

## ENGLISH CORE (301)

TIME : 3 Hours

F.M. : 80 + 20 = 100

## PRESCRIBED BOOKS :

- (1) HORNBILL BY NCERT
- (2) SNAPSHOTS BY NCERT

QUESTION-WISE BREAK-UP			
Sec	Areas of Learning	Marks	H.Y., Pre-Annual & Annual
A	Reading Skills (Three)	10+8+8	26
B	Grammar & Creative Writing Skills	7+3+3+5+5	23
C	Literature (Text Book & Supplementary Reader)	3+3+4+6+3+6+6	31
	Assessment of Listening	5	20
	Assessment of Speaking Project	5	
	Work	10	
	<b>TOTAL</b>		<b>100</b>

## DIFFICULTY LEVEL :

- |                         |   |     |
|-------------------------|---|-----|
| 1. Difficult questions- | - | 15% |
| 2. Average questions    | - | 70% |
| 3. Easy questions       | - | 15% |

QUESTION PAPER DESIGN		
Section	Competencies	Total marks
<b>Reading Skills</b>	Conceptual understanding, decoding, Analyzing, inferring, interpreting, appreciating, literary, conventions and vocabulary, summarizing and using appropriate format/s.	26
<b>Creative Writing Skills</b>	Conceptual Understanding, application of rules, Analysis, Reasoning, appropriacy of style and tone, using appropriate format and fluency, inference, analysis, evaluation and creativity.	23
<b>Literature Text Books and Supplementary Reading Texts</b>	Recalling, reasoning, appreciating literary convention, inference, analysis, creativity with fluency, Critical Thinking.	31
	<b>TOTAL</b>	<b>80</b>
	Internal Assessment	
	• Listening	5
	• Speaking	5
	• Project Work	10
	<b>GRAND TOTAL</b>	<b>100</b>

## SECTION – A (READING COMPREHENSION – 26 MARKS)

## Reading Comprehension through Unseen Passage

18 Marks

- I. One unseen passage to assess comprehension, interpretation, inference and vocabulary. The passage may be factual, descriptive or literary.
- II. One unseen **case-based** passage with verbal/visual inputs like statistical data, charts etc. to assess comprehension, interpretation, analysis, inference & evaluation

*Note: The combined word limit for both the passages will be 600-750.*

Multiple Choice Questions / Objective Type Questions will be asked.

(10+8 = 18 Marks)

III. Note Making and Summarization based on a passage of approximately 200-250 words.

i.	<b>Note Making:</b>		<b>5 Marks</b>
	• Title:	1	
	• Numbering and indenting:	1	
	• Key / glossary:	1	
	• Notes:	2	
ii.	Summary (up to 50 words):		<b>3 Marks</b>
	• Content:	2	
	• Expression:	1	

### SECTION – B (GRAMMAR & CREATIVE WRITING SKILLS – 23 MARKS)

#### Section B

1. **Grammar** **7 Marks**

- i. Questions on Gap filling (Tenses, Clauses)
- ii. Questions on re-ordering/transformation of sentences

**(Total seven questions to be done out of the eight given).**

2. **Creative Writing Skills** **16 Marks**

- i. Short writing task – **Classified Advertisements** up to 50 words. One out of the two given questions to be answered **(3 Marks: Format: 1 / Content: 1 / Expression: 1)**
- ii. Short writing task –**Poster** up to 50 words. One out of the two given questions to be answered. **(3marks:Format:1/Content:1/Expression:1)**
- iii. Writing a **Speech** in 120-150 words based on verbal / visual cues related to some contemporary/ age-appropriate topic. **5 Marks: Format: 1 / Content: 2 / Expression: 2)**
- iv. Writing a **Debate** based on visual/verbal inputs in 120-150 words.  
The theme should be contemporary topical issues. One out of the two given questions to be answered. **(5 Marks)**  
: Format: 1 / Content : 2 / Expression : 2)

### SECTION – C (LITERATURE TEXT BOOKS) – 31 MARKS

**This section will have variety of assessment items including Multiple Choice Questions, Objective Type Questions, Short Answer Type Questions and Long Answer Type Questions to assess comprehension, analysis, interpretation and extrapolation beyond the text.**

3. **Reference to the Context**

- i. One Poetry extract out of two from the book **Hornbill** to assess comprehension, interpretation, analysis and appreciation. **(3x1=3Marks)**
- ii. One Prose extract out of two from the book **Hornbill** to assess comprehension, interpretation, analysis and appreciation.
- iii. One prose extract out of two from the book **Snapshots** to assess comprehension, interpretation and analysis.

4. Two Short answer type question (one from Prose and one from Poetry from the book **Hornbill**), out of four, to be answered in 40-50 words. Questions should elicit inferential responses through critical thinking.

**(3x2=6Marks)**

5. One Short answer type question, from the book **Snapshots**, to be answered in 40- 50 words. Questions should elicit inferential responses through critical thinking. Any 1 out of 2 questions to be done. **(3x1=3Marks)**

6. One Long answer type question, from **Prose/Poetry Hornbill**, to be answered in 120-150 words. Questions can be based on incident / theme / passage / extract / event as reference points to assess extrapolation beyond and across the text. The question will elicit analytical and evaluative response from student. Any 1 out of 2 questions to be done.

**(1x6=6Marks)**

7. One Long answer type question, based on the chapters from the book **Snapshots** to be answered in 120-150 words to assess global comprehension and extrapolation beyond the text. Questions to provide evaluative and analytical responses using incidents, events, themes as reference points. Any 1 out of 2 questions to be done. **(1x6=6Marks)**

**PRESCRIBED BOOKS**

**1. Hornbill:** English Reader published by National Council of Education Research and Training, New Delhi

- The Portrait of a Lady
- “We’re Not Afraid to Die... if we can be together
- The Laburnum Top (Poem)
- Childhood (Poem)
- Silk Road
- A Photograph (Poem)
- Discovering Tut : The Saga Continues
- The Voice of the Rain (Poem)
- The Adventure
- Father to Son (Poem)

**2. Snapshots:** Supplementary Reader published by National Council of Education Research and Training, New Delhi

- The Summer of the Beautiful White Horse (Prose)
- Mother’s Day (Play)
- The Tale of Melon City
- The Address (Prose)
- Birth (Prose)

#### INTERNAL ASSESSMENT

Assessment of Listening Skills - 05 Marks

Assessment of Speaking Skills - 05 Marks

Project Work - 10 Marks

- Half-yearly - Project topic assignment, planning and presentation on project layout **(Sept. – Oct., 2023)**
- Annual Examination- Project report submission and Viva-voce **(January- February 2024)**

#### GUIDELINES FOR INTERNAL ASSESSMENT

ALS must be seen as an integrated component of all four language skills rather than a compartment of two. Suggested activities, therefore, take into consideration an integration of the four language skills but during assessment, emphasis will be given to speaking and listening, since reading and writing are already being assessed in the written exam.

**Assessment of Listening and Speaking Skills: (5+5=10 Marks)**

**i. Activities:**

- Subject teachers must refer to books prescribed in the syllabus.
- In addition to the above, teachers may plan their own activities and create their own material for assessing the listening and speaking skills.

**ii. Parameters for Assessment:** The listening and speaking skills are to be assessed on the following parameters:

- a. Interactive competence (Initiation & turn taking, relevance to the topic)
- b. Fluency (cohesion, coherence and speed of delivery)
- c. Pronunciation

Language (grammar and vocabulary) A suggestive rubric is given below

	1.	2.	3.	4.	5.
<b>Interaction</b>	<ul style="list-style-type: none"> <li>● Contributions are mainly unrelated to those of other speakers</li> <li>● Shows hardly any initiative in the development of conversation</li> <li>● Very limited interaction</li> </ul>	<ul style="list-style-type: none"> <li>● Contributions are often unrelated to those of the other speaker</li> <li>● Generally passive in the development of conversation</li> </ul>	<ul style="list-style-type: none"> <li>● Develops interaction adequately, makes however minimal effort to initiate conversation</li> <li>● Needs constant prompting to take turns</li> </ul>	<ul style="list-style-type: none"> <li>● Interactions adequately initiated and develop</li> <li>● Can take turn but needs little prompting</li> </ul>	<ul style="list-style-type: none"> <li>● Can initiate &amp; logically develop simple conversation on familiar topics</li> <li>● Can take turns appropriately</li> </ul>

<b>Pronunciation</b>	<ul style="list-style-type: none"> <li>• Insufficient accuracy in pronunciation; many grammatical errors</li> <li>• Communication is severely affected</li> </ul>	<ul style="list-style-type: none"> <li>• Frequently unintelligible articulation</li> <li>• Frequent phonological errors</li> <li>• Major communication problems</li> </ul>	<ul style="list-style-type: none"> <li>• Largely correct pronunciation clear articulation except occasional errors</li> <li>• Some expressions cause stress without compromising with</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly correct pronunciation &amp; clear articulation</li> <li>• Can be clearly understood most of the time; very few phonological errors</li> </ul>	<ul style="list-style-type: none"> <li>• Can pronounce correctly &amp; articulate clearly</li> <li>• Is always comprehensible ; uses appropriate intonation</li> </ul>
<b>Fluency &amp; Coherence</b>	<ul style="list-style-type: none"> <li>• Noticeably / long pauses; rate of Speech is slow</li> <li>• Frequent repetition and/or self-correction</li> <li>• Links only basic sentences; breakdown of coherence evident</li> </ul>	<ul style="list-style-type: none"> <li>• Usually fluent; produces simple speech fluently, but loses coherence in complex communication</li> <li>• Often hesitates and/or resorts to slow speech</li> <li>• Topics partly developed; notal ways concluded logically</li> </ul>	<ul style="list-style-type: none"> <li>• Is willing to speakat length, however repetition is noticeable</li> <li>• Hesitates and/or self corrects; occasionally loses coherence</li> <li>• Topics mainly developed, but usually not logically concluded</li> </ul>	<ul style="list-style-type: none"> <li>• Speaks without noticeable effort, with a little repetition</li> <li>• Demonstrate s hesitation to find words or use correct grammatical structures and/or self- correction</li> <li>• Topics not fully developed to merit</li> </ul>	<ul style="list-style-type: none"> <li>• Speaks fluently almost with no repetition &amp; minimal hesitation</li> <li>• Develops topic fully &amp; coherently</li> </ul>
<b>Vocabulary &amp; Grammar</b>	<ul style="list-style-type: none"> <li>• Demonstrates almost no flexibility, and mostly struggles for appropriate words</li> <li>• Uses very basic vocabulary to express view-points.</li> </ul>	<ul style="list-style-type: none"> <li>• Communicates with limited flexibility and appropriacy on some of the topics</li> <li>• Complex forms and sentence structures are rare; exhibits limited vocabulary to express new ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Communicates with limited flexibility and appropriacy on most of the topics</li> <li>• Sometimes uses complex forms and sentence structures; has limited vocabulary to describe/ express new points</li> </ul>	<ul style="list-style-type: none"> <li>• Can express with some flexibility and appropriacy on most of the topics</li> <li>• Demonstrates ability to use complex forms and sentence structures most of the time; expresses with adequate vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>• Can express with some flexibility and appropriacy on a variety of topics such as family, hobbies, work, travel and current events</li> <li>• Frequently uses complex forms and sentence structures; has enough vocabulary to express himself / herself</li> </ul>

**iii. Schedule:**

- The practice of listening and speaking skills should be done throughout the academic year.
- The final assessment of the skills is to be done as per the convenience and schedule of the school.

**Project Work + Viva: 10 Marks**

Out of ten marks, 5 marks will be allotted for the project report / script / essay etc. and 5 marks for the viva.

**I. Schedule:**

**II.** Schools may refer to the suggestive timeline given in these guidelines for the planning, preparation and viva-voice of ALS based projects.

- The final assessment of the skills may be done on the basis of parameters suggested by the Board. Language teachers, however, have the option to adopt/ modify these parameters according to their school specific requirements.
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

## COURSE STRUCTURE

	HALF-YEARLY EXAM (80 marks + 20 marks ASL)	ANNUAL (BOARD) (80 marks + 20 marks ASL)
SEC	17 September – 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025 ANNUAL: 2 <sup>nd</sup> Week of February 2025
A	<b>Reading Section</b> I. Comprehension & Vocabulary II. Case based Comprehension Passage III. Note Making & Summarization	<b>Reading Section</b> I. Comprehension & Vocabulary II. Case based Comprehension Passage III. Note Making & Summarization
	<b>Grammar &amp; Writing Skills : 23 marks</b> <b>Grammar:</b> i. Gap filling (Tenses, Clauses) ii. Re-ordering / Transformation of sentences <b>Creative Writing:</b> i. Classified Advertisements ii. Poster iii. Speech iv. Debate	<b>Grammar &amp; Writing Skills : 23 marks</b> <b>Grammar:</b> i. Gap filling (Tenses, Clauses) ii. Re-ordering / Transformation of sentences <b>Creative Writing:</b> i. Classified Advertisements ii. Poster iii. Speech iv. Debate
	<b>LITERATURE (31 marks)</b> <b>HORNBILL (PROSE)</b> 1. The Portrait of a Lady. 2. We're Not Afraid to Die... if we can be together. 3. Discovering Tut : the Saga Continues 4. The Adventure  <b>POETRY</b> 1. A Photograph. 2. The Laburnum Top. 3. The Voice of the Rain 4. Childhood  <b>SNAPSHOTS</b> 1. The Summer of The Beautiful White Horse 2. The Address 3. Mother's Day	<b>LITERATURE (31 marks)</b> <b>HORNBILL (PROSE)</b> 1. The Portrait of a Lady. 2. We're Not Afraid to Die... if we can be together. 3. Discovering Tut: the Saga Continues 4. The Adventure 5. Silk Road  <b>POETRY</b> 1. A Photograph. 2. The Laburnum Top. 3. The Voice of the Rain 4. Childhood 5. Father to Son <b>SNAPSHOTS</b> 1. The Summer of The Beautiful White Horse 2. The Address 3. Mother's Day 4. Birth 5. The Tale of Melon City

**MATHEMATICS (041)**

TIME : 3Hours

F.M. : 80 + 20 = 100

**PRESCRIBED BOOKS:**

1. Mathematics Textbook for Class XI, (NCERT Publication)
2. Mathematics Exemplar Problems for Class XI,(NCERT Publication)
3. Mathematics Lab Manual for Class XI, Published by NCERT

**QUESTION PAPER DESIGN**

Duration: 3 Hrs.

Maximum Marks: 80

SL.	Typology of Questions	Total Marks	Approximate Percentage
1.	Remembering Understanding	44	55 %
2.	Applying	20	25 %
3.	Analysing Evaluating Creating	16	20 %
	<b>Total Marks</b>	<b>80</b>	<b>100</b>
	<b>Practical</b>	<b>20</b>	
	<b>Gross Total</b>	<b>100</b>	

**COURSE STRUCTURE (THEORY)**

Sl. NO	Units	TYPES OF TEST / Name of the Topics	Half Yearly (PT – II) (80 marks)	Pre Annual / Annual Examination (80 Marks)
		<b>TIME PERIOD OF THE TEST</b>	17 September - 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025  ANNUAL: 2 <sup>nd</sup> Week of February 2025
1	<b>I</b> Sets & Functions	Sets	14	23
2		Relations & Functions	14	
3		Trigonometric Function	22	
4	<b>II</b> Algebra	Complex Numbers & Quadratic Equations	06	25
5		Linear Inequalities	05	
6		Permutations and Combinations	12	
7		Binomial Theorem	07	
8		Sequence & Series		
9	<b>III</b> Coordinate Geometry	Straight lines		12
10		Conic sections		
11		Introduction to Three-dimensional geometry		
12	<b>IV</b> Calculus	Limits & Derivatives		08
13	<b>V</b> Statistics & Probability	Statistics		12
14		Probability		
		<b>TOTAL</b>	<b>80</b>	<b>80</b>

**SYLLABUS DETAILS**

## UNIT-I: SETS AND FUNCTIONS

- Sets :** Sets and their representations, Empty set, Finite and Infinite sets, Equal sets, Subsets, Subsets of a set of real numbers especially intervals (with notations). Universal set. Venn diagrams. Union and Intersection of sets. Difference of sets. Complement of a set. Properties of Complement.
- Relations & Functions:** Ordered pairs. Cartesian product of sets. Number of elements in the Cartesian product of two finite sets. Cartesian product of the set of reals with itself (up to  $\mathbb{R} \times \mathbb{R} \times \mathbb{R}$ ). Definition of relation, pictorial diagrams, domain, co-domain and range of a relation. Function as a special type of relation. Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions with their graphs..Sum, difference, product and quotients of functions.
- Trigonometric Functions:** Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity  $\sin^2 x + \cos^2 x = 1$ , for all  $x$ . Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing  $\sin(x \pm y)$  and  $\cos(x \pm y)$  in terms of  $\sin x$ ,  $\sin y$ ,  $\cos x$  &  $\cos y$  and their simple applications .Deducing identities like the following:

$$\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y},$$

$$\cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x}$$

$$\sin \alpha \pm \sin \beta = 2 \sin \frac{1}{2}(\alpha \pm \beta) \cos \frac{1}{2}(\alpha \mp \beta)$$

$$\cos \alpha + \cos \beta = 2 \cos \frac{1}{2}(\alpha + \beta) \cos \frac{1}{2}(\alpha - \beta),$$

$$\cos \alpha - \cos \beta = -2 \sin \frac{1}{2}(\alpha + \beta) \sin \frac{1}{2}(\alpha - \beta)$$

Identities related to  $\sin 2x$ ,  $\cos 2x$ ,  $\tan 2x$ ,  $\sin 3x$ ,  $\cos 3x$  and  $\tan 3x$

## UNIT -II : ALGEBRA

- Complex Numbers and Quadratic Equations:** Need for complex numbers, especially  $\sqrt{-1}$ , to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Argand plane.
- Linear Inequalities:** Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line.
- Permutations and Combinations:** Fundamental principle of counting. Factorial (n!) Permutations and combinations, derivation of formulae  ${}^n P_r$  and  ${}^n C_r$  and their connections, simple applications.
- Binomial Theorem:** Historical perspective, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, simple applications.
- Sequence and Series:** Sequence and Series. Arithmetic Mean (A.M.), Geometric Progression (G.P.), general term of a GP., sum of  $n$  terms of a G.P., Infinite G.P. and its sum, Geometric mean (G.M.), relation between A.M. and G. M.

## UNIT-III: COORDINATE GEOMETRY

- Straight Lines:** Brief recall of two-dimensional geometry from earlier classes. Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axis, point -slope form, slope-intercept form, two-point form, intercept form, Distance of a point from a line.
- Conic Sections:** Sections of a cone: circles, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.

3. **Introduction to Three - dimensional Geometry:** Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points.

#### UNIT – IV: CALCULUS

1. **Limits and Derivatives:** Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit. Limits of polynomials and rational functions trigonometric, exponential and logarithmic functions. Definitions of derivative relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.

#### UNIT-V: STATISTICS AND PROBABILITY

1. **Statistics:** Measures of Dispersion: Range, Mean deviation, variance and standard deviation of ungrouped/grouped data.
2. **Probability:** Events; occurrence of events, ‘not’, ‘and’ and ‘or’ events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with other theories of earlier classes. Probability of an event, probability of ‘not’, ‘and’ and ‘or’ events.

<b>INTERNAL ASSESSEMENT</b>	<b>20 MARKS</b>
Periodic Tests( Best 2 out of 3 tests conducted)	10 Marks
Mathematical Activities	10 Marks

- 20 % weightage questions will be asked from the exemplar text book in all the examinations.
- No chapter wise weightage
- There will be no overall choice in the question paper; however, 33% internal choices will be given in each section.

**NB: Question wise break up and typology of questions shall be done at par with the sample paper to be released by CBSE.**

ACTIVITY (10 MARKS)		
Sl No	LIST OF ACTIVITIES	
1	ACTIVITY 1 (To find number of subsets of a given set)	Half yearly
2	ACTIVITY 2 (To represent set theoretic operations by using Venn Diagram)	
3	ACTIVITY 3(To verify for any two sets A and B , if $n(A) = p$ , $n(B) = q$ , then total number of relations from A to B is $2^{pq}$ )	
4	ACTIVITY 4(To distinguish between a Relation and a Function)	
5	ACTIVITY 5 (To plot the graph of $\sin x$ , $\sin 2x$ , $2 \sin x$ , $\sin \frac{x}{2}$ )	
6	ACTIVITY 6 (Pascal’s triangle)	Annual (Including Half yearly)
7	ACTIVITY 7 (To demonstrate that the arithmetic mean of two different positive numbers is always greater than their geometric mean)	
8	ACTIVITY 8 (Construct of parabola)	
9	ACTIVITY 9(To find analytically $\lim_{x \rightarrow c} f(x)$ , where $f(x) = \frac{x^2 - c^2}{x - c}$ )	
10	ACTIVITY 10(To write the sample space when a die is rolled once, twice)	

**NB:** (i) (a) One activity (3 marks) out of first 5 will be asked in the half yearly exam and one activity (3 marks) will be asked out of 10 activities for annual activity test. (b) Maintenance of record carries 5 marks and viva voce 2 marks which is in total 10 marks.

#### ASSESSMENT OF ACTIVITIES

Half Yearly	Annual
Record – 5 Marks	Record – 5 Marks
Viva voce - 2 Marks	Viva voce - 2 Marks
Activity – 3 Marks (Out of first 5 activities)	Activity – 3 Marks (Out of 10 activities)

ii) Periodic test (PT-1, HY, Pre Board / Pre Annual) out of these 3, two best marks to be taken for calculating for another 10 weightage.

iii) Total Internal Assessment will be done for 20 marks (10 from activity and 10 from periodic test)

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%



## PHYSICS (042)

Duration: 3 Hrs.

