effective Communication.

UNIT-8: COORDINATION
Coordination: Meaning, Nature & Importance.

UNIT-9: CONTROLLING
(a) Controlling: Meaning and Importance.
(b) Relationship between Planning and Controlling.
(c) Steps in the process of Control.

UNIT-10: BUSINESS FINANCE AND MARKETING

UNIT-10: BUSINESS FINANCE
(a) Meaning and Objectives of Finance Functions, Profit Maximization vs Wealth Maximization.
(b) Financial Planning: Meaning & Importance
(c) Capital Structure: Meaning & Factors
(d) Working Capital: Meaning, Importance, Types & Factors affecting its requirements.

UNIT-11: FINANCIAL MARKETS
(c) Distinction between Capital Market and Money Markets.
(d) Stock Exchange; Meaning, Functions, NSEI, OCTEI, Training Procedure.
(e) Securities and Exchange Board of India (SEBI): Objectives and Functions.

UNIT-12: MARKETING
(a) Marketing: Meaning, Function & Role.
(b) Distinction between Marketing & Selling.
(c) Marketing Mix: Concept & Elements-
   (ii) Physical Distribution: Meaning, Role, Channels of Distribution:- Meaning, Types, Factors determining choice of channel.
   (iii) Promotion: Meaning and Role, Promotion Mix, Role of Advertising and Personal Selling, Objectives of Advertising.
   (iv) Price: Factors influencing Pricing.
UNIT-13: CONSUMER PROTECTION
(a) Importance of Consumer Protection,
(b) Consumer Rights.
(c) Consumer Responsibilities.
(e) Role of Consumer Organization and NGO’s.

UNIT-14 ENTREPRENEURSHIP DEVELOPMENT
(a) Entrepreneurship: Concept, Characteristics, Needs and Functions.
(b) Process of Entrepreneurship Development.
(c) Entrepreneurial Values, Attitudes and Motivation: Meaning & Concept.
STRUCTURE OF QUESTION PAPER (THEORY)

1. The question paper will cover whole of the syllabus.
2. There are 3 sections in the question paper i.e. Section A, Section B and Section C. Section A is compulsory for all the students and students may choose only one section from Section B and Section C. Section A, Section B and Section C will be set from the Part-I and Part-II and Part-III of the syllabus respectively.
3. 12 Questions will be set in the question paper.
4. All units of the syllabus should be given adequate representation in the question paper.
5. There is no word, line or page limit for numerical questions.
6. The use of non-programmable simple calculator is allowed.

SECTION-A

7. Question No. 1 consists of 3 sub parts (1a to 1c) carrying 1 mark each. Answer of each Part should be given in 1-15 words. Objective type questions may include questions with one word to one sentence answer/fill in the blank/true or false/multiple choice type questions. Question No. 2 to 5 (Out of which 2 will be theoretical and two will be numerical) will carry 2 marks each. Answer of theoretical question should be given in 5-10 lines. Question No. 6 consists of 4 sub parts (i,ii,iii,iv) out of which two will be numerical and two will be theoretical (Attempt any three questions out of four) Each question will carry 4 marks. Answer of theoretical question should be given in 15-20 lines. Question No.7 will be numerical with numerical question as internal choice. This question will be set from any of the first four unit (unit1, 2, 3 and 4) and will carry 6 marks. Internal choice question will not be set from the same unit.

SECTION B AND C

8. In Question No. 8 consists of 3 sub parts (8a to 8c) carrying 1 mark each. Answer of each Part should be given in 1-15 words. Objective type questions may include questions with one word to one sentence answer/fill in the blank/true or false/multiple choice type questions. Question No. 9 and 10 (Out of which one will be theoretical and one numerical) will carry 2 marks each. Answer of theoretical question should be given in 5-10 lines. Question No. 11 consists of 3 sub parts (i, ii, ii) out of which 2 will be numerical and one theoretical (Attempt any two questions out of three).
Each question will be 4 marks. Answer of theoretical question should be given in 15-20 lines.

Question No. 12 with internal choice between theoretical and numerical questions will be set out of units 5,6,7 and 8 and will carry 6 marks. Internal choice question will not be set from the same unit. Answer of theoretical question should be given in 3-4 pages of answer book.