Maximum Marks: 70

## PRESCRIBED BOOKS:

1. Physics Part-I, Published by NCERT
2. Physics Part-II, Published by NCERT
3. Exemplar Physics, Published by NCERT
4. Laboratory Manual of Physics, Class XI Published by NCERT
5. Any related books and manuals brought out by NCERT (Also consider multimedia)

## QUESTION PAPER DESIGN

SL.	Typology of Questions	Total Marks	Approximate Percentage
1.	Remembering Understanding	27	38 %
2.	Applying	22	32 %
3.	Analyzing Evaluating Creating	21	30 %
	<b>Total Marks</b>	<b>70</b>	<b>100</b>
	<b>Practical</b>	<b>30</b>	
	<b>Gross Total</b>	<b>100</b>	

## NOTE:

- The above template is only a sample. Suitable internal variations may be made for generating similar templates keeping the overall weightage to different form of questions and typology of questions same.
- Question wise break up shall be followed as per the sample paper to be released by DAV CAE.
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

## COURSE STRUCTURE (THEORY)

TIME : 3 HOURS

F.M. : 70

SL. NO	TYPES OF TEST	Half Yearly (70 marks)	Pre Annual / Annual (70 Marks)
		17 September - 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025 ANNUAL: 2 <sup>nd</sup> Week of February 2025
Unit – I	<b>Physical world and measurement</b>	46	23
	Chapter 2: Units and Measurement		
Unit– II	<b>Kinematics</b>		
	Chapter 3: Motion in a straight line	24	17
	Chapter 4: Motion in a plane		
Unit -III	<b>Laws of Motion</b>		
	Chapter 5: Laws of Motion	20	
Unit – IV	<b>Work, Energy and Power</b>		
	Chapter 6: Work, Energy and Power		
Unit – V	<b>Motion of system of particles and rigid body</b>	20	
	Chapter 7: Motion of system of particles and rigid body		
Unit – VI	<b>Gravitation</b>		
	Chapter 8: Gravitation	20	
Unit –VII	<b>Properties of bulk matter</b>		
	Chapter 9: Mechanical Properties of solids		

Sl. NO	TYPES OF TEST	Half Yearly (70 marks)	Pre Annual / Annual (70 Marks)
		17 September - 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025 ANNUAL: 2 <sup>nd</sup> Week of February 2025
	Chapter 10: Mechanical Properties of Fluids Chapter 11 :Thermal Properties of Matter		
Unit –VIII	<b>Thermodynamics</b>		
	Chapter 12: Thermodynamics		
Unit – IX	<b>Behavior of perfect gases and kinetic theory of gases</b>		
	Chapter13: Kinetic Theory		
Unit – X	<b>Oscillations and Waves</b>		
	Chapter 14: Oscillations Chapter 15: waves		10
	<b>TOTAL</b>	<b>70</b>	<b>70</b>

**N.B. :** 20% weightage questions may be asked from Exemplar Text book in all the examination.

#### SYLLABUS DETAILS

#### UNIT – I : PHYSICAL WORLD AND MEASUREMENT

**Chapter – 2 : Units and Measurement :** Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Significant figures. Dimensions of physical quantities, dimensional analysis and its applications.

#### UNIT – II : KINEMATICS

**Chapter – 3 : Motion in a straight line :** Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non- uniform motion, instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).

**Chapter – 4 : Motion in a Plane :** Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration- projectile motion, uniform circular motion.

#### UNIT – III : LAWS OF MOTION

**Chapter – 5 : Laws of Motion :** Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion.

Law of conservation of linear momentum and its applications.

Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).

#### UNIT – IV : WORK, ENERGY AND POWER

**Chapter – 6 : Work, Energy and Power :** Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power.

Notion of potential energy, potential energy of a spring, conservative forces: non- conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.

#### UNIT – V : MOTION OF SYSTEM OF PARTICLES AND RIGID BODY

**Chapter – 7 : System of Particles and Rotational motion :** Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod.

Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications.

Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions.

Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).

## UNIT –VI : GRAVITATION

**Chapter – 8 : Gravitation :** Kepler's laws of planetary motion, universal law of gravitation.

Acceleration due to gravity and its variation with altitude and depth.

Gravitational potential energy and gravitational potential, escape velocity, orbital velocity of a satellite.

## UNIT –VII : PROPERTIES OF BULK MATTER

**Chapter – 9 : Mechanical Properties of Solids :** Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio, elastic energy.

**Chapter – 10 : Mechanical Properties of Fluid :** Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure.

Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications.

Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.

**Chapter – 11 : Thermal Properties of Matter :** Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity;  $C_p$ ,  $C_v$  - Calorimetry; change of state - latent heat capacity.

Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law.

## UNIT –VIII : THERMODYNAMICS

**Chapter – 12 : Thermodynamics :** Thermal equilibrium and definition of temperature, zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: gaseous state of matter, change of condition of gaseous state -isothermal, adiabatic, reversible, irreversible, and cyclic processes.

## UNIT –IX : BEHAVIOR OF PERFECT GASES AND KINETIC THEORY OF GASES

**Chapter – 13 : Kinetic Theory :** Equation of state of a perfect gas, work done in compressing a gas.

Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.

## UNIT –X : OSCILLATIONS AND WAVES

**Chapter – 14: Oscillation :** Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their applications.

Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period.

**Chapter – 15: Waves. :** Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats.

## PRACTICALS

The record, to be submitted by the students, at the time of their examination, has to include:

❖ **HALF YEARLY:**

- Record of at least 04 Experiments [from sections A & B], to be performed by the students.
- Record of at least 03 activities [from sections A & B], to be performed by the students.

❖ **ANNUAL:**

- Record of at least 08 Experiments [with 4 from each section], to be performed by the students.
- Record of at least 6 activities [with 3 each from section A and section B], to be performed by the students.
- Report of the project to be carried out by the students.

## EVALUATION SCHEME

Topic	Half- Yearly (Marks)	Annual (Marks)
Two experiments one from each section	7+7	7+7
Practical record (experiment and activities)	5	5
One activity from any section	3	3
Investigatory Project	3	3
Viva on experiments, activities and projects	5	5
<b>Total</b>	<b>30</b>	<b>30</b>

## SECTION-A

## Experiments

1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorie meter using Vernier Calipers and hence find its volume.
2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.
3. To determine volume of an irregular lamina using screw gauge.
4. To determine radius of curvature of a given spherical surface by a spherometer.
5. To determine the mass of two different objects using a beam balance.
6. To find the weight of a given body using parallelogram law of vectors.
7. Using a simple pendulum, plot  $L-T^2$  graph and use it to find the effective length of second's pendulum.
8. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result.
9. To study the relationship between force of limiting friction and normal reaction and to find the co-efficient of friction between a block and horizontal surface.
10. To find the downward force, along an inclined plane, acting on a roller due to Gravitational pull of the earth and study its relationship with the angle of inclination ( $\theta$ ) by plotting graph between force and  $\sin\theta$ .

## Activities

1. To make a paper scale of given least count e.g. 0.2cm, 0.5cm.
2. To determine mass of a given body using a metre scale by principle of moments.
3. To plot a graph for a given set of data, with proper choice of scales and error bars.
4. To measure the force of limiting friction for rolling of a roller on a horizontal plane.
5. To study the variation in range of projectile with angle of projection.
6. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane)
7. To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.

## SECTION-B

1. To determine Young's modulus of elasticity of the material of a given wire.
2. To find the force constant of a helical spring by plotting a graph between load and extension.
3. To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V, and between P and  $1/V$ .
4. To determine the surface tension of water by capillary rise method.
5. To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
6. To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
7. To determine specific heat capacity of a given solid by method of mixtures.
8. To study the relation between frequency and length of a given wire under constant tension using sonometer.
9. To study the relation between the length of a given wire and tension for constant frequency using sonometer.
10. To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.

## Activities

1. To observe change of state and plot a cooling curve for molten wax.
2. To observe and explain the effect of heating on a bi-metallic strip.
3. To note the change in level of liquid in a container on heating and interpret the observations.
4. To study the effect of detergent on surface tension of water by observing capillary rise.
5. To study the factors affecting the rate of loss of heat of a liquid.
6. To study the effect of load on depression of a suitably clamped meter scale loaded at (i) its end (ii) in the middle.
7. To observe the decrease in pressure with increase in velocity of a fluid.

**CHEMISTRY (043)**

Duration: 3 Hrs

Maximum Marks: 70

**PRESCRIBED BOOKS:**

1. Chemistry Part-I, Published by NCERT
2. Chemistry Part-II, Published by NCERT
3. Exemplar Chemistry, Published by NCERT
4. Laboratory Manual of Chemistry, Class XI Published by NCERT
5. Any related books and manuals brought out by NCERT (Also consider multimedia)

**QUESTION PAPER DESIGN**

SL.	Typology of Questions	Total Marks	Approximate Percentage
1.	Remembering Understanding	28	40 %
2.	Applying	21	30 %
3.	Analysing Evaluating Creating	21	30 %
<b>Total Marks</b>		<b>70</b>	<b>100</b>
<b>Practical</b>		<b>30</b>	
<b>Gross Total</b>		<b>100</b>	

**N.B.: 20% weightage questions may be asked from Exemplar Text book in all the examination.**

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**COURSE STRUCTURE (THEORY)**

SL NO	UNITS	TYPE OF TEST / NAME OF THE UNIT	HALF YEARLY (70 marks)	PRE ANNUAL / ANNUAL (BOARD) (70 Marks)
			17 September – 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025 ANNUAL: 2 <sup>nd</sup> Week of February 2025
1	UNIT-I	Some basic concepts of chemistry	14	07
2	UNIT-II	Structure of atom	16	09
3	UNIT-III	Classification of elements and periodicity of properties	12	06
4	UNIT-IV	Chemical bonding and molecular structure	16	07
5	UNIT-VI	Chemical Thermodynamics	12	09
6	UNIT-VII	Equilibrium		07
7	UNIT-VIII	Redox reactions		04
8	UNIT-XII	Organic chemistry : Some basic principles & techniques		11
9	UNIT-XIII	Hydrocarbons		10
<b>TOTAL</b>			<b>70</b>	<b>70</b>

**SYLLABUS DETAILS****UNIT I: SOME BASIC CONCEPTS OF CHEMISTRY**

General Introduction: Importance and scope of Chemistry. Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry.

**UNIT II: STRUCTURE OF ATOM**

Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations, Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms, stability of half-filled and completely filled orbitals.

**UNIT III: CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES**

Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements -atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100.

**UNIT IV: CHEMICAL BONDING AND MOLECULAR STRUCTURE**

Valence electrons, ionic bond, covalent bond, bond parameters, Lewis's structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), Hydrogen bond.

**UNIT VI: CHEMICAL THERMODYNAMICS**

Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat, measurement of  $\Delta U$  and  $\Delta H$ , Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and non- spontaneous processes, criteria for equilibrium. Third law of thermodynamics (brief introduction).

**UNIT VII: EQUILIBRIUM**

Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium- Le Chatelier's principle, ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, Henderson Equation, solubility product, common ion effect (with illustrative examples).

**UNIT VIII: REDOX REACTIONS**

Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, applications of redox reactions.

**UNIT XII: ORGANIC CHEMISTRY -SOME BASIC PRINCIPLES AND TECHNIQUES**

General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electrometric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.

**UNIT XIII: HYDROCARBONS****Classification of Hydrocarbons****Aliphatic Hydrocarbons:**

Alkanes - Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis.

Alkenes - Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition.

Alkynes - Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water.

**Aromatic Hydrocarbons:**

Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.

**PRACTICALS**

EVALUATION SCHEME FOR EXAMINATION	HALF YEARLY	ANNUAL
VOLUMETRIC ANALYSIS	10	8
SALT ANALYSIS	-	8
CONTENT BASED EXPERIMENT	6	6
PROJECT WORK	4	4
CLASS RECORD AND VIVA	10	4
<b>Total</b>	<b>30</b>	<b>30</b>

**PRACTICAL SYLLABUS**

Micro-chemical methods are available for several of the practical experiments. Wherever possible such techniques should be used:

**A. Basic Laboratory Techniques**

- Cutting glass tube and glass rod
- Bending a glass tube
- Drawing out a glass jet
- Boring a cork

**B. Characterization and Purification of Chemical Substances**

- Determination of melting point of an organic compound.
- Determination of boiling point of an organic compound.
- Crystallization of impure sample of any one of the following: Alum, Copper Sulphate, Benzoic Acid.

**C. Experiments based on pH**

- (a) Any one of the following experiments:
- Determination of pH of some solutions obtained from fruit juices, solution of known and varied concentrations of acids, bases and salts using pH paper or universal indicator.
  - Comparing the pH of solutions of strong and weak acids of same concentration.
  - Study the pH change in the titration of a strong base using universal indicator.
- (b) Study the pH change by common-ion in case of weak acids and weak bases.

**D. Chemical Equilibrium**

One of the following experiments:

- Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either of the ions.
- Study the shift in equilibrium between  $[\text{Co}(\text{H}_2\text{O})_6]^{2+}$  and chloride ions by changing the concentration of either of the ions.

**E. Quantitative Estimation**

- Using a chemical balance / Electronic balance.
- Preparation of standard solution of Oxalic acid.
- Determination of strength of a given solution of Sodium Hydroxide by titrating it against standard solution of Oxalic acid.

- iv) Preparation of standard solution of Sodium Carbonate.
- v) Determination of strength of a given solution of Hydrochloric acid by titrating it against standard Sodium Carbonate solution.

**F. Qualitative Analysis**

- (a) Determination of one anion and one cation in a given salt

**Cation** -  $\text{Pb}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{As}^{3+}$ ,  $\text{Al}^{3+}$ ,  $\text{Fe}^{3+}$ ,  $\text{Mn}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Sr}^{2+}$ ,  $\text{Ba}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $(\text{NH}_4)^+$

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

(Note: Insoluble salts excluded)

- (b) Detection of -Nitrogen, Sulphur, Chlorine in organic compounds.

**PROJECT**

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

**A few suggested Projects**

- Checking the bacterial contamination in drinking water by testing sulphide ion.
- Study of the methods of purification of water.
- Testing the hardness, presence of Iron, Fluoride, Chloride, etc., depending upon the regional variation in drinking water and study of causes of presence of these ions above permissible limit (if any).
- Investigation of the foaming capacity of different washing soaps and the effect of addition of Sodium Carbonate on it.
- Study the acidity of different samples of tea leaves.
- Determination of the rate of evaporation of different liquids.
- Study of acidity of fruit and vegetable juices.

**Note: Any other investigatory project, which involves about 10 periods of work, can be chosen with the approval of the teacher.**



**BIOLOGY (044)**

TIME : 3 Hours

F.M. : 70+30=100

**PRESCRIBED BOOKS:**

1. Text book of biology for Class-XI (NCERT).
2. Exemplar Biology-Class-XI (NCERT).
3. Biology supplementary materials (revised), available on CBSE website.
4. Other related books and manuals brought out by NCERT (including multimedia).
5. Comprehensive laboratory manual in biology-XI (Laxmi publication).

**QUESTION PAPER DESIGN**

TYPOLOGY	NO OF QUESTIONS (MARKS)
	50%
<b>Demonstrate Knowledge and Understanding</b>	35
	30 %
<b>Application of Knowledge / Concepts</b>	21
	20 %
<b>Formulate, Analyse, Evaluate and Create</b>	14
	100%
<b>Total Marks</b>	70

**NOTE:**

- The above template is only a sample. Suitable internal variations may be made for generating similar templates keeping the overall weightage to different form of questions and typology of questions same.
- Question wise break up shall be followed as per the sample paper to be released by DAV CAE.
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**COURSE STRUCTURE (THEORY)**

UNIT	NAME OF THE UNIT	Half Yearly Exam 17 September – 27 September 2024	Pre Annual / Annual Exam PRE ANNUAL: 1 <sup>st</sup> Week of January 2025  ANNUAL: 2nd Week of February 2025
1	Diversity of Living Organisms	25	15
2	Structural Organisation in Plants and Animals	20	10
3	Cell: Structure and Function	25	15
4	Plant Physiology	-	12
5	Human Physiology	-	18
	<b>Total</b>	<b>70</b>	<b>70</b>

**SYLLABUS DETAIL****UNIT-I DIVERSITY OF LIVING ORGANISMS**

**Chapter-1: The Living World :** Biodiversity ; Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature

**Chapter-2 : Biological Classification :** Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids.

**Chapter-3 : Plant Kingdom :** Classification of plants into major groups; Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyta, Gymnospermae (Topics excluded – Angiosperms, Plant Life Cycle and Alternation of Generations)

**Chapter-4 : Animal Kingdom :** Salient features and classification of animals, non-chordates up to phyla level and chordates up to class levels (salient features and few examples of each category). (No live animals or specimen should be displayed.)

**UNIT-II STRUCTURAL ORGANIZATION IN PLANTS AND ANIMALS**

**Chapter-5: Morphology of Flowering Plants :** Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed. Description of family Solanaceae.

**Chapter-6: Anatomy of Flowering Plants :** Anatomy and functions of tissue systems in dicots and monocots.

**Chapter-7: Structural Organisation in Animals :** Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog.

#### UNIT- III CELL: STRUCTURE AND FUNCTION

**Chapter-8: Cell-The Unit of Life :** Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultra structure and function); nucleus.

**Chapter-9: Biomolecules :** Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids; Enzyme-types, properties, enzyme action. (Topics excluded: Nature of Bond Linking Monomers in a Polymer, Dynamic State of Body Constituents, Concept of Metabolism, Metabolic Basis of Living, The Living State)

**Chapter-10: Cell Cycle and Cell Division :** Cell cycle, mitosis, meiosis and their significance

#### UNIT-IV PLANT PHYSIOLOGY

**Chapter-13: Photosynthesis in Higher Plants :** Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.

**Chapter-14: Respiration in Plants :** Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.

**Chapter-15: Plant-Growth and Development :** Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; growth regulators- auxin, gibberellin, cytokinin, ethylene, ABA;

#### UNIT-V HUMAN PHYSIOLOGY

**Chapter-17: Breathing and Exchange of Gases :** Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration-asthma, emphysema, occupational respiratory disorders.

**Chapter-18: Body Fluids and Circulation :** Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system-hypertension, coronary artery disease, angina pectoris, heart failure.

**Chapter-19: Excretory Products and their Elimination :** Modes of excretion- ammonotelism, ureotelism, uricotelism; human excretory system-structure and function; urine formation, osmoregulation; regulation of kidney function - renin -angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant.

**Chapter-20: Locomotion and Movement :** Types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems -myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.

**Chapter-21: Neural Control and Coordination :** Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse

**Chapter-22: Chemical Coordination and Integration :** Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease.

**Note:** Diseases related to all the human physiological systems to be taught in brief.

#### HALF YEARLY PRACTICAL SYLLABUS

##### A: List of Experiments

1. Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae

can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound).

- Preparation and study of T.S. of dicot and monocot roots and stems (primary).
- Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.

### B. Study and Observe the following (spotting):

- Parts of a compound microscope.
- Specimens/slides/models and identification with reasons - Bacteria, *Oscillatoria*, *Spirogyra*, *Rhizopus*, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
- Virtual specimens/slides/models and identifying features of - *Amoeba*, *Hydra*, liver fluke, *Ascaris*, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
- Mitosis in onion root tip cells and animals cells (grasshopper) from permanent slides.
- Different types of inflorescence (cymose and racemose).

### ANNUAL PRACTICAL SYLLABUS (HALF YEARLY SYLLABUS INCLUDED)

Evaluation Scheme	Marks
One Major Experiment Part A (Experiment No-1,3,7,8)	5Marks
One Minor Experiment Part A (Experiment No-6,9,10,11,12,13)	4Marks
Slide Preparation Part A (Experiment No-2,4,5)	5Marks
Spotting Part B	7Marks
Practical Record + Viva Voce _____ (Credit to the students' work over	4Marks
Project Record + Viva Voce _____ the academic session may be	5Marks
_____ given)	
<b>Total</b>	<b>30Marks</b>

### A:List of Experiments

- Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formula and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound).
- Preparation and study of T.S. of dicot and monocot roots and stems (primary).
- Study of osmosis by potato osmometer.
- Study of plasmolysis in epidermal peels (e.g. *Rhoeo* /lily leaves or flashy scale leaves of onion bulb).
- Study of distribution of stomata on the upper and lower surfaces of leaves.
- Comparative study of the rates of transpiration in the upper and lower surfaces of leaves.
- Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
- Separation of plant pigments through paper chromatography.
- Study of the rate of respiration in flower buds/leaf tissue and germinating seeds.
- Test for presence of urea in urine.
- Test for presence of sugar in urine.
- Test for presence of albumin in urine.
- Test for presence of bile salts in urine.

**B. Study and Observe the following (spotting):**

1. Parts of a compound microscope.
2. Specimens/slides/models and identification with reasons-Bacteria, *Oscillatoria*, *Spirogyra*, *Rhizopus*, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
3. Virtual specimens/slides/models and identifying features of - *Amoeba*, *Hydra*, liver fluke, *Ascaris*, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
4. Mitosis in onion root tip cells and animals cells(grasshopper) from permanent slides.
5. Different types of inflorescence (cymose and racemose).
6. Human skeleton and different types of joints with the help of virtual images/models only.

**COMPUTER SCIENCE (083)****Time : 3 hours****F.M. : 70(T)+30(P)****PRESCRIBED BOOKS :**

Computer Science with Python (Dhanpat Rai Publication by Sumita Arora)

**QUESTION PAPER DESIGN**

SL.	Typology of Questions	Total Marks	Approximate Percentage
1.	Remembering Understanding	17	25 %
2.	Applying	23	33 %
3.	Analyzing Evaluating Creating	30	42 %
<b>Total Marks</b>		<b>70</b>	<b>100</b>
<b>Practical</b>		<b>30</b>	
<b>Gross Total</b>		<b>100</b>	

**NOTE:**

- The above template is only a sample. Suitable internal variations may be made for generating similar templates keeping the overall weightage to different form of questions and typology of questions same.
- Question wise break up shall be followed as per the sample paper to be released by DAV CAE.
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**DIFFICULTY LEVEL :**

- |                        |   |      |
|------------------------|---|------|
| 1. Difficult questions | - | 15 % |
| 2. Average questions   | - | 70%  |
| 3. Easy questions      | - | 15%  |

**COURSE STRUCTURE (THEORY)**

NAME OF THE TEST		Half Yearly	PRE ANNUAL / ANNUAL (BOARD)
		17 September – 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025  ANNUAL: 2nd Week of February 2025
<b>1</b>	<b>Computer Systems and Organisation (CSO)</b>		10
	Basic computer organisation	03	
	Types of software		
	Boolean logic	04	
	Number System	04 <b>15</b>	
	Encoding Schemes	02	
	Operating System	02	
<b>2</b>	<b>Computational Thinking and Programming-1</b>		45
	Introduction to Problem Solving	4	
	Familiarization with the basics of Python programming	3	
		<b>15</b>	
	Knowledge of datatypes and operators, Expressions	6	
	Types of Errors	2	
	Flow of control		
	Conditional statements	10 <b>25</b>	
Notion of iterative computation	15		
	String Manipulations	<b>15</b>	

NAME OF THE TEST		Half Yearly	PRE ANNUAL / ANNUAL (BOARD)
		17 September – 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025  ANNUAL: 2nd Week of February 2025
	List	--	
	Tuples	--	
	Dictionaries	--	
	Introduction to Python modules	--	
3	<b>Society, Law and Ethics (SLE-1)</b>		
	Digital footprints		
	Digital Society and Netizen		
	Data protection		
	Cyber crime	--	
	Cyber safety		
	Safely accessing web sites		
	E-waste management		
	Indian Information Technology Act		
	Technology and society		
	<b>TOTAL</b>	<b>70</b>	<b>70</b>

### SYLLABUS DETAILS

#### UNIT 1: Computer Systems and Organisation (10 Theory+10 Practical)

- Basic Computer Organisation: Introduction to computer system, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (Bit, Byte, KB, MB, GB, TB, PB)
- Types of software: System software (Operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler & interpreter), application software
- Operating system(OS) : functions of operating system, OS user interface
- Boolean logic : NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's laws and logic circuits
- Number system: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems. Encoding schemes : ASCII, ISCII and UNICODE (UTF8, UTF32)

#### UNIT 2 :Computational Thinking & Programming-1(80 Theory+60 Practical)

- Introduction to problem solving: Steps for problem solving (analysing the problem, developing an algorithm, coding, testing and debugging). representation of algorithms using flowchart and pseudocode, decomposition
- Familiarization with the basics of Python programming: Introduction to Python, features of Python, executing a simple "hello world" program, execution modes: interactive mode and script mode, Python character set, Python tokens (keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments
- Knowledge of data types: number (integer, floating point, complex), boolean, sequence (string, list, tuple), none, mapping (dictionary), mutable and immutable data types
- Operators: arithmetic operators, relational operators, logical operators, assignment operator, augmented assignment operators, identity operators (is, is not), membership operators (in, not in)
- Expressions, statement, type conversion & input/output: precedence of operators, expression, evaluation of expression, python statement, type conversion (explicit& implicit conversion), accepting data as input from the console and displaying output
- Errors : syntax errors, logical errors and run time errors
- Flow of control: introduction, use of indentation, sequential flow, conditional and iterative flow control
- Conditional statements: if, if-else, if-elif-else, flowcharts, simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number
- Iterative statements: for loop, range function, while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number etc
- Strings: introduction, indexing, string operations (concatenation, repetition, membership & slicing), traversing a string using loops, built-in functions: len(), capitalize(), title(), lower(), upper(), count(), find(), index(), ends with(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), isspace(), lstrip(),rstrip(), strip(), replace(), join(), partition(), split()
- Lists: introduction, indexing, list operations (concatenation, repetition, membership & slicing), traversing a list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(),index(), remove(),pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list

- Tuples : introduction, indexing, tuple operations (concatenation, repetition, membership & slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple, suggested programs: finding the minimum, maximum, mean of values store dina tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple.
- Dictionary : introduction, accessing items in a dictionary using keys, mutability of dictionary (adding a new item, modifying an existing item), traversing a dictionary, built-in functions : len(), dict(), keys(), values(), items(), get(), update(), del, clear(), from keys(), copy(), pop(), popitem(), set default(), max(), min(), count(), sorted(), copy(); suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them
- Introduction to Python modules: Importing module using 'import <module>' and using from statement, Importing math module (pi, exp, sqrt, ceil, floor, pow, fabs, sin, cos, tan); random module (random, randint, rand range), statistics module (mean, median, mode)

### UNIT 3 : Society, Law and Ethics (SLE-1) (20 Theory)

- Digital Footprints
- Digital society and Netizen : net etiquettes, communication etiquettes, social media etiquettes
- Data protection: Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache)
- Cyber-crime : definition, hacking, eaves dropping, phishing and fraud emails, ran somware, preventing cyber crime
- Cyber safety : safely browsing the web, identity protection, confidentiality, cyber troll sand bullying.
- Safely accessing websites : malware, viruses, trojans, adware
- E-waste management : proper disposal of used electronic gadgets.
- Indian Information Technology Act (IT Act)
- Technology & Society : Gender and disability issues while teaching and using computers

### PRACTICAL (HALF YEARLY)

**Duration : 3 hours**

**Total Marks : 30**

1. Programming

[8+8]

Two Python programs allotted on the following basis

Logic : 4 Marks

Indentation : 2 Marks

Output : 2Marks

2. Practical File

[8]

Record must have 10 Python programs consisting expressions (3 nos.), conditionals (3 nos.), loops(4 nos.) , strings(3 nos.) from the topic covered during half yearly syllabus along with configuration of the system.

3. Viva voce (Based on Practical File)

[6]

### PRACTICAL (ANNUAL)

**Duration : 3 hours**

**Total Marks : 30**

S.No	Unit Name	Marks (Total=30)
1	<b>Lab Test (12 marks)</b>	
	Python program (60% logic + 20% documentation + 20% code quality)	12
2	<b>Report File + Viva (10 marks)</b>	
	Report file: Minimum 20 Python programs	7
	Viva voce	3
3	Project(that uses most of the concepts that have been learnt) (See CS-XII for the rules regarding the projects)	8

### Python Programming

- Input a welcome message and display it.
- Input two numbers and display the larger / smaller number.
- Input three numbers and display the largest / smallest number.
- Generate the following patterns using nested loop.

Pattern-1	Pattern-2	Pattern-3
*	12345	A
**	1234	AB
***	123	ABC
****	12	ABCDABC
*****	1	DE

- Write a program to input the value of x and n and print the sum of the following series:  
 $1+x+x^2+x^3+x^4+\dots+x^n$   
 $1-x+x^2-x^3+x^4-\dots+x^n$   
 $x + x^{2/2} - x^{3/3} + x^{4/4} - \dots+x^{n/n}$   
 $x + x^{2/2!} - x^{3/3!} + x^{4/4!} - \dots+x^{n/n!}$
- Determine whether a number is a perfect number, an armstrong number or a palindrome.
- Input a number and check if the number is a prime or composite number.
- Display the terms of a Fibonacci series.
- Compute the greatest common divisor and least common multiple of two integers.
- Count and display the number of vowels, consonants, uppercase, lowercase characters in string.
- Input a string and determine whether it is a palindrome or not; convert the case of characters in a string.
- Find the largest/smallest number in a list/tuple
- Input a list of numbers and swap elements at the even location with the elements at the odd location.
- Input a list/tuple of elements, search for a given element in the list/tuple.
- Create a dictionary with the roll number, name and marks of n students in a class and display the names of students who have scored marks above 75.

### GUIDELINES FOR PROJECTS

The aim of the class project is to create something that is tangible and useful using Python/ Python and SQL connectivity. This should be done in groups of two to three students and should be started by students at least 6 months before the submission deadline. The aim here is to find a real world problem that is worthwhile to solve.

Students are encouraged to visit local businesses and ask them about the problems that they are facing. For example, if a business is finding it hard to create invoices for filing GST claims, then students can do a project that takes the raw data (list of transactions), groups the transactions by category, accounts for the GST tax rates, and creates invoices in the appropriate format. Students can be extremely creative here. They can use a wide variety of Python libraries to create user friendly applications such as games, software for their school, software for their disabled fellow students, and mobile applications, Of course to do some of these projects, some additional learning is required; this should be encouraged. Students should know how to teach themselves.

The students should be sensitized to avoid plagiarism and violations of copyright issues while working on projects. Teachers should take necessary measures for this.





- Olympic Value Education – Joy of Effort, Fair Play, Respect for Others, Pursuit of Excellence, Balance Among Body, Will & Mind
- Ancient and Modern Olympics
- Olympics - Symbols, Motto, Flag, Oath, and Anthem
- Olympic Movement Structure - IOC, NOC, IFS, Other members

**Unit-III : Yoga**

- Meaning and importance of Yoga
- Introduction to Astanga Yoga
- Yogic Kriyas (Shat Karma)
- Pranayama and its types.
- Active Lifestyle and stress management through Yoga

**Unit-IV : Physical Education and Sports for Children with Special Needs**

- Concept of Disability and Disorder
- Types of Disability, its causes & nature (Intellectual disability, Physical disability).
- Disability Etiquette
- Aim and objectives of Adaptive Physical Education.
- Role of various professionals for children with special needs (Counselor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist, and Special Educator)

**Unit-V : Physical Fitness, Wellness, and Lifestyle**

- Meaning & importance of Wellness, Health, and Physical Fitness.
- Components/Dimensions of Wellness, Health, and Physical Fitness
- Traditional Sports & Regional Games for promoting wellness
- Leadership through Physical Activity and Sports
- Introduction to First Aid – PRICE

**Unit-VI : Test, Measurement & Evaluation**

- Define Test, Measurements and Evaluation.
- Importance of Test, Measurements and Evaluation in Sports.
- Calculation of BMI, Waist – Hip Ratio, Skin fold measurement (3-site)
- Somato Types (Endomorphy, Mesomorphy & Ectomorphy)
- Measurements of health-related fitness

**Unit-VII : Fundamentals of Anatomy, Physiology in Sports**

- Definition and importance of Anatomy and Physiology in Exercise and Sports.
- Functions of Skeletal System, Classification of Bones, and Types of Joints.
- Properties and Functions of Muscles.
- Structure and Functions of Circulatory System and Heart.
- Structure and Functions of Respiratory System.

**Unit-VIII: Fundamentals Of Kinesiology And Biomechanics in Sports**

- Definition and Importance of Kinesiology and Biomechanics in Sports.
- Principles of Biomechanics
- Kinetics and Kinematics in Sports
- Types of Body Movements - Flexion, Extension, Abduction, Adduction, Rotation, Circumduction, Supination & Pronation
- Axis and Planes – Concept and its application in body movements

**Unit-IX : Psychology and Sports**

- Definition & Importance of Psychology in Physical Education & Sports;
- Developmental Characteristics at Different Stages of Development;
- Adolescent Problems & their Management;
- Team Cohesion and Sports;

- Introduction to Psychological Attributes: Attention, Resilience, Mental Toughness

### Unit- X : Training & Doping in Sports

- Concept and Principles of Sports Training
- Training Load: Over Load, Adaptation, and Recovery
- Warming-up & Limbering Down – Types, Method & Importance
- Concept of Skill, Technique, Tactics & Strategies
- Concept of Doping and its disadvantages

### PRACTICAL

#### Practical

	<b>Max. Marks 30</b>
01. Physical Fitness Test : SAI Khelo India test, Brockport Physical Fitness Test (BPFT)*	06 Marks
02. Proficiency in Games and Sports (Skill of any one IOA recognized sport/ games of choice)**	07 Marks
3. Yogic Practices	07 Marks
04. Record File***	05 Marks
05. Viva Voice (Health / Games & Sports / Yoga)	05 Marks

-----  
**30 Marks**

- \*Test for CWSN (any 4 items out of 27 items but 1 item from each component: Aerobic function, Body Composition, Muscular strength & endurance, range of motion or flexibility)
- \*\*CWSN (Children With Special Needs – Divyang): Bocce/Boccia , Sitting Volleyball, Wheel Chair Basketball, Unified Badminton, Unified Basketball, Unified Football, Blind Cricket, Goalball, Floorball, Wheel chair races and throws, or any other sport / games of choice.
- \*\*Children With Special Needs may opt any one sport/game from the list as alternative for Yogic Practices. However, the sport / game must be different for skill of Game and alternate to yogic practices.

#### \*\*\*Record File shall include:

- Practical-1: Fitness tests administration. (SAI Khelo India Test)
- Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease.
- Practical-3: Any one IOA recognized Sport/Game of choice. Labelled diagram of Field & Equipment. Also mention its Rules, Terminologies & Skills

**( Practical-1 & Practical-2 has to be completed for Half Yearly/PA-II. However all three practical activities have to be completed for Annual Practical Examination)**

**PAINTING (049)**

Time : Theory – 2 hrs

F.M.-100

Practical – 3+3=6hrs

Theory – 30 mark

Practical – 70mark

**PRESCRIBED BOOK :**

Introduction to Indian Art /Part – I (NCERT)

**REFERENCE BOOK:**

Panoramic Indian Painting (Class XI) (Vishal Publishing Co.) OR History of Indian Art (Full Circle)

**QUESTIONWISE BREAKS –UP**

Half Yearly / Sahodaya Pre-Board and Annual

Forms of questions – MCQ, SA, LA

No of questions – 15

Marks – MCQ (8 x 1) = 8, SA (5 x 2) =10, LA (2 x 6) =12

Total – 30 Marks

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**TYPOLGY OF QUESTIONS**

- |                                |     |
|--------------------------------|-----|
| 1. Remembering                 | 20% |
| 2. Understanding               | 20% |
| 3. Application                 | 20% |
| 4. Evaluation based            | 20% |
| 5. High order thinking based - | 20% |

**COURSE STRUCTURE (THEORY) MARKS -30**

TYPE OF TEST		HALF YEARLY 30 MARKS	PRE-ANNUAL / ANNUAL 30 MARKS
		17 September – 27 September 2024	PRE ANNUAL: 1 <sup>st</sup> Week of January 2025  ANNUAL: 2nd Week of February 2025
UNIT	CHAPTERS	MARKS	MARKS
Unit-1	Pre-historic Rock Paintings and Art of Indus Valley	6+9 =15	10
Unit-2	Buddhist, Jain & Hindu art	15	10
Unit-3	Temple Sculpture, Bronzes and Artistic aspects of Indo-Islamic architecture	-	10
		30	30

**SYLLABUS DETAILS****Unit – 1****PRE-HISTORIC ROCK PAINTINGS AND ART OF INDUS VALLEY (2500 B.C. to 1500 B.C.)****A. Pre-Historic Rock paintings****Introduction:** 1) Period and location

2) Study and appreciation of following Pre-historic Paintings:

- (i) Wizard's dance, Bhimbethaka

**B. Art of Indus Valley****Introduction :** 1) Period and location 2) Extension: In about 1500 miles

- (i) Harappa and Mohenjo-daro (Now in Pakistan)

- (ii) Ropar, Lothal, Rangpur, Alamgirpur, Kali Bangan, Banawali & Dholavira (In India)

**(2) Study and appreciation of following Sculptures and Terra-cottas:**

- (i) Dancing Girl (Mohenjo-Daro), Bronze, 10.5 × 5 × 2.5cm, Circa 2500 BC, Collection – National Museum, New Delhi
- (ii) Male Torso (Harappa), Red Lime Stone, 9.2 × 5.8 × 3cms, Circa 2500BC

- Collection – National Museum, New Delhi
- (iii) Mother Goddess (Mohenjo-Daro), Terracotta, 22 × 8 × 5cms, Circa 2500BC Collection – National Museum, New Delhi

**(3) Study and appreciation of the following Seal:**

- (i) Bull seal (Mohenjo-Daro), Stone (Steatite), 2.5 × 2.5 × 1.4 cm. Circa 2500BC Collection – National Museum, New Delhi
- (ii) **Decoration on Earthen Wares:** Painted earthen-ware (Jar), (Mohenjo-Daro) Collection – National Museum, New Delhi

**UNIT – 2: Buddhist, Jain & Hindu Art (3<sup>rd</sup> Century B.C. to 8<sup>th</sup> Century A.D.)**

- 1) General introduction to Art during Mauryan, Shunga, Kushana (Gandhara and Mathura style) and Gupta Period :
- 2) Study and appreciation of following Sculptures :

- i. Lion Capital from Sarnath (Mauryan Period), Polished sandstone, Circa 3<sup>rd</sup> Century B.C. (Collection – Sarnath Museum, U.P.)
- ii. Chauri Bearer from Didar Ganj (Yakshi), (Mauryan Period), Polished sandstone, Circa 3<sup>rd</sup> Century B.C. (Collection – Patna Museum, Bihar)
- iii. Seated Buddha from Katra Mound, Mathura (Kushan period- Mathura Style), Red spotted sandstone, Circa 3<sup>rd</sup> Century A.D. (Collection- Govt. Museum, Mathura)
- iv. Jain Tirthankara (Gupta Period), Stone, Circa 5<sup>th</sup> C. A.D. (Collection – State Museum, Lucknow, U.P.)

**3) Introduction to Art of Ajanta**

Location and period, No. of caves, Chaityas and Viharas, Paintings and Sculptures, Subject-matter and technique etc.

**UNIT -3 : Temple Sculpture, Bronzes and artistic aspects of Indo-Islamic Architecture**

**(A) Artistic aspects of Indian Temple Sculptures (6<sup>th</sup> Century A.D. to 13<sup>th</sup> Century A.D.)**

- 1) Introduction to Temple Sculpture (6<sup>th</sup> Century A.D. to 13<sup>th</sup> Century A.D.)
- 2) Study and appreciation of following Temple-Sculptures
- (i) **Descent of Ganga** (Pallav Period, Mahabalipuram, Tamil Nadu, Granite Rock, Circa 7<sup>th</sup> C. A.D.)
  - (ii) **Trimurti** (Elephanta, Maharashtra, Stone, Circa 9<sup>th</sup> C. A.D.)
  - (iii) **Lakshmi Narayana** (Kandariya Mahadev Temple) Chandela period, Khajuraho, MP, (Stone) Circa-10<sup>th</sup> C. A.D.
  - (iv) **Cymbal player**, Sun Temple (Ganga Dynasty) Konark, Odisha, (Stone) Circa 13<sup>th</sup> C. A.D.
  - (v) **Mother & Child** (Vimal Shah Temple, Solanki Dynasty, Dilwara, Mount Abu, Rajasthan), White Marble, Circa 13<sup>th</sup> Century A.D.

**(B) Bronzes**

- 1) Introduction to Indian Bronzes
- 2) Method of casting (solid and hollow)
- 3) Study and appreciation of following south Indian Bronzes
  - (i) **Nataraj** (Chola Period, Thanjavur Dist, Tamil Nadu) 12<sup>th</sup> Century A.D. Collection – National Museum, New Delhi

**(C) Artistic Aspects of the Indo-Islamic Architecture.**

- (1) Introduction
- (2) Study and appreciation of following architectures.
  - (I) **Qutab Minar**, Delhi
  - (II) **Gol Gumbad** of Bijapur

**PRACTICAL**

- UNIT -1 Nature and Object Study (25 marks)**  
(Study of two or three natural and geometrical forms in pencil with light and shade from a fixed point of view. Natural forms like plants, vegetables, fruits and flowers etc. are to be used. Geometrical forms of objects like cubes, cones, prisms, cylinders and spheres should be used.)
- UNIT -2 Painting Composition (Nature and Life) (25 marks)**
- i. Simple exercises of basic design in variation of geometric and rhythmic shapes in geometrical and decorative designs and colours to understand designs as organized visual arrangements.
  - ii. Sketches from life and nature

**UNIT -3 Portfolio Assessments (20marks)**

- a) Record of entire year’s performance from sketch to finished product
  - b) Five selected Nature and Object study exercises in any media including minimum of two Still life exercises.
  - c) One selected work of paintings composition done during the year.
  - d) Two selected works of paintings done during the year.
- (These selected works prepared during the course by the candidates and certified by the school authorities as the work done in the school will be placed before the examiners for assessment.)

**MARKING SCHEME:**

<b>Part-I</b>	<b>Nature and Object Study</b>	<b>25 Marks</b>
	i. Drawing (Composition)	10
	ii. Treatment of media/Shading techniques	05
	iii. Overall impression	10
<b>Part-II</b>	<b>Painting Composition</b>	<b>25 Marks</b>
	i. Compositional arrangement including emphasis on the subject.	10
	ii. Treatment of Media (Colour) and appropriate colour scheme	05
	iii. Originality, Creativity and Overall impression.	10
<b>Part-III</b>	<b>Portfolio assessment</b>	<b>20 Marks</b>
	Record of entire year’s performance from sketch to finished product	10
	Five selected Nature and Object study exercises in any media including minimum of two Still life exercises.	05
	One selected work of paintings composition done during the year.	03
	Two selected works of paintings done during the year.	02

**FORMAT OF THE QUESTIONS****Part –I : Nature and Object Study**

- Draw and paint the still life from a fixed point of view
- All the art work should be done on the half imperial size
- The objects should be painted in realistic manner with proper light and shade and perspective etc.
- The objects for nature study and object study are to be arranged before the candidates.

**Part –II :Painting Composition**

- Painting Composition on any of the following five subjects
  1. Affairs of family friends and daily life.
  2. Affairs of family professional
  3. Games and sports activities
  4. Nature and fantasy
  5. National, religious, cultural, historical and social events and celebrations.
- Medium (any one)  
(Water Color, Pastel, Tempera, Acrylic)
- Paper size :Half-imperial size either vertically or horizontally.
- Weightage will be given on well composed drawing, effective use of media and effective composition.

**ACCOUNTANCY (055)**

Time: 3 Hours

Max. Marks: 100

THEORY: 80 MARKS

PRACTICAL (PROJECT): 20 MARKS

PRESCRIBED BOOK: I &amp; II ACCOUNTANCY BOOK (NCERT)

REFERENCE BOOK: T.S.GREWAL

**WEIGHTAGE TO FORM OF QUESTIONS**

TYPE	MARKS OF EACH QUESTION	NO. OF QUESTION	TOTAL MARKS
Objective type/ MCQ	1	20	20
Short answer type – I	3	6	18
Short answer type – II	4	3	12
Long answer type – I	6	5	30
<b>Total</b>		<b>34</b>	<b>80</b>

**SCHEME OF OPTION:**

There is no overall choice in the question paper. However, an internal choice has been provided in 7 questions of one mark, 2 questions of three marks, 1 question of four marks and 2 questions of six marks.