### Detail of questions set from each unit

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Name of the unit</th>
<th>1mark questions</th>
<th>2 marks questions</th>
<th>4 marks question</th>
<th>6marks questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section A (Part-I)</strong></td>
<td></td>
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</tr>
<tr>
<td>1.</td>
<td>Accounting for not for profit organization</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1 numerical question from units 1,2,3,4 with numerical question as internal choice not from same unit.</td>
</tr>
<tr>
<td>2.</td>
<td>Accounting for partnership</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<tr>
<td>3.</td>
<td>Reconstitution or partnership</td>
<td></td>
<td></td>
<td>1</td>
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<td>4.</td>
<td>Dissolution of partnership firm</td>
<td></td>
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<td>1</td>
<td>1</td>
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<tr>
<td><strong>Section B (Part-II)</strong></td>
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<tr>
<td>5.</td>
<td>Accounting for share capital &amp; debentures</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1 numerical question from units 5,6,7 and 8 with theoretical question as internal choice not from same unit.</td>
</tr>
<tr>
<td>6.</td>
<td>Analysis of financial statements</td>
<td>1</td>
<td></td>
<td>1</td>
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<tr>
<td>7.</td>
<td>Statement of changes in financial position</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
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<tr>
<td><strong>OR Section C (Part-III)</strong></td>
<td></td>
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<tr>
<td>5.</td>
<td>Overview of computerized accounting system</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1 numerical question from units 5,6,7 and 8 with theoretical question as internal choice not from same unit.</td>
</tr>
<tr>
<td>6.</td>
<td>Using computerized accounting system</td>
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<td></td>
<td>1</td>
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<tr>
<td>7.</td>
<td>Accounting using DBMS</td>
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<td>1</td>
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<tr>
<td>8.</td>
<td>Accounting application of electronic spread sheet</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
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</table>

**SYLLABUS (THEORY)**

**PART-I**

**UNIT 1: ACCOUNTING FOR NOT-FOR-PROFIT ORGANIZATION.**

1. Meaning, Basic Concepts
2. Receipts and Payments : Meaning and Concept of Fund Based and Non Fund Based Accounting
3. Preparation of Income and Expenditure Account and Balance Sheet from Receipt and Payment Account with additional information.
UNIT 2 : ACCOUNTING FOR PARTNERSHIP
2. Nature of Partnership Firm, Partnership Deed (Meaning and Importance)
3. Final Accounts of Partnership: Fixed v/s Fluctuating Capital, Division of Profit among Partners (excluding guarantee and past adjustments). Preparation of Profit and Loss Appropriation Account

UNIT 3: RECONSTITUTION OF PARTNERSHIP
1. Change in Profit Sharing Ratio among the existing Partners- Sacrificing Ratio and Gaining Ratio
2. Accounting for Revaluation of Assets and Liabilities and Distribution of Reserves and Accumulated Profits
4. Admission of a Partner: Effect of Admission of Partner, Change in Profit Sharing Ratio, Accounting Treatment of Goodwill (as per accounting standard 10). Revaluation of Assets and Liabilities, Reserves (Accumulated profits) and Adjustment of Capitals

UNIT 4 : DISSOLUTION OF PARTNERSHIP FIRM

NOTE: Students may choose only one Part from Part II and Part III.

PART -II
UNIT-5: ACCOUNTING FOR SHARE CAPITAL AND DEBENTURES
1. Share Capital : Meaning, Nature and Types
2. Accounting for Share Capital : Issue and Allotment of Equity and Prefer Shares, Over Subscription and under Subscription, Issue at Par Securities Premium and Calls in Advance, Calls in Arrears, Issue of Shares for Consideration other than cash.
3. Forfeiture of Shares: Accounting Treatment, Reissue of Forfeited Shares.
4. Presentation of Share and Debenture, Capital in Company’s Balance Sheet
UNIT 6: ANALYSIS OF FINANCIAL STATEMENTS
1. Financial Statement of Company:- Balance Sheet of a Company in the prescribed form with major heading only (schedule VI)
4. Accounting Ratio:- Meaning, Objectives and Types of Ratios:
   (a) Liquidity Ratio :- Current Ratio, Liquidity Ratio.
   (b) Solvency Ratio :- Debt to Equity, Total Assets to Debt, Proprietary Ratio.
   (c) Activity Ratio: Inventory Turnover, Debtors Turnover, Creditors Turnover, Working Capital Turnover, Fixed Assets Turnover, Currents Assets Turnover.
   (d) Profitability Ratio:- Gross Profit, Operating Profit Ratio, Net Profit Ratio, Return on Investment, Earning Per Share Dividend Per Share, Price Earning Ratio.