**TPOLOGY OF QUESTIONS**

- |                                    |   |                   |
|------------------------------------|---|-------------------|
| 1. Remembering and Understanding   | - | 55%(44 marks)     |
| 2. Applying                        | - | 23.75%(19 marks)  |
| 3. Analysing, Evaluating, Creating | - | 21.25% (17 marks) |

**\*\*Note –No. of questions and total marks under each section are subject to change with respect to CBSE sample paper/ DAVCAE sample paper 2024-25.**

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**COURSE STRUCTURE**

Unit	Chapters	Half Yearly	Pre-Annual / Annual Examination
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025 ANNUAL: 2nd Week of February 2025
1	Introduction to accounting Theory Base of accounting	25	12
2	Recording of Transactions Accounting Process: Preparation of Ledger, Trial Balance, and Bank Reconciliation statement. Rectification of Errors Depreciation, Provision and Reserves	55 -	44
3	Financial statements of sole – proprietorship and Incomplete records.	-	24
	Project Work Project File 12 Marks Viva Voce 08 Marks	20	20

Unit	Chapters	Half Yearly	Pre-Annual / Annual Examination
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025 ANNUAL: 2nd Week of February 2025
	Total	100	100

### SYLLABUS DETAILS

#### Part A: Financial Accounting-I

#### UNIT 1: THEORETICAL FRAME WORK

##### INTRODUCTION TO ACCOUNTING

- Accounting- concept, meaning, as a source of information, objectives, advantages and limitations, types of accounting information; users of accounting information and their needs. Qualitative Characteristics of Accounting Information. Role of Accounting in Business.
- Basic Accounting Terms- Entity, Business Transaction, Capital, Drawings. Liabilities (Non-Current and Current), Assets (Non-Current and Current); Expenditure (Capital and Revenue), Expenses, Revenue, Income, Profit, Gain, Loss, Purchase, Sales, Goods, Stock, Debtor, Creditor, Voucher, Discount (Trade discount and Cash Discount)

##### Theory Base of Accounting

- Fundamental accounting assumptions: GAAP Concept
- Basic accounting concept: Business Entity, Money Measurement, Going Concern, Accounting Period, Cost Concept, Dual Aspect, Revenue Recognition, Matching, Full Disclosure, Consistency, Conservatism, Materiality and Objectivity.
- System of Accounting. Basis of Accounting: cash basis and accrual basis
- Accounting Standards: Applicability of Ind AS
- Goods and Services Tax (GST): Characteristics and Advantages.

#### UNIT-2: ACCOUNTING PROCESS

##### Recording of Business Transactions

- Voucher and Transactions: Source documents and Vouchers, Preparation of Vouchers, Accounting Equation Approach: Meaning and Analysis, Rules of Debit and Credit.
- Recording of Transactions: Books of Original Entry-Journal
- Special Purpose books
- Cash Book: Simple, cash book with bank column and petty cashbook
- Purchases book
- Sales book
- Purchases return book
- Sales return book
- Journal Proper

*Note: Including Trade Discount, freight and cartage expenses for simple GST calculation.*

- Ledger: Format, Posting from journal and subsidiary books, Balancing of accounts

##### Bank Reconciliation Statement:

- Need and preparation, Bank Reconciliation Statement

##### Depreciation, Provisions and Reserves

- Depreciation: Meaning, Features, Need, Causes, factors



- Other similar terms: Depletion and Amortisation
- Methods of Depreciation:
  - i. Straight Line Method (SLM)
  - ii. Written Down Value Method (WDV)

**Note: Excluding change of method**

- Difference between SLM and WDV; Advantages of SLM and WDV
- Method of recording depreciation
  - i) Charging to asset account
  - ii) Creating provision for depreciation/accumulated depreciation account
- Treatment of disposal of asset
- Provisions and Reserves: Difference between provision and Reserve
- Types of Reserves:
  - i) Revenue reserve
  - ii) Capital reserve
  - iii) General reserve
  - iv) Specific reserve
  - v) Secret reserve
- Difference between capital and revenue reserve

**Trial balance and Rectification of Errors:**

Trial balance: objectives, meaning and preparation

(Scope: Trial balance with balance method only)

- Errors: classification-errors of omission, commission, principles, and compensating; their effect on Trial Balance.
- Detection and rectification of errors;
  - i) Errors which do not affect trial balance
  - ii) Errors which affect trial balance
- Preparation of suspense account.

**Part B : Financial Accounting – II**

**UNIT 3: FINANCIAL STATEMENTS OF SOLE PROPRIETORSHIP**

**Financial Statements**

Meaning, objectives and importance; Revenue and capital receipts. Capital and Revenue expenditure and deferred revenue expenditure. Opening journal entry.

Trading and Profit and Loss Account: Gross Profit, Operating profit and net profit.Preparation.

Balance Sheet: need, grouping and marshalling of assets and liabilities, Preparation.

Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, Abnormal loss, Goods taken for personal use/staff welfare, interest on capital and managers commission.

Preparation of Trading and Profit and Loss account and Balance Sheet of a sole proprietorship with adjustments.

**Incomplete Records:**

Features, reasons and limitations. Ascertainment of Profit/Loss by Statement of Affairs method. (excluding conversion method)

## Part C: Project Work (As per CBSE Guidelines)

**One specific Project to be assigned. Project / Practical Work : This will include Project/ Practical File – 12 marks Viva Voce – 08 marks**

- 1. Collection of source documents, preparation of vouchers, recording of transactions with the help of vouchers.**
- 2. Preparation of Bank Reconciliation Statement with the given cash book and the pass book with twenty to twenty-five transactions.**
- 3. Comprehensive project of any sole proprietorship business. This may state with journal entries and their ledgering, preparation of Trial balance. Trading and Profit and Loss Account and Balance Sheet. Expenses, incomes and profit (loss), assets and liabilities are to be depicted using pie chart / bar diagram. This may include simple GST related transactions**

**BUSINESS STUDIES (054)**

Time: 3 Hours

Max. Marks: 100

THEORY: 80 MARKS

PRACTICAL (PROJECT): 20 MARKS

PRESCRIBED BOOK:

- NCERT BUSINESS STUDIES

**WEIGHTAGE TO FORM OF QUESTIONS**

TYPE	MARKS OF EACH QUESTION	NO. OF QUESTION	TOTAL MARKS
Objective Type/ MCQ	1	20	20
Short Answer I	3	4	12
Short Answer II	4	6	24
Long Answer	6	4	24
<b>Total</b>		<b>34</b>	<b>80</b>

(NB: subject to change according to change in Sample Paper issued by CBSE)

**SCHEME OF OPTION**

There is no overall choice. However, there will be internal choice in 3 marks (2 choices), 4 marks (2 choices) and 6 marks (2 choices). In all, total 6 internal choices.

**TPOLOGY OF QUESTIONS**

1. Remembering and Understanding - 55% (44 marks)
2. Applying - 23.75% (19 marks)
3. Analyzing, Evaluating and Creating - 21.25% (17 marks)

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**COURSE STRUCTURE**

UNIT	CHAPTERS	HALF-YEARLY	PRE-ANNUAL / ANNUAL
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025 ANNUAL: 2nd Week of February 2025
1	Nature and Purpose of Business	30	16
2	Forms of Business Organizations		
3	Public, Private and Global Enterprises	30	14
4	Business Services		
5	Emerging Modes of Business	20	10
6	Social Responsibility of Business & Business Ethics		
7	Sources of Business Finance	-	20
8	Small Business	-	
9	Internal Trade	-	20
10	International Business	-	
11	Project Work	20	20
	<b>Total</b>	<b>100</b>	<b>100</b>

**SYLLABUS DETAILS****Part A: Foundation of Business****Unit 1: Evolution and Fundamentals of Business**

*History of Trade and Commerce in India:* Indigenous Banking System, Rise of Intermediaries, Transport, Trading Communities: Merchant Corporations, Major Trade Centers, Major Imports and Exports, Position of Indian Sub-Continent in the World Economy.

*Business*- meaning and characteristics; Business, profession and employment- Concept; Objectives of business; Classification of business activities - Industry and Commerce; Industry-types: primary, secondary, tertiary- meaning and sub groups; Commerce-trade: (types-internal, external; wholesale and retail) and auxiliaries to trade; (banking, insurance, transportation, warehousing, communication, and advertising) – Meaning; Business Risk-Concept, Nature, Types and causes.

### **Unit 2: Forms of Business organizations**

Sole Proprietorship- Concept, merits and limitations. Partnership-Concept, types, merits and limitation of partnership, registration of a partnership firm, Partnership deed, types of partners. Hindu Undivided Family Business: Concept, merits and limitations; Cooperative Societies-Concept, types, merits and limitations. Company-Concept, merits and limitations; Types: Private, Public and One Person Company – Concept, Formation of company-stages, important documents to be used in formation of a company; Choice of form of business organization.

### **Unit 3: Public, Private and Global Enterprises**

Public sector and private sector enterprises – Concept; Forms of public sector enterprises: Departmental Undertakings, Statutory Corporations and Government Company. Global enterprises – Features, Public private partnership, joint venture – concept.

### **Unit 4: Business Services**

Business services- meaning and types. Banking: Types of bank accounts- savings, current, recurring, fixed deposit and multiple option deposit account. Banking services with particular reference to Bank Draft, Bank Overdraft, Cash credit. E-Banking meaning, Types of digital payments; Insurance - Principles, Types –life, health, fire and marine insurance –concept. Postal Service-Mail, Registered Post, Parcel, Speed Post, Courier-meaning, Telecom Services - meaning.

### **Unit 5: Emerging Modes of Business**

E-business: concept, scope and benefits, E – business V/S traditional business.

### **Unit 6: Social Responsibility of Business and Business Ethics**

Concept of social responsibility, Case of social responsibility, Responsibility towards owners, investors, consumers, employees, government and community. Role of business in environment protection. Business Ethics-Concept and Elements.

## **Part B: Finance and Trade**

### **Unit 7: Sources of Business Finance**

Concept and importance of business finance, Owners' funds- Equity Shares, Preferences Share, Retained Earnings, Borrowed funds: Debentures and Bonds, Loan from Financial Institution and Commercial Banks, Public Deposits, Trade Credit, Inter Corporate Deposits (ICD), Difference between owner's fund and borrowed fund.

### **Unit 8: Small Business and Enterprises**

Entrepreneurship Development (ED): Concept, Characteristics and Need. Process of Entrepreneurship Development: Start-up India Scheme, ways to fund start-up. Intellectual Property Rights and Entrepreneurship; Small scale enterprise as defined by MSMED Act 2006 (Micro, Small and Medium Enterprise Development Act), Role of small business in India with special reference to rural areas. Government schemes and agencies for small scale industries: National Small Industries Corporation (NSIC) and District Industrial Centre (DIC) with special reference to rural, backward areas

### **Unit 9: Internal Trade**

Internal trade - meaning and types Services rendered by a wholesaler and a retailer, Types of retail-trade-Itinerant and small-scale fixed shops retailers, large scale retailers-Departmental stores, chain stores, mail order business – concept. GST (Goods and Services Tax): Concept and key-features

### **Unit 10: International Trade**

International trade – concept and benefits Export trade- Meaning, objectives and procedure Import Trade- Meaning, objectives and procedure. Documents involved in International Trade; indent, letter of credit, shipping order, shipping bills, mate's receipt (DA/DP), World Trade Organization (WTO) meaning and objectives.

### **Unit 11: Project Work**

As per CBSE guidelines

**ECONOMICS (030)****Prescribed Books :**

Statistics for Economics : NCERT

Introductory Micro Economics : NCERT

**COURSE STRUCTURE (THEORY)**

Sl No	Name of the Chapter	HALF YEARLY (80+20) Marks	PRE ANNUAL / ANNUAL (80+20) Marks
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025  ANNUAL: 2nd Week of February 2025
<b>Part A Statistics for Economics</b>			
1	Introduction	04	15
2	Collection of Data	10	
3	Organization of Data	06	
4	Presentation of Data	10	
5	Measures of Central Tendency	10	
7	Co-relation	NA	25
8	Index Number		
<b>Part B : Introductory Micro Economics</b>			
1	Introduction	8	04
2	Consumer equilibrium and demand	10	14
3	Production Function	10	14
4	Cost	12	
5	Revenue	NA	
7	Theory of Supply		
8	Forms of Market and Price Determination under perfect competition with simple applications		08
	TOTAL	<b>80+20</b>	<b>80+20</b>

**QUESTION PAPER DESIGN**

Marks: 80+20

Duration: 3hrs

Sl. No	Typology of Questions	Marks	Percentage
1	<b>Remembering and Understanding:</b> Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	44	55%
2	<b>Applying:</b> Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	18	22.5%
3	<b>Analyzing, Evaluating and Creating:</b> Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations. Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.	18	22.5%
	<b>Total</b>	<b>80</b>	<b>100%</b>
	<ul style="list-style-type: none"> <li>• Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%</li> <li>• Select response type questions (MCQ) = 20%</li> <li>• Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%</li> </ul>		

## SYLLABUS DETAILS

**Part A : Statistics for Economics****Unit 1: Introduction:**

What is Economics?

Meaning, scope, functions and importance of statistics in Economics

**Unit 2: Collection, Organisation and Presentation of data**

**Collection of data** - sources of data - primary and secondary; how basic data is collected with concepts of Sampling; methods of collecting data; some important sources of secondary data: Census of India and National Sample Survey Organisation.

**Organisation of Data:** Meaning and types of variables; Frequency Distribution.

**Presentation of Data:** Tabular Presentation and Diagrammatic Presentation of Data: (i) Geometric forms (bar diagrams and pie diagrams), (ii) Frequency diagrams (histogram, polygon and Ogives) and (iii) Arithmetic line graphs (time series graph).

**Unit 3: Statistical Tools and Interpretation**

For all the numerical problems and solutions, the appropriate economic interpretation may be attempted. This means, the students need to solve the problems and provide interpretation for the results derived.

**Measures of Central Tendency-** Arithmetic mean, median and mode

**Correlation** – meaning and properties, scatter diagram; Measures of correlation - Karl Pearson's method (two variables ungrouped data) Spearman's rank correlation.

**Introduction to Index Numbers** - meaning, types - wholesale price index, consumer price index and index of industrial production, uses of index numbers; Inflation and index numbers.

**PART B: INTRODUCTORY MICROECONOMICS****Unit 4: Introduction**

Meaning of microeconomics and macroeconomics; positive and normative economics

What is an economy? Central problems of an economy: what, how and for whom to produce; concepts of production possibility frontier and opportunity cost.

**Unit 5: Consumer's Equilibrium and Demand**

Consumer's equilibrium - meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer's equilibrium using marginal utility analysis.

Indifference curve analysis of consumer's equilibrium-the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium.

Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve; price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand – percentage-change method and total expenditure method.

**Unit 6: Producer Behaviour and Supply**

Meaning of Production Function – Short-Run and Long-Run

Total Product, Average Product and Marginal Product.

Returns to a Factor: Law of Variable Proportions

Cost: Short run costs - total cost, total fixed cost, total variable cost; average cost; average fixed cost, average variable cost and marginal cost-meaning and their relationships.

Revenue – total revenue, average revenue and marginal revenue - meaning and their relationship.

Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price elasticity of supply; measurement of price elasticity of supply - percentage-change method.

**Unit 7: Forms of Market and Price Determination under Perfect Competition with simple applications.**

Perfect competition - Features; Determination of market equilibrium and effects of shifts in demand and supply (Short Run Only)

Simple Applications of Demand and Supply: Price ceiling, price floor.

**Part C: Project in Economics****Guidelines for Project Work in Economics (Class XI)**

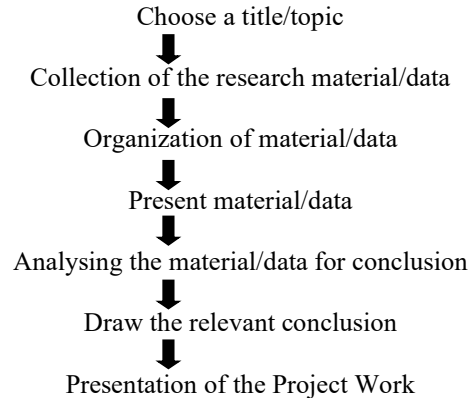
The **objectives** of the project work are to enable learners to:

- Probe deeper into theoretical concepts learnt in class XI

- Analyse and evaluate real world economic scenarios using theoretical constructs and arguments
- Demonstrate the learning of economic theory
- Follow up aspects of economics in which learners have interest
- Develop the communication skills to argue logically
- The **expectations** of the project work are that:
- Students would prepare only ONE project in the entire academic session, which is divided into 2 terms i.e. Term I and Term II.
- Project should be of 3,500-4,000 words (excluding diagrams & graphs), preferably hand-written
- It will be an independent, self-directed piece of study

### Scope of the project:

Learners may work upon the following lines as a suggested flow chart:



The project work can be in the form of Power Point Presentation or files.

### Expected Checklist:

- Introduction of topic/title
- Identifying the causes, consequences and/or remedies
- Various stakeholders and effect on each of them
- Advantages and disadvantages of situations or issues identified
- Short-term and long-term implications of economic strategies suggested in the course of research
- Validity, reliability, appropriateness and relevance of data used for research work and for presentation in the project file
- Presentation and writing that is succinct and coherent in project file
- *Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.*

### Mode of presentation/submission of the Project:

At the end of the stipulated term, each learner will present the research work in the Project File to the Internal examiner. **The questions should be asked from the Research Work/ Project File of the learner. The Internal Examiner should ensure that the study submitted by the learner is his/her own original work.** In case of any doubt, authenticity should be checked and verified.

### Marking Scheme :

Marks are suggested to be given as –

S. No.	Heading	Marks Allotted
1	Relevance of the topic	3
2	Knowledge Content/Research Work	6
3	Presentation Technique	3
4	Viva-voce (2 marks X 4 questions)	8
	<b>Total</b>	20 Marks

### Suggestive List of Projects:

- Effect on PPC due to various government policies
- Opportunity Cost as an Economic Tool (taking real life situations)
- Effect on equilibrium Prices in Local Market (taking real life situation or recent news)
- Solar Energy, a Cost Effective Comparison with Conventional Energy Sources

- Effect of Price Change on a Substitute Good (taking prices from real life visiting local market)
- Effect of Price Change on a Complementary Good (taking prices from real life visiting local market)
- Bumper Production- Boon or Bane for the Farmer
- Solar Energy, a Cost Effective Comparison with Conventional Energy Sources
- Any other newspaper article and its evaluation on basis of economic principles
- Any other topic



**ENTREPRENEURSHIP (066) 2023-24****Class-XI  
Syllabus (2023-24)****Time : 3 Hours****F. M. = 100****Theory = 70 Marks****Practical (Project) = 30 Marks****Prescribed Book :**

Entrepreneurship – NCERT

**Reference Book :**

Entrepreneurship by “All in One”

**Weightage of form of questions :**

Type	Marks of Each Question	No. of Questions	Total Marks
Very Short Answer-objective type	1	18	18
Short Answer (SA-I)	2	6	12
Short Answer (SA-II)	3	5	15
Long Answer(LA)	5	5	25
<b>Total</b>		<b>34</b>	<b>70</b>

**TPOLOGY OF QUESTIONS:**

1. Remembering and Understanding - 28.5%(20 marks)
  2. Applying - 43% (30 marks)
  3. Analysing, Evaluating and Creating - 28.5%(20 marks)
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
  - Select response type questions (MCQ) = 20%
  - Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

Unit	Chapters	HALF YEARLY 17 September – 27 September 2024	PRE-ANNUAL 1st Week of January 2025	ANNUAL EXAM 2nd Week of February 2025
1	Entrepreneurship: Concept and Functions	30	10	15
2	An entrepreneur		15	
3	Entrepreneurial journey	40	15	20

4	Entrepreneurship as innovation and problem solving		10	
5	Understanding the market	-	10	15
6	Business finance and arithmetic	-	10	20
7	Resource mobilization	-	-	
8	Project work	30	30	30
		<b>100</b>	<b>100</b>	<b>100</b>

### Syllabus in Detail

#### **Unit-1 : Entrepreneurship: Concept and Functions**

- Entrepreneurship – Concept, Functions, Need
- Why Entrepreneurship for you
- Myths about Entrepreneurship
- Advantages and Limitations of Entrepreneurship
- Process of Entrepreneurship
- Entrepreneurship - The Indian Scenario

#### **Unit-2 : An Entrepreneur**

- Why be an entrepreneur
- Types of Entrepreneurs
- Competencies and characteristics
- Entrepreneurial Values, Attitudes and Motivation
- Intrapreneur : Meaning and Importance

#### **Unit-3 : Entrepreneurship Journey**

- Idea Generation
- Feasibility Study and opportunity assessment
- Business Plan: meaning, purpose and elements
- Execution of Business Plan

#### **Unit-4 : Entrepreneurship as Innovation and Problem Solving**

- Entrepreneurs as problem solvers
- Innovations and Entrepreneurial Ventures - Global and Indian
- Role of technology - E-commerce and Social Media
- Social Entrepreneurship – Concept

#### **Unit-5 : Understanding the Market**

- Market: Concept and Types
- Micro and Macro Market Environment
- Market Research - Concept, Importance and Process
- Marketing Mix

#### **Unit-6 : Business Finance and Arithmetic**

- Unit of Sale, Unit Price and Unit Cost – for single product or service
- Types of Costs – Start up, Variable and Fixed
- Break Even Analysis – for single product or service

**Unit-7 : Resource Mobilization**

- Types of Resources – Physical, Human, Financial and Intangible
- Selection and utilization of human resources and professionals like Accountants, Lawyers, Auditors, Board Members, etc.

**Project Work (Any Two files)**

1. Visit of the District Industries Centre and prepare a report of activities and programs undertaken by them.
2. Conduct a case study of any entrepreneurial venture in your nearby area.
3. Field Visit: Visit any business firm near your locality; interact with the owner of the business firm and prepare a field report on parameters like: type of business, scale of business, product/service dealing in, target customer, problems faced and measures to solve the faced challenges.
4. Learn to Earn
5. Know your State Handicraft and Handlooms as a means of economic activity for the livelihood of people and intellectual property rights attached to them for the promotion of local specific skills.
  - 10 Marks each for 02 Projects
  - 5 Marks for Numerical Assessment
  - 5 Marks for Viva

**Note: Students need to complete two projects. Guidelines for project are given in the CBSE Textbook.**

**HISTORY (027)****PRESCRIBED BOOKS-**

THEMES IN WORLD HISTORY (NCERT)

**QUESTION PAPER DESIGN**

Section	Theme	MCQ		SA		LA		Source Based		Map	Total	
		No of question	MM (1)	No of question	MM (3)	No of question	MM (8)	No of question	MM (4)		Theory	Internal
I. Early Societies	Theme 1	3	1	1	3	-	-	1	4		10	
II. Empires	Theme 2 Theme 3	4	1	-	-	2	8	-	-		20 (10+10)	
III. Changing Traditions	Theme 4 Theme 5	6	1	2	3	-	-	2	4		20 (10+10)	
IV. Towards Modernisation	Theme 6 Theme 7	8	1	3	3	1	8	-	-		25 (10+15)	
Map											05	
Project												20
		21X 1=21		6X 3 = 18		3X 8=24		3X4=12		1X5=05	80	
<b>Total</b>											<b>100 marks</b>	

**N.B-**The above question paper pattern has been designed as per the CBSE sample paper 2023-24 (Std XII)

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**WEIGHTAGE BASED ON COMPETENCIES**

	Competencies	Total Marks	% Weightage
1	<b>Remembering:</b> Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	21	26.25%
	<b>Understanding:</b> Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating main ideas	18	22.50%
2	<b>Applying and Analysing :</b> applying acquired knowledge, facts, techniques and rules and solving the problem.	24	30%
3	<b>Formulating, Evaluating and Creating skills:</b> Examining, making inferences and finding evidence to support generalizations; Presenting and defending opinions by making judgments about information and piling information	12	15%
4	<b>Map skills-</b>	5	6.25%
		80	100%

**COURSE STRUCTURE, THEORY (80 MARKS)**

Sl No	TYPE OF TEST	Half Yearly (80 Marks)	Pre Annual / Annual (Board) (80 Marks)
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025 ANNUAL: 2nd Week

			of February 2025
<b>Section I: EARLY SOCIETIES</b>			
<b>Theme -1</b>	Writing and City life	<b>25</b>	<b>10</b>
<b>Section II: Empires</b>			
<b>Theme -2</b>	An empire across three continents	<b>25</b>	<b>10</b>
<b>Theme -3</b>	Nomadic Empires	<b>25</b>	<b>10</b>
<b>Section III: CHANGING TRADITIONS</b>			
<b>Theme -4</b>	The Three orders		<b>10</b>
<b>Theme -5</b>	Changing cultural traditions		<b>10</b>
<b>Section IV: TOWARDS MODERNISATION</b>			
<b>Theme -6</b>	Displacing Indigenous people		<b>10</b>
<b>Theme -7</b>	Paths to Modernisation		<b>15</b>
	<b>MAP WORK</b>	<b>5</b>	<b>5</b>
	<b>Total</b>	<b>80</b>	<b>80</b>
	<b>Project Work</b>		<b>20</b>
	<b>TOTAL</b>		<b>100</b>

**THEMES IN WORLD HISTORY**

Themes	Learning objectives	Suggestive Teaching learning process	Learning outcomes
<b>1. Writing and City Life</b> Focus: Iraq, 3rd millennium BCE a) Growth of towns. b) Nature of early urban societies. c) Historians' Debate on uses of writing.	<ul style="list-style-type: none"> <li>Familiarize the learner with the nature of early urban Centre's.</li> <li>Discuss whether writing is significant as a marker of civilization.</li> </ul>	<ul style="list-style-type: none"> <li>To use a table to bring out the connection between city life and culture of contemporary civilizations.</li> <li>Group discussion to discuss whether writing is significant as a marker of civilization.</li> <li>Using Visuals to explain</li> </ul>	At the completion of this unit students will be able to: <ul style="list-style-type: none"> <li>compare and analyse the transformation from Neolithic to Bronze Age Civilization in order to understand the myriad spheres of human development.</li> <li>elucidate the interwoven social and cultural aspects of civilization in order to understand the connection between city life and culture of contemporary civilizations.</li> <li>Analyze the outcomes of a sustained tradition of writing.</li> </ul>
<b>2. An Empire across Three Continents</b> Focus: Roman Empire, 27 BCE to 600 CE a) Political evolution. b) Economic Expansion. c) Religion-culture foundation. d) Late Antiquity. e) Historians' view on the Institution of Slavery .	<ul style="list-style-type: none"> <li>Familiarize the learner with the history of a major world empire.</li> <li>Discuss whether slavery was a significant element in the economy.</li> </ul>	<ul style="list-style-type: none"> <li>Quiz and Timeline discussion.</li> <li>Use of maps to facilitate an easier comprehension of the changing dynamics of political history. Group discussion on slavery as a significant element in the economy.</li> <li>Use of flow chart to learn the cultural transformation during that period</li> </ul>	<ul style="list-style-type: none"> <li>explain and relate the dynamics of the Roman Empire in order to understand their polity, economy, society and culture.</li> <li>analyze the implications of Roman's contacts with the subcontinent Empires.</li> <li>examine the domains of cultural transformation in that period .</li> </ul>
<b>3. Nomadic empires</b> Focus: The Mongol, 13th to 14th century a) The nature of nomadism . b) Formation of empires. c) Conquests and relations with other states. d) Historians' views on nomadic societies and state formation.	<ul style="list-style-type: none"> <li>Familiarize the learner with the varieties of nomadic society and their institutions.</li> <li>Discuss whether state formation is possible in nomadic societies.</li> </ul>	<ul style="list-style-type: none"> <li>Discussion on the life of pastoralist society.</li> <li>Textual reading and discussion about Genghis Khan.</li> <li>Watching Genghis Khan film and distinguish between the Mongolian people's perspective and the world's opinion about Genghis Khan</li> </ul>	<ul style="list-style-type: none"> <li>identify the living patterns of nomadic pastoralist society.</li> <li>trace the rise and growth of Genghis Khan in order to understand him as an oceanic ruler.</li> <li>analyze socio-political and economic changes during the period of the descendants of Genghis Khan. Distinguish between the Mongolian people's perspective and the world's opinion about Genghis Khan</li> </ul>

		<ul style="list-style-type: none"> <li>• Use case studies for deeper understanding of the sociopolitical and economic changes</li> </ul>	
<p><b>4.The Three Orders.</b> Focus: Western Europe 13th - 16th century</p> <p>a) Feudal society and economy. b) Formation of state. c) Church and society. d) Historians' views on decline of feudalism.</p>	<ul style="list-style-type: none"> <li>• Familiarize the learner with the nature of the economy and society of this period and the changes within them.</li> <li>• Show how the debate on the decline of feudalism helps in understanding processes of transition.</li> </ul>	<ul style="list-style-type: none"> <li>• Debate and explain the Historical phenomenon of feudalism. Discussion on the impact of feudalism.</li> <li>• Pictures and discussions held on renaissance paintings' or 'slave trade'</li> </ul>	<ul style="list-style-type: none"> <li>• explain the myriad aspects of feudalism with special reference to first, second, third and fourth order of the society.</li> <li>• relate between ancient slavery and serfdom .</li> <li>• assess the 14th century crisis and rise of the nation states.</li> </ul>
<p><b>5.Changing Cultural Traditions</b> Focus: Europe 14th -17th century</p> <p>a) New ideas and new trends in literature and arts. b) Relationship with earlier ideas. c) The contribution of West Asia. d) Historians' viewpoint on the validity of the notion 'European Renaissance. 'Renaissance'. Renaissance.</p>	<ul style="list-style-type: none"> <li>• Explore the intellectual trends in the period.</li> <li>• Familiarize students with the paintings and buildings of the period.</li> <li>• Introduce the debate around the idea of 'Renaissance'.</li> </ul>	<ul style="list-style-type: none"> <li>• Photos and Video clippings to understand the events and its impact. Field trip and research work on architectural and literary developments.</li> <li>• Graphic chart to compare the life of women during this period</li> <li>• Group work on Protestant reformation and catholic reformation and de brief.</li> </ul>	<ul style="list-style-type: none"> <li>• analyze the causes, events, and effects of the Renaissance, Reformation, Scientific Revolution, and Age of Exploration.</li> <li>• relate the different facets of Italian cities to understand the characteristics of Renaissance Humanism and Realism.</li> <li>• compare and contrast the condition of women in the Renaissance period.</li> <li>• recognize major influences on the architectural, artistic, and literary developments in order to understand the facades of Renaissance.</li> <li>• critical analysis of the Roman Catholic Church by Martin Luther and Erasmus and their impact on later reforms.</li> <li>• evaluate the Roman Catholic Church's response to the Protestant Reformation in the forms of the Counter and Catholic Reformations.</li> </ul>
<p><b>6.Displacing Indigenous People</b> Focus: North America and Australia, 18th to 20th century</p> <p>a) European colonists in North America and Australia. b) Formation of White Settler societies. c) Displacement and repression of local people. d) Historians' viewpoint on the impact of European settlement on indigenous population.</p>	<ul style="list-style-type: none"> <li>• Sensitize students to the processes of displacements that accompanied the development of America and Australia.</li> <li>• Understand the implications of such processes for the displaced populations.</li> </ul>	<ul style="list-style-type: none"> <li>• Use of factsheets, debates and group-discussions on such issues of displacements, supported with maps.</li> <li>• Narration of events with picture charts.</li> </ul>	<ul style="list-style-type: none"> <li>• recount some aspects of the history of the native people of America to understand their condition.</li> <li>• to analyze the realms of settlement of Europeans in Australia and America.</li> <li>• compare and contrast the lives and roles of indigenous people in these continents.</li> </ul>
<p><b>7.Paths to Modernization</b> Focus: East Asia, late 19th to 20th century</p> <p>a) Militarization and economic growth in Japan. b) China and the communist alternative. c) Historians' Debate on the meaning of modernization.</p>	<ul style="list-style-type: none"> <li>• Make students aware that transformation in the modern world takes many different forms.</li> <li>• Show how notions like 'modernization' need to be critically assessed.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of the concept of modernization and its application in various forms. Research work and textual reading to comprehend the impact of modernization.</li> <li>• Videos to understand the upsurge in China</li> </ul>	<ul style="list-style-type: none"> <li>• deduce the histories of China and Japan from the phase of imperialism to modernization.</li> <li>• explore the Japanese political, cultural and economic system prior to and after the Meiji Restoration.</li> <li>• analyze the domains of Japanese nationalism prior and after the Second World War.</li> <li>• summarize the nationalist upsurge in China from Dr Sun Yet Sen to Mao Ze Dong</li> </ul>

		and learn about the era.	to understand the era of communism. ● to analyze the Chinese path to modernization under Deng Xio Ping and Zhou en Lai in order to understand the transformation from rigid communism to liberal socialism
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#### LIST OF MAPS

1.	<b>Theme -3</b> An empire across three continents	Mediterranean Sea, Black Sea, Rome, Carthage, Alexandria, Antioch, Constantinople, Tripolitania, Cyrenaica, Sahara Desert, Gaul and River Danube
2.	<b>Theme -5</b> Nomadic Empires	Arabia, Red Sea, Arabian Sea, Moscow, China, Bagdad, Persia, Delhi, Tibet, Bay of Bengal,
3.	<b>Theme -7</b> Changing cultural traditions	Italian States, Florence, Bologna, Venice, Padua, Mantua, Genoa, Adriatic Sea, Mediterranean Sea, Sicily
4.	<b>Theme -10</b> Displacing Indigenous people	Indian Ocean, Pacific Ocean, Southern, Ocean, Darwin Perth, Melbourne, Adelaide, Sydney, Canberra and Tasmania

#### PROJECT WORK

##### INTRODUCTION:

History is one of the most important disciplines in school education. It is the study of the past, which helps us to understand our present and shape our future. It promotes the acquisition and understanding of historical knowledge in breath and in depth across cultures.

The course of history in senior secondary classes is to enable students to know that history is a critical discipline, a process of enquiry, a way of knowing about the past rather than just a collection of facts. The syllabus helps them to understand the process, through which a historian collects, chooses, scrutinizes and assembles different types of evidences to write history.

The syllabus in class-XI is organized around some major themes in world history. In class XII the focus shifts to a detailed study of some themes in ancient, medieval and modern Indian history.

CBSE has decided to introduce project work in history for classes XI and XII in 2013-14 as a part of regular studies in classroom, as project work gives students an opportunity to develop higher cognitive skills. It takes students to a life beyond text books and provides them a platform to refer materials, gather information, analyze it further to obtain relevant information and decide what matter to keep and hence understand how history is constructed

##### OBJECTIVES

Project work will help students:

- To develop skill to gather data from a variety of sources, investigate diverse viewpoints and arrive at logical deductions.
- To develop skill to comprehend, analyze, interpret, evaluate historical evidence and understand the limitation of historical evidence.
- To develop 21st century managerial skills of co-ordination, self-direction and time management.
- To learn to work on diverse cultures, races, religions and lifestyles.
- To learn through constructivism-a theory based on observation and scientific study.
- To inculcate a spirit of inquiry and research.
- To communicate data in the most appropriate form using a variety of techniques.
- To provide greater opportunity for interaction and exploration.
- To understand contemporary issues in context to our past.
- To develop a global perspective and an international outlook.
- To grow into caring, sensitive individuals capable of making informed, intelligent and independent choices.
- To develop lasting interest in history discipline.

##### GUIDELINES TO TEACHERS

This section provides some basic guidelines for the teachers to take up projects in History. It is very necessary to interact, support, guide, facilitate and encourage students while assigning projects to them.

- The teachers must ensure that the project work assigned to the students individually/ In-groups and discussed at different stages right from assigning topic, draft review to finalization.
- Students should be facilitated in terms of providing relevant materials, suggesting websites, obtaining of required permission for archives, historical sites, etc.
- The Project Work should be suitably spaced from April to November in classes XI and XII so that students can prepare for Final Examination.
- The teachers must ensure that the students submit original work.
- Project report should be Handwritten only. (Eco-friendly materials can be used by students)

***The following steps are suggested:***

1. Teacher should design and prepare a list of 15-20 projects and should give an option to a student to choose a project as per his/her interest.
2. The project must be done individually /In-groups.
3. The topic should be assigned after discussion with the students in the class to avoid repetition and should then be discussed at every stage of submission of the draft/final project work.
4. The teacher should play the role of a facilitator and should closely supervise the process of project completion, and should guide the children by providing necessary inputs, resources etc. so as to enrich the subject content.
5. The Project Work needs to enhance cognitive, affective, and psychomotor domains in the learners. It will include self-assessment and peer assessment, and progress of the child in project based and inquiry-based learning. Art integrated Activities, experiments, models, quizzes, role plays, group work, portfolios, etc., along with teacher assessment. (NEP-2020) The Project work can culminate in the form of Power Point Presentation/Exhibition/Skit/albums/files/song and dance or culture show /story telling/debate/panel discussion, paper presentation and whichever is suitable to visually impaired candidates.
6. Students can use primary sources available in city archives, Primary sources can also include newspaper cuttings, photographs, film footage and recorded written/speeches. Secondary sources may also be used after proper authentication.
7. Evaluation will be done by external examiner appointed by the Board in class XII and internal in class XI

**Note: The project reports are to be preserved by the school till the final results are declared, for scrutiny by CBSE.**

**FEW SUGGESTIVE TOPICS FOR CLASS XI PROJECTS**

1. Facets of the Industrialization in sixteenth- eighteenth centuries.
2. Crusades: causes; rationale; events; outcomes; Holy Alliance
3. Ancient History in depth: Mesopotamia
4. Greek Philosophy and City States
5. Contributions of Roman Civilization
6. The spirit of Renaissance: Manifestation in art; Literature; Sculpture; Influence on Trading Community; Social Fabric; Philosophy; Political Values; Rational Thinking; Existentialism
7. Aspects of Development -South American States /Central American States
8. Different schools of thoughts- Realism: Humanism: Romanticism
9. Piecing together the past of Genghis Khan
10. Myriad Realms of Slavery in ancient, medieval, and modern world
11. History of Aborigines – America / Australia
12. Facets of Modernization – China / Japan / Korea

(Projects are an imperative component in enhancing students learning with the related themes. In the research project, students can go beyond the textbook and explore the world of knowledge. They can conceptualize under the embedded themes. Forms of rubrics are a significant aspect and to be discussed in the classroom itself for clear understanding of concept and for assessment.)



**Note: Please refer Circular No. Acad.16/2013 dated 17.04.2013 for complete guidelines.**

### **Guidelines for History Project Work: 20 Marks**

One Project to be done throughout the session, as per the existing scheme.

#### **1.Steps involved in the conduct of the project:**

Students may work upon the following lines as a suggested flow chart:

1. Choose a Title/Topic
2. Need of the Study, Objective of the Study
3. Hypothesis
4. Content -Timeline, Maps, Mind maps, Pictures, etc.
5. (Organization of Material/Data
6. Present Material/Data)
7. Analyzing the Material/Data for Conclusion
8. Draw the Relevant Conclusion
9. Bibliography

#### **2. Expected Checklist for the Project Work:**

- Introduction of topic/title
- Identifying the causes, events, consequences and/or remedies
- Various stakeholders and effect on each of them
- Advantages and disadvantages of situations or issues identified
- Short-term and long-term implications of strategies suggested during research
- Validity, reliability, appropriateness, and relevance of data used for research work and for presentation in the project file
- Presentation and writing that is succinct and coherent in project file
- Citation of the materials referred to, in the file in footnotes, resources section, bibliography etc.

#### **3. Assessment of Project Work:**

- Project Work has broadly the following phases: Synopsis/ Initiation, Data Collection, Data Analysis and Interpretation, Conclusion.
- The aspects of the project work to be covered by students can be assessed during the academic year.
- 20 marks assigned for Project Work can be divided in the following manner:

#### **ASSESSMENT**

#### **Allocation of Marks (20)**

**The marks will be allocated under the following heads:**

	<b>Assessment Rubrics</b>	<b>Marks</b>
<b>1</b>	Introduction, Statement of Purpose/Need and objectives of the study, Hypothesis/Research Question, Review of Literature, Presentation of Evidence, Methodology, Questionnaire, Data Collection.	<b>6</b>
<b>2</b>	Significance and relevance of the topic; challenges encountered while conducting the research.	<b>5</b>
<b>3</b>	Content analysis and its relevance in the current scenario. Conclusion, Limitations, Bibliography, Annexures and Overall Presentation	<b>5</b>
<b>4</b>	External/ Internal Viva based on the project	<b>4</b>
	<b>TOTAL</b>	<b>20</b>

**GEOGRAPHY (029)****Time Allowed: 3 Hours****Maximum Marks: 70****PRESCRIBED BOOKS:**

1. Fundamentals of Physical Geography, Class -XI(NCERT)
  2. India-Physical Environment, Class -XI(NCERT)
  3. Practical Work in Geography, Part-I, Class XI(NCERT)
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
  - Select response type questions (MCQ) = 20%
  - Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**COURSE STRUCTURE**

Unit No	TYPES OF TEST	HALF YEARLY (70 Marks)	PRE ANNUAL / ANNUAL (70 Marks)
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025  ANNUAL: 2nd Week of February 2025
<b>Fundamentals of Physical Geography</b>			
1	Ch-1:Geography as a Discipline	5	3
2	Ch-2:The Origin & Evolution of the earth	15	9
	Ch-3:Interior of the Earth		
	Ch-4:Distribution of Oceans & Continents		
3	Ch-5:Geomorphic Processes	10	6
	Ch-6:Landform and their Evolution		
4	Ch-7:Composition& Structure of the Atmosphere.	---	8
	Ch-8:Solar Radiation, Heat balance & Temperature		
	Ch-9:Atmospheric Circulation and Weather Systems.		
	Ch-10:Water in Atmosphere		
	Ch-11:World Climate & Climate Change (To be tested through internal assessments in the form of projects and presentation)		
5	Ch-12:Water (Oceans)	---	4
	Ch-13:Movements of Ocean Water		
6	Ch-14:Biodiversity and Conservation (To be tested through internal assessments in the form of projects and presentation)		----
	Map work on identification	5	5
<b>India-Physical Environment</b>			
1	Ch-1:India- Location	10	5
2	Ch-2:Structure& Physiography	11	13
	Ch-3: Drainage System	9	
3	Ch-4:Climate	-----	12
	Ch-5:Natural Vegetation		
4	Ch-6:Natural Hazards and Disasters (To be tested through internal assessments in the form of projects and presentation)		---

Unit No	TYPES OF TEST	HALF YEARLY (70 Marks)	PRE ANNUAL / ANNUAL (70 Marks)
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025  ANNUAL: 2nd Week of February 2025
	Map work on location	5	5
	<b>Total Marks</b>	<b>70</b>	<b>70</b>

**Geography Practical Part-I**

UNIT	NAME	HALF-YEARLY	ANNUAL
<b>ONE</b>	Ch-1: Introduction to Maps	4	3
	Ch-2: Map Scale	7	4
	Ch-3: latitude, Longitude & Time	7	4
	Ch-4: Map Projection	7	4
<b>TWO</b>	Ch-5: Topographical Maps	---	4
	Ch-6: Introduction to Remote Sensing	---	6
	<b>Practical file (3 marks) &amp; Viva voce (2 marks)</b>	5	5
	<b>Total Marks</b>	<b>30</b>	<b>30</b>