UNIT 7: STATEMENT OF CHANGES IN FINANCIAL POSITION
Cash Flow Statement:- Meaning and Objectives, Preparation, Adjustments related to Depreciation, Dividend, Tax , Purchase and Sale of non current assets (as per revised standard issued by ICAI)

OR

PART-III

COMPUTERISED ACCOUNTING SYSTEM

UNIT 5: OVERVIEW OF COMPUTERIZED ACCOUNTING SYSTEM
4. Concepts and Types of Computerized Accounting System(CAS)
5. Features of a Computerized Accounting System
6. Structure of a Computerized Accounting System

UNIT 6: USING COMPUTERIZED ACCOUNTING SYSTEM
4. Steps in installation of CAS, preparation of chart of accounts, codification and hierarchy of account heads.
5. Data Entry, Data Validation and Data Verification.
7. Security of CAS and security features generally available in CAS (Students are expected to understand and practice the entire accounting process using an accounting package).

UNIT 7: ACCOUNTING USING DATA BASE MANAGEMENT SYSTEM(DBMS)
1. Concepts of DBMS.
2. Objective in DBMS: Tables, Queries, Forms, Reports.
3. Creating Data Tables for Accounting
4. Using queries, forms and reports for generating accounting information, Applications of DBMS in generating accounting information such as shareholders records, sale reports, customers profile, suppliers profile payroll, employees’ profile and petty cash register.

UNIT 8: ACCOUNTING APPLICATION OF ELECTRONIC SPREAD SHEET
1. Concept of an Electronic Spread Sheet (ES).
2. Features offered by Electronic Spread Sheet.
3. Applications of Electronic Spread Sheet in generating Accounting Information,
   Preparing Depreciation Schedule, Loan Repayment Schedule, Payroll Accounting and other such applications.

Project work

Project work is for those students who choose Part-II of the syllabus.

Time: 1 ½ Hours

Max Marks 15

1. The syllabus of project work is same as prescribed for the theory paper i.e. Part I and Part II.
2. Project Note book will consist of at least one comprehensive project and some short answer questions based on the prescribed syllabus.
3. Division of Marks:
   Project Note Book 3 marks
   Total five questions of 3 marks each will be set.
   The students are required to attempt any three (3×3) 9 marks
   Viva Voce 3 marks

Practical

Practical is for those students who choose Part-III of the syllabus.

Time: 1 ½ Hours

Max Marks 15

1. The syllabus of project work is same as prescribed for the theory paper of part-III.
2. Practical Note book will consist of the entire practical performed in the computer laboratory based on the prescribed syllabus.
3. Division of Marks:
   Practical Note Book 3 marks
   The students are required to perform any two practical out of the given four of 4 marks each. (2×4) 8 marks
   Viva Voce 4 marks
CLASS-XII
55. BUSINESS ECONOMICS & QUANTITATIVE METHODS - II
(COMMERCE GROUP)

Time: 3 Hrs                      Theory: 65 Marks
CCE: 10 Marks
Total: 75 Marks

STRUCTURE OF QUESTION PAPER
1. The question paper will cover whole of the syllabus.
2. 24 Questions will be set in the question paper. Student will have to attempt 22 questions.
3. All units of the syllabus should be given adequate representation in the question paper.

Section-A
4. Question No. 1 consists of 5 sub parts carrying 1 mark each. Answer of each part should be given in 1-15 words. Objective type questions may include questions with one word or one sentence answer/fill in the blanks/multiple choice type questions/ true and false.

Section-B
5. Question No. 2 to 8 will carry 2 marks each. Answer of each question should be given in 5-10 lines.

Section-C
6. Question No. 9 to 17 will carry 4 marks each. Out of 9 questions 4 questions will be numerical and 4 questions will be theoretical. One question can be either theoretical. Do any 7 question out of 9 questions. Answer of theory question should be given in 15-20 lines.

Section-D
7. Question No. 18 to 20 will carry 6 marks each with internal choice. Answer of each question should be given in 3-5 pages. Internal choice question should not be set from the same unit.
8. There is no word, line or page limit for numerical questions.
9. The use of non-programmable simple calculator is allowed.