**COURSE CONTENT****FUNDAMENTALS OF PHYSICAL GEOGRAPHY**

Chapter and Name	Specific Learning Objectives	Suggested Teaching Learning Process	Learning Outcomes
Ch-1: Geography as a Discipline	<ul style="list-style-type: none"> <li>To define and understand the scope and nature of Geography as a discipline.</li> </ul>	<p>Observe your surroundings and note down the variation in natural as well as cultural phenomena. Discuss with your partner: Geography is the study of “areal differentiation” Project Work Topic: - Forest - as a natural resource.</p> <ul style="list-style-type: none"> <li>Prepare a map of India showing the distribution of different types of forests.</li> <li>Write about the economic importance of forests for the country.</li> <li>Prepare a historical account of conservation of forests in India with focus on Chipk movements in Rajasthan and Uttaranchal.</li> </ul>	<p><b>At the completion of this unit students will be able to:</b></p> <ul style="list-style-type: none"> <li>explain the meaning geography as an integrating discipline</li> <li>state the fields of geography and its relation with other disciplines.</li> <li>explain the approaches to study geography</li> </ul>
Ch-2: The Origin and Evolution of the Earth	<ul style="list-style-type: none"> <li>To acquire knowledge about earth's origin through various theories.</li> <li>To understand stages in the evolution of the earth.</li> </ul>	<ul style="list-style-type: none"> <li>Watch videos of theories (Big Bang etc.) in the class room through projector.</li> <li>Presentation and interaction about the origin of the earth by students</li> <li>Students to explore more information related to the topic</li> </ul>	<ul style="list-style-type: none"> <li>describe the Big Bang, Planetesimal theory, Nebular Hypothesis related to the origin of the universe</li> </ul>
Ch-3: Interior of the Earth	<ul style="list-style-type: none"> <li>To understand that the configuration of the surface of the earth is largely a product of the exogenic and endogenic processes operating in the interior of the earth</li> </ul>	<p><b>Activity: Draw a well labelled diagram to show the interior of the earth.</b></p> <ul style="list-style-type: none"> <li>Draw a diagram of a volcano and mark the following parts: a. Magma Chamber b. Vent c. Central Pipe d. Lava flow</li> <li>Draw a diagram to show the intrusive volcanic forms.</li> <li>Case study of earthquakes that occurred in India in recent times and</li> </ul>	<ul style="list-style-type: none"> <li>describe direct and indirect sources of information about the interior of the earth.</li> <li>discuss Earthquakes—its causes and effects, define : Epi centre, Hypo centre, Earthquake waves and its propagation, Shadow zones, Measuring the intensity of Earthquakes.</li> <li>explain the interior structure of</li> </ul>

		in Turkey.	the earth. <ul style="list-style-type: none"> <li>explain Volcanoes, its types and volcanic landforms</li> </ul>
Ch-4 : Distribution of seas and oceans	<ul style="list-style-type: none"> <li>To describe the theory of continental drift proposed by Alfred Wegner.</li> <li>To understand the present configuration of continents and oceans through plate tectonics theory.</li> </ul>	<p>On the outline world map mark and label the following: a. Major plate boundaries b. Ring of fire c. Hot spot Volcanoes</p> <ul style="list-style-type: none"> <li>Draw diagrams to show different types of plate boundaries.</li> <li>Case Study: <a href="https://www.downtoearth.org.in/news/natural-disasters/out-of-theabyss-56977">https://www.downtoearth.org.in/news/natural-disasters/out-of-theabyss-56977</a></li> </ul>	<ul style="list-style-type: none"> <li>provide evidences in support of continental drift and force for drifting.</li> <li>explain Post drift studies, Convectional current theory, Mapping of the ocean floor, Ocean floor configuration, Concept of sea-floor spreading,</li> <li>describe theory of plate tectonics and different types of plate boundaries.</li> <li>trace the movements of Indian Plate.</li> </ul>
Ch-5 Geomorphic Processes	<ul style="list-style-type: none"> <li>To understand various exogenic and endogenic processes responsible to bring changes in the configuration of the surface of the earth</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a concept map to show different Exogenic and Endogenic Processes.</li> <li>Students will prepare concept map on denotational processes.</li> <li>Study types of weathering: Physical, Chemical, Biological and understanding their importance for human being.</li> <li>Study types of mass movements and prepare a mind map.</li> </ul>	<ul style="list-style-type: none"> <li>describe and draw various erosional and depositional landforms created by different agents. • Students will be able to compare and analyse various landforms</li> <li>locate different landforms (mountains, plateaus, plains) on the outline map of the world.</li> </ul>
Ch-6 Landforms and their Evolution	<ul style="list-style-type: none"> <li>To understand the nature of different erosional and depositional agents and landforms made by them.</li> </ul>	<ul style="list-style-type: none"> <li>Visit nearby landforms and draw sketches.</li> <li>Draw neat and well labelled diagrams of landforms created by running water, wind and waves etc.</li> <li>Watch videos of different landforms created by running water, underground water, glacier, wind, sea waves etc.</li> <li>Find out the advantages and disadvantages of different landforms from the internet.</li> <li>Prepare charts to show different landforms</li> </ul>	<ul style="list-style-type: none"> <li>describe and draw various erosional and depositional landforms created by different agents.</li> <li>students will be able to compare and analyse various landforms</li> <li>locate different landforms (mountains, plateaus, plains) on the outline map of the world.</li> </ul>
Ch-7 Composition and Structure of Atmosphere	<ul style="list-style-type: none"> <li>To understand the composition and structure atmosphere.</li> </ul>	<ul style="list-style-type: none"> <li>Watch a video on the importance of different layers of the atmosphere.</li> <li>Write songs based on different seasons.</li> <li>Draw a neat and well labelled diagram to show different layers of the atmosphere and write the importance of each layer.</li> </ul>	<ul style="list-style-type: none"> <li>describe the composition and characteristics of different layers of atmosphere.</li> <li>correlate climate change with Sustainable Development Goals13: Climate Action.</li> </ul>
Ch-8 Solar Radiation, Heat Balance and Temperature	<ul style="list-style-type: none"> <li>To understand the heating and cooling of the atmosphere and the resultant temperature distribution over the surface of the earth.</li> </ul>	<ul style="list-style-type: none"> <li>Students to learn about the three different modes of heat transfer— convection, conduction, radiation— with the help of an activity and how they are related to the Sun and life on our planet.</li> <li>Draw a diagram to show the passage of solar radiation through the atmosphere.</li> <li>Study the figure 9.4 and 9.5 and write the distribution of surface</li> </ul>	<ul style="list-style-type: none"> <li>differentiate between solar radiation and terrestrial radiation.</li> <li>give reasons for variability of insolation at the surface of the earth.</li> <li>Explain the heat budget of the planet earth</li> <li>describe factors controlling temperature distribution.</li> <li>explain inversion of</li> </ul>

		temperature in the month of January and July.	temperature.
Ch-9 Atmospheric Circulation and Weather Systems	<ul style="list-style-type: none"> <li>To understand the general atmospheric circulation and the forces that control the circulation.</li> <li>To understand the meaning of various terms related to the topic.</li> <li>To know the causes and consequences of air circulation.</li> </ul>	<ul style="list-style-type: none"> <li>Students may read various theories and articles related to atmospheric circulation and weather system.</li> <li>Students are advised to watch live videos related to the topic winds: The students can be encouraged to prepare presentation on different topics in the chapter.</li> <li>Examine the weather conditions necessary for the formation of cyclones, tornadoes, hurricanes etc.</li> </ul>	<ul style="list-style-type: none"> <li>describe the permanent pressure belts and the prevailing winds.</li> <li>explain different types of winds.</li> <li>differentiate between tropical and extra tropical cyclones.</li> <li>realize how global warming is result of atmospheric pollution and how it can be minimised if not prevented.</li> </ul>
Ch-10 Water in the Atmosphere	<ul style="list-style-type: none"> <li>To understand continuous exchange of water between the atmosphere, the oceans and the continents through the processes of evaporation, transpiration, condensation and precipitation</li> </ul>	<ul style="list-style-type: none"> <li>Make a list of different forms of condensation and precipitation and define them.</li> <li>Draw diagrams of different types of rainfall.</li> <li>On a world map mark and label areas of heavy, moderate, low and inadequate rainfall.</li> </ul>	<ul style="list-style-type: none"> <li>explain the process of precipitation and its different forms.</li> <li>analyse the variation in the distribution of rainfall in the world.</li> </ul>
Ch-11 World Climate and Climate Change (To be tested through internal assessments in the form of project and presentation)	<ul style="list-style-type: none"> <li>To define three broad approaches that have been adopted for classifying climate – Empirical Classification, Genetic Classification, and Applied Classification.</li> <li>To Describe various types of climates and their groups/subtypes.</li> <li>To analyse Koeppen’s Scheme of Classification of Climate.</li> <li>To explain climate change and related concepts.</li> <li>To evaluate the climate changes in the recent past.</li> </ul>	<ul style="list-style-type: none"> <li>Classify climate based on various schemes by Koeppen with the help of a mind map.</li> <li>Describes the causes and effects of global warming.</li> <li>Evaluate the climate changes in the recent pas</li> </ul>	<ul style="list-style-type: none"> <li>the topic can be presented in class through PPT or Project Work after conducting extensive and guided research by students.</li> </ul>
Ch-12 Water (Oceans)	<ul style="list-style-type: none"> <li>To explain water cycle and summarize how an increase in demand for water leads to a water crisis.</li> <li>To Illustrate major and minor ocean floor features. (mid oceanic ridges, seamounts, submarine canyons, guyots, and atolls)</li> <li>To describe horizontal and vertical distribution of oceanic temperature.</li> <li>To evaluate the factors affecting the salinity of ocean waters</li> </ul>	<ul style="list-style-type: none"> <li>Draw a diagram to show major and minor features of ocean floor.</li> <li>Study figure 13.5 and analyse the horizontal distribution of salinity in different oceans.</li> <li>Locate and label the major seas on a political map of the world (As given in map list).</li> </ul>	<ul style="list-style-type: none"> <li>describe the basic processes involved in hydrological cycle with the help of a well labelled diagram.</li> <li>describe the relief features of the ocean floor.</li> <li>explain the process of heating and cooling of oceanic water and factors that affect temperature distribution in the ocean.</li> <li>describe the salinity of ocean waters.</li> </ul>
Ch-13 Movements of Ocean Water	<ul style="list-style-type: none"> <li>To define and differentiate between tides and currents.</li> <li>To describe the formation of sea waves.</li> <li>To analyse the importance of tides.</li> <li>To classify and describe</li> </ul>	<ul style="list-style-type: none"> <li>Mark and label the major warm and cold currents on an outline world map. (As per the given map list)</li> <li>Draw a diagram of spring and neap tides.</li> </ul>	<ul style="list-style-type: none"> <li>explain tides, currents and waves.</li> <li>analyse the economic significance of tides.</li> <li>describe ocean currents and the forces that influence them.</li> <li>distinguish between cold and</li> </ul>

	major ocean currents and its effects.		warm ocean currents.
Ch-14 Biodiversity and Conservation	<ul style="list-style-type: none"> <li>To explain the three major realms of the environment.</li> <li>To explain the concept of ecology.</li> <li>To analyse the features and types of aquatic ecosystems and biomes, with examples.</li> </ul>	<ul style="list-style-type: none"> <li>Make a list of flora and fauna found in your surroundings and make a scrap book containing information and pictures of at least ten species.</li> </ul>	<ul style="list-style-type: none"> <li>describe the characteristic features of the biosphere</li> <li>define ecology and related terms and explain the need for ecological balance.</li> <li>recognize the a biotic and biotic factors of the ecosystem.</li> <li>to compare and contrast the features of five major biomes of the world – forest, grassland, desert, aquatic, and altitudinal.</li> </ul>

## INDIA PHYSICAL ENVIRONMENT

Chapter No. Chapter Name	Specific Learning Objectives	Suggested Teaching Learning Process	Learning Outcomes
Ch-1 India- Location	<ul style="list-style-type: none"> <li>To understand the geographical location of India and its significance.</li> </ul>	<ul style="list-style-type: none"> <li>On an outline map of India mark all the neighboring countries and compare the size of India with its neighbours.</li> <li>Make a list of all the states that share common boundary with our neighboring countries.</li> <li>Mark and label the land boundary and coastline on an outline map of India.</li> <li>On a political map of India mark and label the states and UTs.</li> </ul>	<ul style="list-style-type: none"> <li>describe the location of India mentioning the surrounding water bodies.</li> <li>analyse the implications of living in a country with vast longitudinal and latitudinal extent and its impact on the standard time of India.</li> <li>explain the vastness of India and the diversity that comes along with it.</li> </ul>
Ch-2 Structure and Physiography	<ul style="list-style-type: none"> <li>To understand the evolution of different geological structures in India.</li> <li>To acquire knowledge about physiographic divisions and their subdivisions.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the physiographic and geological region you live in. Discuss the impact of physiography on the development of your region.</li> <li>On an outline map of India mark and label the physiographic divisions of India.</li> </ul>	<ul style="list-style-type: none"> <li>explain the evolution of various geological structures in different parts of the country.</li> <li>describe major physiographic divisions and the processes of their formation.</li> <li>locate the major physical features on the map of India.</li> </ul>
Ch-3 Drainage System	<ul style="list-style-type: none"> <li>To understand the drainage system and drainage patterns of Indian rivers.</li> <li>To understand the extent of use ability of river water and the problems associated with it.</li> </ul>	<ul style="list-style-type: none"> <li>Have a group discussion in your class about floods-their positive and negative impact.</li> <li>Make a list of east flowing and west flowing rivers of Peninsular region.</li> </ul>	<ul style="list-style-type: none"> <li>understand the major drainage systems of India.</li> <li>analyse the causes of river water pollution.</li> <li>differentiate between Himalayan and Peninsular rivers.</li> </ul>
Ch-4 Climate	<ul style="list-style-type: none"> <li>To understand Indian monsoon : and its mechanism.</li> <li>To list the weather conditions that prevail during different seasons.</li> <li>To analyse the variation in distribution of rainfall in India.</li> </ul>	<ul style="list-style-type: none"> <li>Students to mark and label the hottest, coldest, driest and wettest place in India. (on a political map.</li> <li>Students should be made to understand Air Quality Index.</li> <li>The Air Quality Index is a way for the government to alert people to the quality of the air and how bad the air pollution is in an area or city. They use colours to help you determine if you should go outside.</li> </ul>	<ul style="list-style-type: none"> <li>discuss the factors affecting climate of the country and its effect on country's economic life.</li> <li>understand the annual cycle of four main seasons in India.</li> <li>able to realize the causes and problems of climate changes.</li> <li>able to understand the concept of Global Warming.</li> </ul>

Chapter No. Chapter Name	Specific Learning Objectives	Suggested Teaching Learning Process	Learning Outcomes
		<ul style="list-style-type: none"> <li>● Green-the air is good.</li> <li>● Yellow-the air is moderate</li> <li>● Orange - the air is unhealthy for sensitive people like the elderly, children, and those with lung diseases.</li> <li>● Red –Unhealthy</li> <li>● Purple –Very unhealthy</li> <li>● Maroon -Hazardous</li> </ul>	
Ch : 5 Natural Vegetation	<ul style="list-style-type: none"> <li>● To understand the relationship between vegetation belts and the climate.</li> </ul>	<ul style="list-style-type: none"> <li>● Students would be able to enhance their communication skills by debating on positive and negative impact of human activities on forest cover and wildlife.</li> <li>● To mark all major types of forests on a map of India.</li> <li>● Class can be divided into groups to collect information about people's (common man) participation in the conservation of forests and wildlife.</li> </ul>	<ul style="list-style-type: none"> <li>● the students will be able to recognise the importance of forest cover in the country and its spatial distribution.</li> <li>● they will learn about number of species of plants and animals in India.</li> <li>● they will appreciate the efforts in conservation of forests and wildlife.</li> </ul>
Ch-6 Natural Hazards and Disasters (To be tested through internal assessment in the form of Projects and presentation)	<ul style="list-style-type: none"> <li>● To make students aware about natural hazards and disasters happening in various parts of the country, their impact and ways to mitigate the damage caused by them.</li> </ul>	<ul style="list-style-type: none"> <li>● Divide your class in to groups and allocate one disaster to each group.</li> <li>● Every group should think of themselves as living in a disaster prone area of their allocated topic.</li> <li>● All groups would give a presentation on causes , impact and risk reduction of that disaster.</li> </ul>	<ul style="list-style-type: none"> <li>● classifies different types of hazards and disasters.</li> <li>● describes causes effects and mitigation policy for various natural disasters.</li> <li>● able to identify and locate regions prone to different disasters on the map.</li> <li>● understands the concept of disaster management.</li> </ul>

### QUESTION PAPER DESIGN

QUESTION TYPES	TOTAL MARKS & % (70 Marks)
Competency Focused Questions (MCQs/ Case Based, Source Based integrated questions or any other type)	35 marks (50%)
Select Response Type (MCQs)	14 Marks (20%)
Constructed Response Questions (SA & LA Type )	21 marks (30%)
<b>TOTAL</b>	<b>70 Marks (100 %)</b>

### LIST OF MAP ITEMS IN GEOGRAPHY FUNDAMENTALS OF PHYSICAL GEOGRAPHY

(Map Items for locating and labelling on outline political map of the World)

#### Ch-4: Distribution of Oceans & Continents

- Political Map of all Continents of the world.
- Major Oceans of the world: Indian Ocean, Pacific Ocean, Atlantic Ocean, Arctic Ocean, Southern Ocean
- Major lithospheric plates and Minor lithospheric plates, Ring of fire (Pacific Ocean), Mid-Atlantic Ridge.

**Ch-9: Atmospheric Circulations and Weather systems****Major Hot Deserts of the world:**

- Mojave Desert- Nevada, US
- Patagonian Desert- Argentina
- Sahara- Africa
- Gobi Desert- Mongolia, Asia
- Thar desert- India
- Great Victoria desert- Australi

**Ch-12: Water(Oceans)**

**Major seas:** Black sea , Baltic sea ,Caspian Sea , Mediterranean Sea , North Sea , Red sea , Bay of Fundy (Canada)-Famous for the highest tides in the world

**Ch-14: Movements of Ocean Currents****OCEAN CURRENTS-**

**Cold currents :-** Humboldt c. , California c. , Falkland c. •,Canaries c. , West Australian c. , Oyashio c. ,Labrador c.

**Warm currents :-** Alaska c. , Brazilian c., Aughlas c. , Kuroshio c., Gulf stream c.,

**Ch- 14:Biodiversity& Conservation**

**Ecological hotspot:-** Eastern Himalaya(India) ,Western ghats(India) , Indonesia,(Asia) ,Eastern Madagascar(Africa) ,Upper Guinean forests( Africa) , Atlantic forest,(Brazil) , Tropical Andes

**INDIA-PHYSICAL ENVIRONMENT**

**(Map Items for locating and labelling on outline political map of India)**

**CH-1: INDIA-LOCATION**

Latitudinal extent of India , Longitudinal extent of India , Standard Meridian of India ,Important latitude passing through India (Tropic of Cancer) , Southern Most Point of main land of India (Kanya Kumari).

**CH-2: PHYSICAL FEATURES OF INDIA**

**Mountains:** Karakoram Range, Garo- Khasi- Jaintia hills, Aravalli Range, Vindhyan Range, Satpura Range, Western ghats & Eastern ghats

**Peaks:** K2, Kanchenjunga, Nandadevi, Nanga Parvat, Namcha Barwa and Anaimud

**Passes:** Shipkila, Nathula, Palghat, Bhor ghat and Thal ghat

**Plateaus:** Malwa, Chhotnagpur, Meghalaya and Deccan Plateau.

**Coastal Plains:** Saurashtra, Konkan, North and South Kanara, Malabar, Coromandel and Northern Circars Islands: Andaman & Nicobar Islands and Lakshadweep Islands

**CH-3: DRAINAGE**

**Rivers:** Brahmaputra, Indus, Satluj, Ganga, Yamuna, Chambal, Damodar Mahanadi, Krishna, Kaveri, Godavari, Narmada, Tapti and Luni .

**Lakes: (Identification)**Wular, Sambhar, Chilika, Kolleru, Pulica t&Vembanad

**Straits, Bays , Gulfs:** Palk Strait, Rann of Kachch, Gulf of Kachch, Gulf of Mannar & Gulf of Khambat

**CH-4: CLIMATE**

Area with highest temperature in India , Area with lowest temperature in India ,Area with highest rainfall in India , Area with lowest rainfall in Indi

**CH-5: NATURAL VEGETATION**

**(Identification on an outline map of India)-**Tropical evergreen, Tropical deciduous, Tropical thorn, Montane and Littoral/Swamp forests.

**Wildlife reserves: (locating and labeling)**

**National Parks:-** Corbett, Kaziranga, Ranthambore. Shivpuri, Simlipal

**Bird Sanctuaries:-**Keoladev Ghana and Ranganathitto,

**Wild life Sanctuaries:-** Periyar, Rajaji, Mudumalai, Dachigam



**POLITICAL SCIENCE (Code No.028)****Prescribed Book:**

1. INDIA CONSTITUTION AT WORK, CLASS XI (NCERT)
  2. POLITICAL THEORY, CLASS XI (NCERT)
  3. Uploaded additional Study Materials
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
  - Select response type questions (MCQ) = 20%
  - Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**COURSE STRUCTURE**

SL NO	EXAM TIME PERIOD	Half Yearly (80 Marks)	Pre Annual / Annual Exam (80Marks)
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025  ANNUAL: 2nd Week of February 2025
<b>PART A: INDIAN CONSTITUTION AT WORK</b>			
1	Constitution: Why and How?	12	08
2	Rights in the Indian Constitution		
3	Election and Representation	10	06
4	Legislature	18	12
5	Executive		
6	Judiciary		
7	Federalism	-	06
8	Local Governments	-	04
9	Constitution as a living document	-----	04
10	Philosophy of the Indian Constitution		
	<b>TOTAL</b>	<b>40</b>	<b>40</b>
<b>PART B: POLITICAL THEORY</b>			
1	Political Theory: An Introduction	08	04
2	Freedom	20	12
3	Equality		
4	Social Justice	12	06
5	Rights		04
6	Citizenship		08
7	Nationalism		
8	Secularism		06
	<b>TOTAL</b>	<b>40</b>	<b>40</b>

**Project Work: 20 Marks, Grand Total = 100 Mark**

**COURSE CONTENTS****Part A: Indian Constitution At Work****Ch 1: Constitution: Why and How?**

- a) Why do we need a Constitution?
  - Constitution allows coordination and assurance
  - Specification of decision-making powers
  - Limitations on the powers of government
  - Aspirations and goals of a society
  - Fundamental identity of a people
- b) The authority of a Constitution
  - Mode of promulgation

- The substantive provisions of a constitution
  - Balanced institutional design
- c) How was the Indian Constitution made?
- Composition of the Constituent Assembly
  - Procedures
  - Inheritance of the nationalist movement
  - Institutional arrangements
- d) Provisions adapted from Constitutions of different countries.