DETAIL OF QUESTIONS SET FROM EACH UNIT

<table>
<thead>
<tr>
<th>Syllabus</th>
<th>Section-A</th>
<th>Section-B</th>
<th>Section-C</th>
<th>Section-D</th>
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<tr>
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<td>1 Mark Questions</td>
<td>2 Marks Questions</td>
<td>4 Marks Question</td>
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<td>PART - I</td>
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<td>Business Statistics</td>
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<td>7 out of 9</td>
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PART-I
BUSINESS STATISTICS

UNIT 1. MEASURES OF CENTRAL TENDENCY
(i) Arithmetic Mean (Simple and weighted)
(ii) Median and Mode

UNIT 2. MEASURES OF DISPERSION AND SKEWNESS
A. Measures of Dispersion
   i. Range, Quartile, Decile, Percentile and Quartile Deviation.
   ii. Mean Deviation, Standard Deviation and Coefficient of Variation.

B. Measures of Skewness
   (i) Meaning of Measures of Skewness.
   (ii) Difference between Dispersion & Skewness.
   (iii) Measures of Skewness.
       a) Absolute Measures
       b) Relative Measures & Coefficient of Skewness
          (i) Bowley’s Coefficient of Skewness
          (ii) Kelly’s Coefficient of Skewness
          (iii) Karl Pearson’s Coefficient of Skewness

UNIT 3. INDEX NUMBER
(i) Meaning, Features, Uses and Problems of Construction of Index Number.
(ii) Methods of Construction of Index Number, Cost of Living Index Numbers, Choice of base for Computing Index Numbers, Base Shifting.

UNIT 4. CORRELATION & REGRESSION ANALYSIS
A CORRELATION
(i) Meaning, Significance, Cause and Effect Relationship.
   Types of Correlation.
(ii) Methods of Correlation:
    a) Scattered Diagram,
    b) Graphic Method
    c) Karl Pearson’s Coefficient of Correlation,
    d) Spearman’s Rank Correlation Coefficient
    e) Concurrent Deviation Method.
(iii) Probable error, Standard error and Coefficient of Determination.

B REGRESSION ANALYSIS
(i) Meaning, Uses of Regression Analysis, Relationship between Correlation and Regression analysis
(ii) Regression Lines
(iii) Preparation of Regression quotient
(iv) Standard errors of estimation and Limitation of Regression analysis.

PART-II
INTRODUCTORY MACROECONOMICS

UNIT 5. NATIONAL INCOME AND RELATED AGGREGATES.
(iv) GDP and Welfare

UNIT 6 DETERMINATION OF INCOME AND EMPLOYMENT.
(i) Aggregate Demand, Aggregate Supply and their Components.
(ii) Propensity to Consume and Propensity to Save (Average and Marginal)
(iii) Meaning of Involuntary Unemployment and Full Employment.
(iv) Determination of Income and Employment-Two Sector Model.
(v) Concept of Investment Multiplier and its working.
(vi) Problems of Excess and Deficient Demand.
(vii) Measures to correct Excess & Deficient Demand, Availability of Credit, Change in Govt. spending.

UNIT 7 MONEY AND BANKING
(i) Money- Meaning, Evolution and Functions.
(ii) Supply of Money - Currency held by the Public and Net Demand Deposits held by Commercial Banks.
(iv) Commercial Banks- Meaning and Functions.
Unit 8  GOVERNMENT BUDGET AND THE ECONOMY

(i)  Government Budget- Meaning, Components and Objectives.
(ii) Classification of Receipts- Revenue Receipts and Capital Receipts.
(iii) Classification of Expenditure- Revenue Expenditure and Capital Expenditure.
(iv) Balanced Budget-Surplus Budget and Deficit Budget; Meaning and Implications.
(v)  Revenue Deficit, Fiscal Deficit and Primary Deficit; Meaning and Implications; Measures to correct different Deficits.

Unit-9  BALANCE OF PAYMENTS

(i)  Balance of Payment Accounts-Meaning and Components.
(ii) Balance of Payments Deficit -- Meaning.
(iii) Foreign Exchange Rate- Meaning (Flexible and Fixed), Merits and Demerits, Determination through Demand and Supply.
(iv) Determination of Exchange Rate in a Free Market.
CLASS-XII
56. FUNDAMENTAL OF E-BUSINESS
(COMMERCE GROUP)

Time: 3 Hrs                      Theory: 50 Marks
CCE: 10 Marks
Practical: 15 Marks
Total: 75 Marks

STRUCTURE OF QUESTION PAPER

1. The Question Paper will cover whole of the Syllabus.

2. 16 Questions will be set in the Question paper. Do any five questions from Section-C.

3. All units should be given adequate representation in the question paper.

4. The Question paper will have 4 sections i.e. A, B,C & D.

SECTION-A

5. Question No. 1 consists of 6 subparts carrying 1 mark each. Answer of each part should be given in 1-15 words. Objective type questions may include questions with one word or one sentence answer/fill in the blanks/true or false/multiple choice type questions. Three Questions will be set from Part-1 and another three questions will be set from Part-2 of the syllabus.

SECTION-B

6. Question No. 2 to 7 will carry 2 marks each.Two questions (Q.No. 2 and Q.No. 3) will be set from Part-1 and remaining four questions (Q.No. 4 to Q.No.7) will be set from Part-2 of the syllabus. Answer of these questions should be given in 5 to 10 lines.

SECTION-C

7. Question No. 8 to 14 will carry 4 marks each. Attempt total five questions from this section. Attempt any three questions from (Q.No. 8 to Q.No. 11) which will be set from Part -I and attempt any two questions from (Q.No. 12 to Q.No. 14) which will be set from Part-II. Answer of these questions should be given in 15 to 20 lines.

SECTION-D

8. Question No. 15 and 16 will carry 6 marks each with internal choice. Q.No.15 will be set from Units I to II with internal choice and Q.No. 16 will be set from Units III and IV with internal choice. Each question will carry six marks each. Answer of these questions should be given in 3-4 pages of the answer book. Internal choice question will not be set from the same unit.
Unit wise division of the Marks

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Name of the Unit</th>
<th>1 Marks Questions</th>
<th>2 Marks Questions</th>
<th>4 Marks Questions</th>
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<tr>
<td>I</td>
<td>Fundamental of Information Technology</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>(i) 1 question from units 1, 2 and 3 with internal choice not from same unit</td>
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<tr>
<td>II</td>
<td>Introduction to Electronic Commerce</td>
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<td>1</td>
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<td>III</td>
<td>E-Payments</td>
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<tr>
<td>IV</td>
<td>E-Security</td>
<td>1</td>
<td></td>
<td>1</td>
<td>(ii) 1 question from units 4, 5, 6, and 7 with internal choice not from same unit</td>
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<tr>
<td>V</td>
<td>E-Banking</td>
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<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>VI</td>
<td>E-Trading</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
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<td>VII</td>
<td>E-Marketing</td>
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<td>Total Questions</td>
<td></td>
<td>6</td>
<td>6</td>
<td>7</td>
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Note:

1. Do any five questions out of seven questions of 4 marks from Section-C.

SYLLABUS (THEORY)

Rationale of the Course:
Information technology has great influence on all aspects of our life. All our work places and the living environments are being computerized. In order to prepare students to work in these environments, it is essential that they are exposed to various applications of information technology. One of the important applications of IT is e-business. The term applies to the use of computer network to search and retrieve information in support of human and corporate decision making. It is a modern business methodology that addresses the needs of business organizations, merchants and consumers to out costs while improving the quality of goods and services and increasing the speed of service delivery. This exposure will enable the students to enter the world with confidence, live in these environments in a harmonious way and contribute to the productivity.

PART -I

UNIT 1: FUNDAMENTALS OF INFORMATION TECHNOLOGY

1. Concepts and Scope of IT
3. CPU: Memory Input Devices, Output Devices, Storage Devices, and Communication Devices, Multimedia Devices
4. Introduction to operating system
Introduction to Internet
Concept of Internet, Use of Internet, Requirements of Internet, Internet Domain, Internet Server, establishing connectivity on the Internet, Types of Internet Providers, Constitute of Internet Protocol, Browsing the Internet Tools and Service of Internet, Procedure of opening e-mail account on internet.

PART-II
CONCEPTUAL FRAMEWORK OF E-BUISNESS

UNIT 2: INTRODUCTION TO ELECTRONIC COMMERCE

UNIT 3: E-PAYMENTS
Transaction through Internet, Requirements of E-Payment System, Post Paid Payment System, Credit Card Solutions, Cyber Cash Internal Cheques, Instant Paid Payment System, Debit Card, Prepaid Payment System, Electronic Cash, Digi Cash, Net Cash, Cyber Cash, Smart Cards.

UNIT 4: E-SECURITY

UNIT 5: E-BANKING
Meaning, Importance and Types of E-Banking Services. Traditional vs E-Banking, Process of E-Banking, Advantages and Disadvantages of E-Banking, Status of E-Banking in India.