### **Ch2: Rights in the Indian Constitution**

- a) The importance of rights
- Bill of Rights
- b) Fundamental rights in the Indian Constitution
- Right to Equality
  - Right to Freedom
  - Right against Exploitation
  - Right to Freedom of Religion
  - Cultural and Educational Rights
  - Right to Constitutional Remedies
- c) Directive principles of state policy
- What do the directive principles contain?
- d) Relationship between fundamental rights and directive principles.

### **Ch 3: Election and Representation**

- a) Elections and democracy
- b) Election system in India
- First Past the Post System
  - Proportional Representation
- c) Why did India adopt the FPTP system?
- d) Reservation of constituencies
- e) Free and fair elections
- Universal franchise and right to contest
  - Independent Election Commission
- f) Electoral Reforms

### **Ch 4: Executive**

- a) What is an executive?
- b) What are the different types of executives?
- c) Parliamentary executive in India
- Power and position of President
  - Discretionary Powers of the President
- d) Prime Minister and Council of ministers
- e) Permanent Executive: Bureaucracy

### **Ch 5: Legislature**

- a) Why do we need a parliament?
- b) Why do we need two houses of parliament?
- Rajya Sabha
  - Lok Sabha
- c) What does the parliament do?
- Powers of Rajya Sabha
  - Special Powers of Rajya Sabha

- d) How does the parliament make laws?
- e) How does the parliament control the executive?
- f) What do the committees of parliament do?
- g) How does the parliament regulate itself?

**Ch 6: Judiciary**

- a) Why do we need an independent judiciary?
  - Independence of Judiciary
  - Appointment of Judges
  - Removal of Judges
- b) Structure of the Judiciary
- c) Jurisdiction of supreme Court
  - Original Jurisdiction
  - Writ Jurisdiction
  - Appellate Jurisdiction
  - Advisory Jurisdiction
- d) Judicial Activism
- e) Judiciary and Rights
- f) Judiciary and Parliament

**Ch 7: Federalism**

- a) What is Federalism?
- b) Federalism in the Indian Constitution
  - Division of Powers
- c) Federalism with a strong central government
- d) Conflicts in India's federal system
  - Centre-State Relations
  - Demands for Autonomy
  - Role of Governors and President's Rule
  - Demands for New States
  - Interstate Conflicts
- e) Special provisions Jammu and Kashmir

**Ch 8: Local Governments**

- a) Why local governments?
- b) Growth of Local Government in India
  - Local Governments in Independent India
- c) 73rd and 74th amendments
- d) 73rd Amendment
  - Three Tier Structure
  - Elections
  - Reservations
  - Transfer of Subjects
  - State Election Commissioners
  - State Finance Commission
- e) 74th Amendment
- f) Implementation of 73rd and 74th Amendments

**Ch 9: Constitution as a Living Document**

- a) Are constitutions static?
- b) How to amend the constitution?

- c) Why have there been so many amendments?
- d) Contents of amendments made so far
  - Differing Interpretations
  - Amendments through Political Consensus
  - Controversial Amendments
- e) Basic structure and evolution of the constitution
- f) Constitution as a Living Document
  - Contribution of the Judiciary
  - Maturity of the Political Leadership

### Ch 10: The Philosophy of the Constitution

- a) What is meant by philosophy of the constitution?
  - Constitution as Means of Democratic Transformation
- b) Why do we need to go back to the Constituent Assembly?
- c) What is the political philosophy of our constitution?
  - Individual freedom
  - Social Justice
  - Respect for diversity and minority rights
  - Secularism
  - Universal franchise
  - Federalism
  - National identity
- d) Procedural Achievements
- e) Criticisms
- f) Limitations

## Part B: Political Theory-An Introduction

### Ch 1: Political Theory: An Introduction

- a) What is politics?
- b) What do we study in political theory?
- c) Putting Political theory into practice
- d) Why should we study political theory?

### Ch2:Freedom

- a) The Ideal of freedom
- b) The sources of Constraints-Why do we need constraints?
- c) The Harm Principle
- d) Negative and Positive liberty

### Ch 3: Equality

- a) Why does equality matter?
  - Equality of opportunities
  - Natural and Social Inequalities
- b) Three dimensions of equality
- c) Feminism, Socialism
- d) How can we promote equality?

### Ch 4: Social Justice

- a) What is Justice?
  - Equal Treatment for Equals
  - Proportionate Justice
  - Recognition of Special Needs
- b) Just distribution
- c) John Rawls Theory of Justice

- d) Pursuing Social Justice
- e) Free Markets versus State Intervention

**Ch 5: Rights**

- a) What are Rights?
- b) Where do rights come from?
- c) Legal rights and the state
- d) Kinds of rights
- e) Rights and responsibilities

**Ch 6: Citizenship**

- a) Introduction
- b) Full and equal membership
- c) Equal Rights
- d) Citizen and Nation
- e) Universal Citizenship
- f) Global Citizenship

**Ch 7: Nationalism**

- a) Introducing Nationalism
- b) Nations and Nationalism
  - Shared Beliefs
  - History
  - Shared National Identity
- c) National self-determination
- d) Nationalism and Pluralism

**Ch 8: Secularism**

- a) What is Secularism?
  - Inter-religious Domination
  - Intra-religious Domination
- b) Secular State
- c) The western model of secularism
- d) The Indian model of secularism
- e) Criticisms of Indian secularism
  - Western Import
  - Minoritism
  - Interventionist
  - Vote Bank Politics

**PROJECT WORK: 20 Marks, GUIDELINES FOR PROJECT WORK****Project Work: 20 Marks****Rationale**

Political Science as a field of study in senior secondary classes enable students to get an exposure to political activities and processes that they are exposed to in everyday life. The study of political science has emerged as a multifaceted discipline, involving a contemporary interdisciplinary approaches and empirical framework, emphasizing more on field work rather than theoretical perceptions. The connect between government and citizen ensures the emergence of an active and reflective citizens and vibrant democracy. CBSE has therefore incorporated project work in Political Science to enable students to extend their interest beyond textbooks and provide them with a platform to gather information, value the decisions made to shape the community and visualize future course of action to be taken to ensure healthy democracy.

**Objectives of project work:**

- To enable learners to probe deeper, initiate action and reflect on knowledge and skills acquired during the course of class XI and XII
- To analyze and evaluate real world scenarios using social constructivism, a theory based on observation and scientific study
- To become independent and empowered to choose their topic and gather data from a variety of source, investigate varied viewpoints acquired during the course XI-XII and arrive at logical deductions.
- To enquire into, and reflect on, issues independently /in collaboration with others and identify the limitations
- To develop 21st century skills of communication, cooperation, coordination, critical thinking, creativity and collaboration to produce an extended and independent work.

**Project overview:**

- The Project work will be implemented for 20 Marks.
- Out of 20 marks, 10 marks are to be allotted to viva voce and 10 marks for project work.
- For class XI the evaluation can be done by the internal examiner.
- The project can be individual/pair/group of 4-5 each. The Project can be made on any of the topics given in the syllabus of a particular class or any contemporary issues.
- The project work can be culminated in the form of films, albums, songs, storytelling, debate, Role Play, Skit, Presentation, Model, Field Survey, Mock Drills/Mock Event etc.
- The teacher should give enough time for preparation of the Project Work. The topics for Project Work taken up by the student must be discussed by the teacher in classroom.
- Students can use primary sources available in city archives, Primary sources can also include newspaper cuttings, photographs, film footage and recorded written/speeches. Secondary sources may also be used after proper authentication.

**Viva-Voce**

- At the end of the stipulated term, each learner will present the research work in the Project File to the External and Internal examiner.
- The questions should be asked from the Research Work/ Project File of the learner.
- The Internal Examiner should ensure that the study submitted by the learner is his/her original work.
- In case of any doubt, authenticity should be checked and verified.

**The marks will be allocated under the following heads:**

SL.NO	COMPONENTS	MARKS ALLOTTED
1	INTRODUCTION/OVERVIEW	2
2	VARIETY OF CONTENTS	3
3	PRESENTATION	3
4	CONCLUSION	1
5	BIBLIOGRAPHY	1
6	VIVA-VOCE	10
	TOTAL	20

**Suggested Topics**

1. Making of the Constitution.
2. Elections in India.
3. Working of the Indian Judiciary System.
4. Social Justice: Are ethics followed in Indian Politics
5. Human Rights Act and its gratification in India.
6. Political impact on Indian Legislation

**PSYCHOLOGY (037)**

TIME : 3Hours

F.M. :70+30=100

**PRESCRIBED BOOK:**

- PSYCHOLOGY for Class11, published by NCERT

The distribution of marks over different dimensions of the question paper shall be as follows:

**QUESTION PAPER DESIGN**

Sl No	Typology of Questions	Total Mark	% Weightage
1	Remembering and Understanding	25	35%
2	Applying:	31	45%
3	Formulating, Analysing, Evaluating and Creating	14	20%
	<b>Total</b>	<b>70</b>	<b>100</b>

Practical : 30 Marks

**NOTE:**

- The above template is only a sample. Suitable internal variations may be made for generating similar templates keeping the overall weightage to different form of questions and typology of questions.
- Question wise breakup shall be followed as per the sample paper to be released by DAV CAE.
- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

The weightage of chapters as per the examinations are as following:

**SYLLABUS DETAILS**

Ch. No.	TYPES OF TEST	HALF YEARLY	PRE-ANNUAL / ANNUAL
		17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025  ANNUAL: 2nd Week of February 2025
1	What is Psychology ?	19	11
2	Methods of Enquiry in Psychology	21	13
3	Human Development	19	11
4	Sensory, Attentional and Perceptual Processes	11	8
5	Learning	-	9
6	Human Memory	-	8
7	Thinking	-	5
8	Motivation and E motion	-	5
	Total	<b>70</b>	<b>70</b>

**COURSE STRUCTURE****Unit I : What is Psychology?**

1. Introduction
2. What is Psychology?
  - Psychology as a Discipline
  - Psychology as a Natural Science

- Psychology as a Social Science
- 3. Understanding Mind and Behaviour
- 4. Popular Notions about the Discipline of Psychology
- 5. Evolution of Psychology
- 6. Development of Psychology in India
- 7. Branches of Psychology
- 8. Psychology and Other Disciplines
- 9. Psychology in Everyday Life

**Unit II : Methods of Enquiry in Psychology**

1. Introduction
2. Goals of Psychological Enquiry
  - Steps in Conducting Scientific Research
  - Alternative Paradigms of Research
3. Nature of Psychological Data
4. Some Important Methods in Psychology
  - Observational Method
  - Experimental Method
  - Correlational Research
  - Survey Research
  - Psychological Testing
  - Case Study
5. Analysis of Data
  - Quantitative Method
  - Qualitative Method
6. Limitations of Psychological Enquiry
7. Ethical Issues

**Unit IV : Human Development**

1. Introduction
2. Meaning of Development
  - Life-Span Perspective on Development
3. Factors Influencing Development
4. Context of Development
5. Overview of Developmental Stages
  - Prenatal Stage
  - Infancy
  - Childhood
  - Challenges of Adolescence
  - Adulthood and Old Age

**Unit V : Sensory, Attentional and Perceptual Processes**

1. Introduction
2. Knowing the world
3. Nature and varieties of Stimulus
4. Sense Modalities
  - Functional limitation of sense organs
5. Attentional Processes
  - Selective Attention
  - Sustained Attention
6. Perceptual Processes



- Processing Approaches in Perception
- 7. The Perceiver
- 8. Principles of Perceptual Organisation
- 9. Perception of Space, Depth and Distance
  - Monocular Cues and Binocular Cues
- 10. Perceptual Constancies
- 11. Illusions
- 12. Socio-Cultural Influences on Perception

**Unit VI : Learning**

1. Introduction
2. Nature of Learning
3. Paradigms of Learning
4. Classical Conditioning
  - Determinants of Classical Conditioning
5. Operant / Instrumental Conditioning
  - Determinants of Operant Conditioning
  - Key Learning Processes
6. Observational Learning
7. Cognitive Learning
8. Verbal Learning
9. Skill Learning
10. Factors Facilitating Learning
11. Learning Disabilities

**Unit VII : Human Memory**

1. Introduction
2. Nature of memory
3. Information Processing Approach : The Stage Model
4. Memory Systems : Sensory, Short-term and Long – term Memories
5. Levels of Processing
6. Types of Long-term Memory
  - Declarative and Procedural ; Episodic and Semantic
7. Nature and Causes of Forgetting
  - Forgetting due to Trace Decay, Interference and Retrieval Failure
8. Enhancing Memory
9. Mnemonics using Images and Organisation

**Unit VIII : Thinking**

1. Introduction
2. Nature of Thinking
  - Building Blocks of Thought
3. The Processes of Thinking
4. Problem Solving
5. Reasoning
6. Decision-making
7. Nature and Process of Creative Thinking
  - Nature of Creative Thinking
  - Process of Creative Thinking
8. Thought and Language
9. Development of Language and Language Use

**Unit IX : Motivation and Emotion**

1. Introduction
2. Nature of Motivation

3. Types of Motives
  - Psychosocial Motives
  - Biological Motives
4. Maslow's Hierarchy of Needs
5. Nature of Emotions
6. Expressions of Emotions
  - Culture and Emotional Expressions
  - Culture and Emotional Labelling
7. Managing Negative Emotions
8. Enhancing Positive Emotions

### PRACTICAL

#### PRACTICAL (PROJECTS, EXPERIMENTS, SMALL STUDIES, ETC.) - 30MARKS

The students shall be required to undertake **one project and conduct two experiments**. The project would involve the use of different methods of enquiry and related skills. Practical would involve conducting experiments and undertaking small studies, exercises, related to the topics covered in the course (e.g. Human development, Learning, Memory, Motivation, Perception, Attention and Thinking). Experiments could focus on cause-and-effect relationship.

#### Practical Examination

- |  |         |
|--|---------|
| • Practical (Experiments) file                           | 05Marks |
| • Project file   | 05Marks |
| • Viva Voice (Project and experiments)                   | 05Marks |
| • One experiment : (05 for conduct and 10 for reporting) | 15Marks |

#### Practical Topics : (Any 2)

1. Determine the span of attention of digits in the subject.
2. Determine memory with effect of Retro active and Pro active inhibition.
3. Impact of motivation on perception.
4. Meaningfulness of study material has an impact on learning.

#### Project Topics: (Choose any one topic for project)

1. Contact a psychologist and interview him / her. Have a list of questions prepared beforehand. Write a report of your interview and include your specific reactions.
2. Conduct a survey of the after-school activities of Class V and Class IX students taking a sample of 10 students in each. Find information about the time devoted by them in various activities, such as studying, playing, television viewing, hobbies, etc. Do you find any difference? What conclusions do you draw and what suggestions would you offer?
3. Conduct an experiment: Take two transparent glasses of the same size and pour same amount of water in both. Ask a child of Class II and Class V of your school: whether the glasses contain the same amount of water? Take another tall thin glass and in front of the child empty water from one of the earlier glasses to the third glass. Now ask her/him which glass has more water? Did you find any difference in their responses?
4. Interview people from three different stages of life, for example, 20-35, 35-60 and over 60 years of age. Talk to them about:
  - a. Major transitions that have taken place in their lives.
  - b. How they feel these transitions have affected them? Compare the events considered important in different groups.

**APPLIED MATHEMATICS (241)**

<b>Number of Paper:</b>	<b>1</b>
<b>Total number of Periods:</b>	<b>240 (35 Minutes Each) Time:</b>
	<b>3 Hours</b>
<b>Max Marks:</b>	<b>80</b>

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

No.	Units	No. of Periods	Marks
I	Numbers, Quantification and Numerical Applications	25	09
II	Algebra	45	15
III	Mathematical Reasoning	15	06
IV	Calculus	35	10
V	Probability	25	08
VI	Descriptive Statistics	35	12
VII	Basics of Financial Mathematics	45	15
VIII	Coordinate Geometry	15	05
Total		240	80
Internal Assessment			20

Sl. No.	Contents	Learning Outcomes: Students will be able to	Notes / Explanation
<b>UNIT – 1 NUMBERS, QUANTIFICATION AND NUMERICAL APPLICATIONS</b>			
<b>Numbers &amp; Quantification</b>			
1.2	Binary Numbers	<ul style="list-style-type: none"> <li>• Express decimal numbers in binary system</li> <li>Express binary numbers in decimal system</li> </ul>	<ul style="list-style-type: none"> <li>• Definition of number system (decimal and binary)</li> <li>Conversion from decimal to binary system and vice - versa</li> </ul>
1.4	Indices, Logarithm and Antilogarithm	<ul style="list-style-type: none"> <li>• Relate indices and logarithm /antilogarithm</li> <li>• Find logarithm and antilogarithms of given number</li> </ul>	<ul style="list-style-type: none"> <li>• Applications of rules of indices</li> <li>• Introduction of logarithm and antilogarithm</li> <li>Common and Natural logarithm</li> </ul>
1.5	Laws and properties of logarithms	<ul style="list-style-type: none"> <li>• Enlist the laws and properties of logarithms</li> <li>Apply laws of logarithm</li> </ul>	Fundamental laws of logarithm
1.6	Simple applications of logarithm and antilogarithm	Use logarithm in different applications	Express the problem in the form of an equation and apply logarithm/ antilogarithm

### Numerical Applications

1.7	Averages	Determine average for a given data	<ul style="list-style-type: none"> <li>● Definition and meaning</li> <li>● Problems on average, weighted average</li> </ul>
1.8	Clock	<ul style="list-style-type: none"> <li>● Evaluate the angular value of a minute</li> <li>● Calculate the angle formed between two hands of clock at given time</li> <li>● Calculate the time for which hands of clock meet</li> </ul>	<ul style="list-style-type: none"> <li>● Number of rotations of minute hand / hour hand of a clock in a day</li> </ul> <p>Number of times minute hand and hour hand coincides in a day</p>
1.9	Calendar	<ul style="list-style-type: none"> <li>● Determine Odd days in a month/ year/ century</li> </ul> <p>Decode the day for the given date</p>	<ul style="list-style-type: none"> <li>● Definition of odd days</li> <li>● Odd days in a year/ century.</li> </ul> <p>Day corresponding to a given date</p>
1.10	Time, Work and Distance	<ul style="list-style-type: none"> <li>● Establish the relationship between work and time</li> <li>● Compare the work done by the individual / group w.r.t. time</li> <li>● Calculate the time taken/ distance covered/ Work done from the given data</li> </ul>	<ul style="list-style-type: none"> <li>● Basic concept of time and work</li> </ul> <p>Problems on time taken / distance covered / work done</p>
1.11	Mensuration	<ul style="list-style-type: none"> <li>● Solve problems based on surface area and volume of 2D and 3D shapes</li> </ul> <p>Calculate the volume/ surface area for solid formed using two or more shapes</p>	<ul style="list-style-type: none"> <li>● Comparison between 2D and 3D shapes</li> <li>● Combination of solids</li> </ul> <p>Transforming one solid shape to another</p>
1.12	Seating arrangement	<ul style="list-style-type: none"> <li>● Create suitable seating plan/ draft as per given conditions (Linear/circular)</li> <li>● Locate the position of a person in a seating arrangement</li> </ul>	<ul style="list-style-type: none"> <li>● Linear and circular seating arrangement</li> </ul> <p>Position of a person in a seating arrangement</p>

### UNIT – 2 ALGEBRA

#### Sets

2.1	Introduction to sets – definition	Define set as well-defined collection of objects	<ul style="list-style-type: none"> <li>● Definition of a Set</li> </ul> <p>Examples and Non-examples of Set</p>
2.2	Representation of sets	Represent a set in Roster form and Set builder form	<ul style="list-style-type: none"> <li>● Write elements of a set in Set Builder form and Roster Form</li> <li>● Convert a set given in Roster form into Set builder form and vice-versa</li> </ul>
2.3	Types of sets and their notations	<ul style="list-style-type: none"> <li>● Identify different types of sets on the basis of number of elements in the set</li> <li>● Differentiate between equal set and equivalence set</li> </ul>	Types of Sets: Finite Set, Infinite Set, Empty Set, Singleton Set
2.4	Subsets	<ul style="list-style-type: none"> <li>● Enlist all subsets of a set</li> <li>● Find number of subsets of a given set</li> </ul> <p>Find number of elements of a power set</p>	<ul style="list-style-type: none"> <li>● Subset of a given set</li> </ul> <p>Familiarity with terms like Superset, Improper subset, Universal set, Power set</p>