UNIT 6: E-TRADING
UNIT 7: E-MARKETING


STRUCTURE OF PRACTICAL QUESTION PAPER
(PRACTICAL)

Time: 1½ Hours

1. Total five questions (two from Part-1 and three from Part-2) of 3 marks each will be set out of list prescribed for practical. The students are required to perform three practicals selecting at least one from each part.

9 marks

2. Viva Voce 3 marks

3. Project Work 3 marks

SYLLABUS (PRACTICAL)
LIST OF PRACTICALS (PART-I)

Internet and its applications:
Log into internet.
Navigation for seeking information.
Downloading information from internet

PART-II

Sending and receiving e-mail.
(a) Create e-mail account
(b) Creating a message
(c) Creating an address book
(d) Attaching a file with e-mail
(e) Receiving a message
(f) Deleting a message

Purchasing through the net.
On-line banking - Operating an ATM.
57. देवीदारी

पूरा पाठ से गुरु-देव (लिखिती)

वाली: 3 तोटे

<table>
<thead>
<tr>
<th>दिवस</th>
<th>1 अंक बतले पुस्तक</th>
<th>2 अंक बतले पुस्तक</th>
<th>4 अंक बतले पुस्तक</th>
<th>6 अंक बतले पुस्तक</th>
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<td>1</td>
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<td>20</td>
<td>16</td>
<td>24</td>
<td>70 अंक</td>
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<td>4</td>
<td>28 पृष्ठ</td>
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</table>

पहली अंक दस्तावेज (लिखिती)

| पहली दिवसीय | | | | | 19 अंक |
| दूसरी दिवसीय | | | | | 19 अंक |
| तीसरी दिवसीय | | | | | 16 अंक |
| चौथी दिवसीय | | | | | 16 अंक |
| दस्तावेज (लिखिती) | | | | | 19 अंक |
| पहली दिवसीय | | | | | 19 अंक |
| दूसरी दिवसीय | | | | | 19 अंक |
| तीसरी दिवसीय | | | | | 16 अंक |
| चौथी दिवसीय | | | | | 16 अंक |
| दस्तावेज (लिखिती) | | | | | 19 अंक |
पुंज-पुंज, ताल पेट्टे, रेड्डी से मेल, पंटी सी मस, तारी चेट, वर्ड ब्रुज। सुपपुरः पुरुषां सी धुर्गवर्त।
तारी वृतत्व दिख क्षण नहीं अभिज्ञान की माज़ूं।

विज्ञानी - दीमी

व्यक्तिमाण मील विषयनात - विज्ञानी विषयनात

1. अशुभेशवर्त - मेहरां द अशुभेशवस्वत हिंदु।
2. फिंगी वृतत्व पंडु अड़े दी नीं पुंडु उठें, मड़ मढ़ पड़े दी अंरुडु मंडयां द सहितव
रखनेस।
3. राजपत, मेनूद मड़े दिमेश पुरुष दे हुज़ू ठुम।
4. नर्मकांड सीमी विनिमय अड़े परजात शक्ती समरकन मनाः।
5. शशी मजे द्वार द स्वरकल अड़े दिवराः।
6. दल्ले दे पुरुष अड़े शशी दे नरमन (विद्वलता)।
7. उठें दिक्षित शब्दबुन्द दिक्षित दे सुम्पुरव नामीं डे मंडयां तकऩ अड़े अनसभन माँड़ूं द नाम:

(०) वारुमीधी (मरु, सलमां)
(१) नृतशयी (पकां, छिंडी)
(२) तुकूरी (दिश मरी, लर्जी पूंज)
(३) धुड़बिंदी (धरिंद भट, मर्ट)
(४) देशोमी (श्रृण, भारु झुिव)
(५) मेसीमी (मितुम्र, भारु)
(६) दुबुल्लकीमी (चूदी, लर्जी)
(७) मेशलीमी (लमी, लर्जी)

8. पुरुष मेन्दकर्म, नाम विषयनात अड़े नरमन जुँगसबां वरे मेंक मंडफां।

विज्ञानी - हैमी

व्यक्तिमाण मील विषयनात - पुण्य विषयनात

1. स्तू-पादक: पुण्य विषयनात, मीली दसुरान दे लंडट, वी. औरंट, दे., भात. औरंट, दे.,
अनसभनां सबे उपस्थत पर्य श्रुतीली मंडवानी।
2. मेनूदां द विषयनात मानकर मड़े बुतीलवय पते मिरांट। नींदी दी मौल डुंगरिज। दिवरां
पे मिरांट अड़े नरम।
3. दल्ली नरमां दे अनस लंडट। अबलां दी मृकली विषयनातभिंग मलीय धड़न निदां - दिमेस कुँ दिक्षित पता, मर्ट, मर्ट-दर्ज मठे नरम पुरुष उच्च मंडवाणी।
4. वीर्वे - वीर्वे दे जना मजे दियाः। उठें दे दिक्षित दी मलीवय धड़न अड़े महुपत मंडवाः।
5. वीर्वे मजे अनसभन माँड़ूं तकऩ रुप्त रुप्त अड़े महुपत मंडवाः।

पुण्यी यूर इस्दे की कुं की-केबी

1. यूर इस्दे नियमित रूप से मजे दे ती मेंट पीड़ा मंडवें।
2. फिंगी वृतत्व दिक्षित २० दे जप पुरुषभवस्वत शक्ती उठें।
3. यूर इस्दे दे क्षण उठें। उठें जपा दिक्षित दिवरां दिक्षित नरादण वनरें।

(०) कुंवी अड़े दामल यूर नियमित, यूर इस्दे मठे यूरुली पता
(१) दोमीमी मील विषयनात मंडवानी श्रुती शक्ती उठें दिक्षित मंडवाः।

• ४-४ अंकें दे पुरुषा / विषयनात)
• पुण्यी रेंट बुंव, रहट मठे उठें पेरानी
• शरीरी यूर 
• शीमा, धरं, मर्लू, ममी, नर्मकांड, वीडिका, शीमावीली मठे दी पुरुष दामल।

पुण्यिक (पुण्यी)

1. यूरुप्त इस्दे दी नियमित शक्ती विषयनात दिक्षित मंडवें।
2. नर्मकांड मे जंगवान वीमा विषयनात।
3. सिस्टमी सीर्य विद्यार्थियों।
4. गामानिक कारण दर्शाउँगा विद्यार्थियोंने विद्यार्थी लाई देंगा।
5. डूबी लाई भला ही निः गुरू देंगा।
6. बैंच-बैंच दर्शाओं ने पृथ्वी विद्यार्थियों लाई विद्यालयीय दी गहरी बताओ।
7. बाजारी भावना पेशिमगों दी सिस्टमी लाई देंगी जाजाटी वत्सल, धारा देंगा ने सिस्टमी वत्सल।
8. धारा वत्सल।
9. भव्यक्षी दर्शाओ।
10. दर्शाओं पृथ्वी दी देश वत्सल।
11. दर्शाओं तुम हबीबीया मंजूर।
12. वेदी का विज्ञान दी मंजूर ने देंगा दी देश।

d - (१)
वेदीयजी सीव विकाश

वनस्पति विकाशः
1. मनली मल्ली दर्शाओं नर्तकी दिख्की दीवी दांति नें दी दीवी दांति उत्तरे, सब नें दांति दी घनत्व द्वारा अपनाए वत्सल।
2. बैंच-बैंच दुख दुख दे रूपिशिया दी गहरी देंगे अपनाए वत्सल।
3. बैंच-बैंच दिशिताएं दे मासे दे सम्पिशिया दी गहरी देंगे अपनाए वत्सल।
4. विदेशी महान अनुभव बैंच-बैंच दुख दे रूपिशिया/रूपिशिया दे दर्शाओं दी गहरी देंगे अपनाए वत्सल।
5. पृथ्वी में संरक्षण, मानव विकास नें दांति द्वारा संरक्षण मल्ली बैंच-बैंच पृथ्वी देश।

मैदु विकाशः
1. वेदीयजी दिख पृथ्वी दी नारायण मांडळ ग्राम दर्शाओं।
2. मल्ली दिखाओं नें दंतों दे दुख देंगा विकाशः मल्ली मल्ली दर्शाओं दर्शाओं नें अपनाए वत्सल।
3. महान दर्शाओं दे दिख दीवी दी अपने दे द्वारा दिख मल्ली अपनाए वत्सल।
4. महान संगठन दर्शाओं दी धर्म-बैंच पृथ्वी दर्शाओं नें अपनाए वत्सल।
5. दर्शाओं दे पृथ्वी विद्यार्थियों नें देंगा दी गहरी बताओ।