2.5	Intervals	Express subset of real numbers as intervals	<ul style="list-style-type: none"> <li>Open interval, closed interval, semi open interval and semi closed interval</li> </ul>
2.6	Venn diagrams	<ul style="list-style-type: none"> <li>Apply the concept of Venn diagram to understand the relationship between sets</li> </ul> Solve problems using Venn diagram	<ul style="list-style-type: none"> <li>Venn diagrams as the pictorial representation of relationship between sets</li> </ul> Practical Problems based on Venn Diagrams
2.7	Operations on sets	Perform operations on sets to solve practical problems	<ul style="list-style-type: none"> <li>Operations on sets include               <ol style="list-style-type: none"> <li>Union of sets</li> <li>Intersection of sets</li> <li>Difference of sets</li> <li>Complement of a set</li> </ol> </li> </ul> De Morgan's Laws
<b>Relations</b>			
2.8	Ordered pairs  Cartesian product of two sets	<ul style="list-style-type: none"> <li>Explain the significance of specific arrangement of elements in a pair</li> <li>Write Cartesian product of two sets</li> </ul> Find the number of	<ul style="list-style-type: none"> <li>Ordered pair, order of elements in an ordered pair and equality of ordered pairs</li> </ul> Cartesian product of two non- empty sets
		elements in a Cartesian product of two sets	
2.9	Relations	<ul style="list-style-type: none"> <li>Express relation as a subset of Cartesian product</li> </ul> Find domain and range of a relation	Definition of Relation, examples pertaining to relations in the real number system
<b>Sequences and Series</b>			
2.11	Sequence and Series	Differentiate between sequence and series	<ul style="list-style-type: none"> <li>Sequence: <math>a_1, a_2, a_3, \dots, a_n</math></li> </ul> Series: $a_1 + a_2 + a_3 + \dots + a_n$
2.12	Arithmetic Progression	<ul style="list-style-type: none"> <li>Identify Arithmetic Progression (AP)</li> <li>Establish the formulae of finding <math>n^{\text{th}}</math> term and sum of <math>n</math> terms</li> <li>Solve application problems based on AP</li> </ul> Find arithmetic mean (AM) of two positive numbers	<ul style="list-style-type: none"> <li>General term of AP: <math display="block">t_n = a + (n - 1)d</math></li> <li>Sum of <math>n</math> terms of AP : <math display="block">S_n = \frac{n}{2}[2a + (n - 1)d]</math></li> </ul> AM of $a$ and $b = \frac{a+b}{2}$
2.13	Geometric Progression	<ul style="list-style-type: none"> <li>Identify Geometric Progression (GP)</li> <li>Derive the <math>n^{\text{th}}</math> term and sum of <math>n</math> terms of a given GP</li> <li>Solve problems based on applications of GP</li> <li>Find geometric mean (GM) of two positive numbers</li> </ul> Solve problems based on relation between AM and GM	<ul style="list-style-type: none"> <li>General term of GP: <math display="block">t_n = ar^{n-1}</math></li> <li>Sum of <math>n</math> terms of a GP: <math display="block">S_n = \frac{a(r^n - 1)}{r - 1}</math></li> <li>Sum of infinite term of GP = <math>\frac{a}{1-r}</math>, where <math>-1 &lt; r &lt; 1</math></li> <li>Geometric mean of <math>a</math> and <math>b = \sqrt{ab}</math></li> <li>For two positive numbers <math>a</math> and <math>b</math>, AM <math>\geq</math> GM i.e., <math>\frac{a+b}{2} \geq \sqrt{ab}</math></li> </ul>
2.14	Applications of AP and GP	Apply appropriate formulas of AP and GP to solve application problems	Applications based on <ul style="list-style-type: none"> <li>Economy Stimulation</li> </ul>

			The Virus spread etc.
<b>Permutations and Combinations</b>			
2.15	Factorial	<ul style="list-style-type: none"> <li>Define factorial of a number</li> </ul> Calculate factorial of a number	<ul style="list-style-type: none"> <li>Definition of factorial:  <math>n! = n(n-1)(n-2)\dots 3.2.1</math></li> </ul> Usage of factorial in counting principles
2.16	Fundamental Principle of Counting	Appreciate how to count without counting	<ul style="list-style-type: none"> <li>Fundamental Principle of Addition</li> <li>Fundamental Principle of Multiplication</li> </ul>
2.17	Permutations	<ul style="list-style-type: none"> <li>Define permutation</li> </ul> Apply the concept of permutation to solve simple problems	<ul style="list-style-type: none"> <li>Permutation as arrangement of objects in a definite order taken some or all at a time</li> <li>Theorems under different conditions resulting in <math>{}^n P_r = \frac{n!}{(n-r)!}</math> or <math>n^r</math> or <math>\frac{n!}{n_1!n_2!\dots n_k!}</math> arrangements</li> </ul>
2.20	Combinations	<ul style="list-style-type: none"> <li>Define combination</li> <li>Differentiate between permutation and combination</li> </ul> Apply the formula of combination to solve the related problems	<ul style="list-style-type: none"> <li>The number of combinations of <math>n</math> different objects taken <math>r</math> at a time is given by <math>{}^n C_r = \frac{n!}{r!(n-r)!}</math></li> <li>Some results on combinations:               <ul style="list-style-type: none"> <li><math>{}^n C_0 = 1 = {}^n C_n</math></li> <li><math>{}^n C_a = {}^n C_b \Rightarrow a=b</math> or <math>a+b=n</math></li> <li><math>{}^n C_r = {}^n C_{n-r}</math></li> </ul> </li> <li><math>C_r + C_{r-1} = C_{r+1}</math></li> </ul>
<b>UNIT -3 MATHEMATICAL REASONING</b>			
3.2	Logical reasoning	<ul style="list-style-type: none"> <li>Solve logical problems involving odd man out, syllogism, blood relation and coding decoding</li> </ul>	<ul style="list-style-type: none"> <li>Odd man out</li> <li>Syllogism</li> <li>Blood relations</li> </ul> Coding Decoding
<b>UNIT – 4 CALCULUS</b>			
4.1	Functions	<ul style="list-style-type: none"> <li>Identify dependent and independent variables</li> </ul> Define a function using dependent and independent variable	<ul style="list-style-type: none"> <li>Dependent variable and independent variable</li> <li>Function as a rule or law that defines a relationship between one variable (the independent variable) and another variable (the dependent variable)</li> </ul>
4.2	Domain and Range of a function	Define domain, range and co-domain of a given function	<ul style="list-style-type: none"> <li>Domain as a set of all values of independent variable</li> <li>Co-domain as a set of all values of dependent variable</li> </ul> Range of a function as set of all possible resulting values of dependent variable
4.3	Types of functions	<ul style="list-style-type: none"> <li>Define various types of functions</li> </ul> Identify domain, co- domain and range of the function	<ul style="list-style-type: none"> <li>Following types of functions with definitions and characteristics            Constant function, Identity function, Polynomial function, Rational function, Composite function, Logarithm function, Exponential function, Modulus function, Greatest integer function, Signum function, Algebraic function</li> </ul>
4.4	Graphical	Representation of function graphically	<ul style="list-style-type: none"> <li>Graph of some polynomial</li> </ul>

	representation of functions		functions, Logarithm function, Exponential Function, Modulus function, Greatest integer
			function, Signum function
4.5	Concepts of limits and continuity of a function	<ul style="list-style-type: none"> <li>Define limit of a function</li> <li>Solve problems based on the algebra of limits</li> </ul> Define continuity of a function	Left hand limit, Right hand limit, Limit of a function, Continuity of a function
4.6	Instantaneous rate of change	Define instantaneous rate of change	<ul style="list-style-type: none"> <li>The ratio <math>\frac{\Delta y}{\Delta x} = \frac{f(x+\Delta x)-f(x)}{\Delta x}</math> as instantaneous rate of change, where <math>\Delta y</math> is change in <math>y</math> and <math>\Delta x</math> is change in <math>x</math> at any instant</li> </ul>
4.7	Differentiation as a process of finding derivative	Find the derivative of the functions	Derivatives of functions (non- trigonometric only)
4.8	Derivatives of algebraic functions using Chain Rule	Find the derivative of function of a function	<ul style="list-style-type: none"> <li>If <math>y = f(u)</math> where <math>u = g(x)</math> then differential coefficient of <math>y</math> w.r.t <math>x</math> is</li> </ul> $\frac{dy}{dx} = \frac{dy}{du} \cdot \frac{du}{dx}$
<b>UNIT – 5 PROBABILITY</b>			
5.1	Introduction	Appreciate the use of probability in daily life situations	<ul style="list-style-type: none"> <li>Probability as quantitative measure of uncertainty</li> <li>Use of probability in determining the insurance premium, weather forecasts etc.</li> </ul>
5.2	Random experiment and sample space	<ul style="list-style-type: none"> <li>Define random experiment and sample space with suitable examples</li> </ul>	Sample space as set of all possible outcomes
5.3	Event	<ul style="list-style-type: none"> <li>Define an event</li> <li>Recognize and differentiate different types of events and find their probabilities</li> </ul>	<ul style="list-style-type: none"> <li>Types of Event: Impossible and sure event, Independent and dependent event, mutually exclusive and exhaustive event</li> </ul>
5.4	Conditional Probability	<ul style="list-style-type: none"> <li>Define the concept of conditional probability</li> </ul> Apply reasoning skills to solve problems based on conditional probability	<ul style="list-style-type: none"> <li>Conditional Probability of event E given that F has occurred is:  <math>P(E F) = \frac{P(E \cap F)}{P(F)}</math>, <math>P(F) \neq 0</math></li> </ul>
5.5	Total Probability	<ul style="list-style-type: none"> <li>Interpret mathematical information and identify situations when to apply total probability</li> <li>Solve problems based on application of total probability</li> </ul>	<ul style="list-style-type: none"> <li>Total Probability:            Let <math>E_1, E_2, \dots, E_n</math> be a partition of the sample space S, then probability of an event A associated with S is:  <math>P(A) = \sum_{j=1}^n P(E_j)P(A E_j)</math></li> </ul>
5.6	Bayes' Theorem	<ul style="list-style-type: none"> <li>State Bayes' theorem</li> </ul> Solve practical problems based on Bayes' Theorem	<ul style="list-style-type: none"> <li>Bayes' Theorem:            If <math>E_1, E_2, \dots, E_n</math> be <math>n</math> non empty events which constitute a partition of a sample space S and A be any event with non zero probability, then:</li> </ul>

			$P(E_i A) = \frac{P(E_i)P(A E_i)}{\sum_{j=1}^n P(E_j)P(A E_j)}$
<b>UNIT- 6 DESCRIPTIVE STATISTICS</b>			
6.4	Data Interpretation		
	Measure of Dispersion	<ul style="list-style-type: none"> <li>• Understand meaning of dispersion in a data set</li> <li>• Differentiate between range, quartile deviation, mean deviation and standard deviation</li> <li>• Calculate range, quartile deviation, mean deviation and standard deviation for ungrouped and grouped data set</li> </ul> <p>Choose appropriate measure of dispersion to calculate spread of data</p>	<ul style="list-style-type: none"> <li>• Mean deviation around mean and median</li> <li>• Standard deviation and variance</li> </ul> <p>Examples of different kinds of data helping students to choose and compare different measures of dispersion</p>
	Skewness and Kurtosis	<ul style="list-style-type: none"> <li>• Define Skewness and Kurtosis using graphical representation of a data set</li> <li>• Interpret Skewness and Kurtosis of a frequency distribution by plotting the graph</li> <li>• Calculate coefficient of Skewness and interpret the results</li> </ul>	<ul style="list-style-type: none"> <li>• Examples of symmetrical and asymmetrical data</li> </ul> <p>Visualization of graphical representation of data using Excel Spreadsheet or any other computer assisted tool</p>
6.5	Percentile rank and Quartile rank	<ul style="list-style-type: none"> <li>• Define Percentile rank and Quartile rank</li> <li>• Calculate and interpret Percentile and Quartile rank of scores in a given data set</li> </ul>	Emphasis on visualizing, analysing and interpreting percentile and quartile rank scores
6.6	Correlation	<ul style="list-style-type: none"> <li>• Define correlation in values of two data sets</li> <li>• Calculate Product moment correlation for ungrouped and grouped data</li> <li>• Calculate Karl Pearson's coefficient of correlation</li> <li>• Calculate Spearman's rank correlation</li> </ul> <p>Interpret the coefficient of correlation</p>	Emphasis on application, analysis and interpreting the results of coefficient of correlation using practical examples
<b>UNIT – 7 FINANCIAL MATHEMATICS</b>			
7.1	Interest and Interest Rates	<ul style="list-style-type: none"> <li>• Define the concept of Interest Rates</li> <li>• Compare the difference between Nominal Interest Rate, Effective Rate and Real Interest Rate</li> </ul>	Impact of high interest rates and low interest rates on the business
		<ul style="list-style-type: none"> <li>• Solve Practical applications of interest rate</li> </ul>	
7.2	Accumulation	<ul style="list-style-type: none"> <li>• Interpret the concept of</li> </ul>	<ul style="list-style-type: none"> <li>• Meaning and significance of</li> </ul>



	with simple and compound interest	simple and compound interest Calculate Simple Interest and Compound Interest	simple and compound interest Compound interest rates applications on various financial products
7.3	Simple and compound interest rates with equivalency	<ul style="list-style-type: none"> <li>• Explain the meaning, nature and concept of equivalency</li> <li>• Analyze various examples for understanding annual equivalency rate</li> </ul>	<ul style="list-style-type: none"> <li>• Concept of Equivalency Annual Equivalency Rate</li> </ul>
7.4	Effective rate of interest	Define with examples the concept of effective rate of interest	<ul style="list-style-type: none"> <li>• Effective Annual Interest Rate = <math>(1 + i/n)^n - 1</math> where: i = Nominal Interest Rate n = No. of Periods</li> </ul>
7.5	Present value, net present value and future value	<ul style="list-style-type: none"> <li>• Interpret the concept of compounding and discounting along with practical applications</li> <li>• Compute net present value</li> </ul> <p>Apply net present value in capital budgeting decisions</p>	<ul style="list-style-type: none"> <li>• Formula for Present Value: <math>PV = CF/(1 + r)^n</math> Where: CF = Cash Flow in Future Period r = Periodic Rate of return or Interest (also called the discount rate or the required rate of return) n = no. of periods</li> <li>• Use of PVAF, FVAF tables for practical purposes</li> </ul> <p>Solve problems based on Application of net present value</p>
7.6	Annuities, Calculating value of Regular Annuity	<ul style="list-style-type: none"> <li>• Explain the concept of Immediate Annuity, Annuity due and Deferred Annuity</li> </ul> <p>Calculate General Annuity</p>	Definition, Formulae and Examples
7.7	Simple applications of regular annuities (upto 3 period)	<ul style="list-style-type: none"> <li>• Calculate the future value of regular annuity, annuity due</li> <li>• Apply the concept of Annuity in real life situations</li> </ul>	Examples of regular annuity: Mortgage Payment, Car Loan Payments, Leases, Rent Payment, Insurance payouts etc.
7.8	Tax, calculation of tax, simple applications of tax calculation in Goods and service tax, Income Tax	<ul style="list-style-type: none"> <li>• Explain fundamentals of taxation</li> <li>• Differentiate between Direct and indirect tax</li> <li>• Define and explain GST</li> <li>• Calculate GST</li> </ul> <p>Explain rules under State -</p>	<ul style="list-style-type: none"> <li>• Computation of income tax Add Income from Salary, house property, business or profession, capital gain, other sources, etc. Less deductions PF, PPF, LIC, Housing loan, FD, NSC etc.</li> </ul>
		Goods and Services Tax (SGST) Central Goods and Services Tax (CGST) and Union Territory Goods and Services Tax (UTGST)	<ul style="list-style-type: none"> <li>• Assess the Individuals under Income Tax Act</li> <li>• Formula for GST</li> </ul> <p>Different Tax heads under GST</p>
7.9	Bills, tariff rates, fixed charge, surcharge, service charge	<ul style="list-style-type: none"> <li>• Describe the meaning of bills and its various types</li> <li>• Analyze the meaning and rules determining tariff rates</li> </ul> <p>Explain the concept of fixed charge</p>	<ul style="list-style-type: none"> <li>• Tariff rates- its basis of determination</li> </ul> <p>Concept of fixed charge service charge and their applications in various sectors of Indian economy</p>
7.10	Calculation and	<ul style="list-style-type: none"> <li>• To interpret and analyze</li> </ul>	<ul style="list-style-type: none"> <li>• Components of electricity bill/water</li> </ul>

	interpretation of electricity bill, water supply bill and other supply bills	electricity bills, water bills and other supply bills Evaluate how to calculate units consumed under electricity bills/water bill	supply and other supply bills: i) overcharging of electricity ii) water supply bills units consumed in electricity bills
<b>UNIT – 8 COORDINATE GEOMETRY</b>			
8.1	Straight line	<ul style="list-style-type: none"> <li>Find the slope and equation of line in various form</li> <li>Find angle between the two lines</li> <li>Find the perpendicular from a given point on a line</li> </ul> Find the distance between two parallel lines	<ul style="list-style-type: none"> <li>Gradient of a line</li> <li>Equation of line: Parallel to axes, point-slope form, two-points form, slope intercept form, intercept form</li> </ul> Application of the straight line in demand curve related to economics problems
8.2	Circle	<ul style="list-style-type: none"> <li>Define a circle</li> <li>Find different form of equations of a circle</li> </ul> Solve problems based on applications of circle	<ul style="list-style-type: none"> <li>Circle as a locus of a point in a plane</li> </ul> Equation of a circle in standard form, central form, diameter form and general form
8.3	Parabola	<ul style="list-style-type: none"> <li>Define parabola and related terms</li> <li>Define eccentricity of a parabola</li> </ul> Derive the equation of parabola	<ul style="list-style-type: none"> <li>Parabola as a locus of a point in a plane.</li> <li>Equation of a parabola in standard form:</li> <li>Focus, Directrix, Axis, Latus rectum, Eccentricity</li> <li>Application in parabolic reflector, beam supported by wires at the end of the support, girder of a railway bridge, etc.</li> </ul>

**Practical: Use of spreadsheet**

Calculating average, interest (simple and compound), creating pictographs, drawing pie chart, bar graphs, calculating central tendency visualizing graphs (straight line, circles and parabola using real-time data)

**Suggested practical using spreadsheet**

- Plot the graph of functions on excel study the nature of function at various points, drawing lines of tangents
- Create a budget of income and spending
- Create and compare sheet of price & features to buy a product
- Prepare the best option plan to buy a product by comparing cost, shipping charges, tax and other hidden costs
- Smart purchasing during sale season
- Prepare a report card using scores of the last four exams and compare the performance  
Collect the data on weather, price, inflation, and pollution. Sketch different types of graphs and analyze the results

**SOCIOLOGY (039)**

BOOKS PRESCRIBED: 1. INTRODUCING SOCIOLOGY (NCERT)  
2. UNDERSTANDING SOCIETY (NCERT)

	MONTH	CHAPTERS/ TOPICS TO BE TAUGHT	UNIT WISE WEIGHTAGE	
			HALF YEARLY	ANNUAL
<b>CETS</b>			17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025  ANNUAL: 2nd Week of February 2025
	JUNE/JULY	<b>Part-A:</b> Sociology, Society and its relationship with other Social Science disciplines <b>Part-B:</b> Introducing Western Sociologist	20  20	12
	AUGUST	<b>Part-B:</b> Social Change and Social order in Rural and Urban Society <b>Part B:</b> Indian Sociologists	20  20	16
	SEPTEMBER/OCTOBER	<b>REVISION FOR HALF YEARLY EXAMINATIONS</b>		
<b>CETS</b>	NOVEMBER	<b>Part-A-</b> Understanding Social Institutions		16
	DECEMBER	<b>Part-A:</b> Terms, concepts and their use in Sociology		20
	JANUARY	<b>Part-A:</b> Culture and Socialization		16
	FEBRUARY	<b>REVISION</b>		
	MARCH	<b>ANNUAL EXAMINATION</b>		

**QUESTION PAPER DESIGN**

Theory: 80 Marks+ project: 20 Marks

Sl. No.	Very short answer/ MCQ 1 Marks	Short Answer (I) 2 marks	Short Answer (II) 4 Marks	Long Answer 6 Marks	Marks
1	4	3	2	1	24
2	4	2	2		16
3	4	2	2	1	22
4	4	2	1	1	18
	16 X1 =16	9 X 2 =18	7X4=28	3X6=18	THEORY 80+ 20 PROJECT = 100 35 Questions

**NOTE-** There will be internal choices in questions of 1 mark, 2 marks, 4 marks and 6 marks in both sections (A & B). In all, total 8 internal choices.

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%
-

MARKING SCHEME FOR PROJECT WORKS

SL. NO.	HEADING	MARKS ALLOTTED
1	RELEVANCE OF THE TOPICS	3
2	KNOWLEDGE CONTENT/ RESEARCH WORKS	6
3	PRESENTATION TECHNIQUE	3
4	VIVA	8
	TOTAL	20

**MASS MEDIA STUDIES**

BOOK PRESCRIBED: Mass Media Studies [CBSE Study Material]

	MONTH	CHAPTERS/LESSONS TO BE TAUGHT	DISTRIBUTION OF MARKS FOR HALF YEARLY, PRE- ANNUAL & ANNUAL EXAM.
CETs	JUNE	<b>Part-A Skills</b> Unit-1: Communication Skills Unit-2:Self-management Skills	Theory 60 marks Practical 40 marks <b>Total 100 marks</b>
	JULY	<b>Part-B Skills</b> Unit-1: Introduction to Mass Communication  Unit 2: Evolution of the Media	
	AUG	<b>Part-A Skills</b> Unit 3: Information and Communication Technology Skills	
	SEPT.	<b>Part-A Skills</b> Unit 4: Entrepreneurial Skills – IV <b>Part-B Skills</b> Unit 3: Understanding Media <b>Revision</b> <b>Half Yearly Examination</b>	<b>Part C Practical Work</b> Practical Examination 15 marks Viva Voce 05 marks <b>Total 20 marks</b>
	OCT.	<b>Part-A Skills</b> Unit 5: Green Skills	<b>Part D Project Work/Field Visit/ Portfolio</b> Practical File/Student Portfolio 15 marks Viva Voce 05 marks <b>Total 20 marks</b>
CETs	NOV.	<b>Part-B Skills</b> Unit 4: Pre- production Skills	
	DEC.	Unit 4: Pre- production Skills - Continued	
	JAN.	Portfolio Preparation <b>Revision and Pre- Annual</b>	
	FEB	<b>Revision for Annual</b>	

N.B: Blue print of question paper will be as per CBSE guidelines.

**BANKING (811)****BOOKS PRESCRIBED:** Banking (NCERT & CBSE Study Materials)

	MONTH	CHAPTER/TOPICS TO BE TAUGHT	CHAPTERWISE WEIGHTAGE	
			HALF YEARLY	ANNUAL
			17 September – 27 September 2024	PRE ANNUAL: 1st Week of January 2025  ANNUAL: 2nd Week of February 2025
<b>CETS</b>	JUNE	<b>PART-A :Employability Skills</b>		
		Unit1.Communication Skills....Contd.		
	JULY	Unit1.Communication Skills Unit2.Self-management Skills Unit3. Information and Communication Technology Skills	10	10
		<b>PART-B :Vocational Skills</b>		
		Unit1.Introduction	10	05
	AUGUST	Unit2. Banker & Customer....Contd.	15	10
Unit2. Banker & Customer. Unit3.Employment of Bank Funds		25	20	
<b>PROJECT WORK</b>		40		
SEPTEMBER	<b>REVISION &amp; HALF YEARLY EXAMINATION</b>	Total: 100		
	OCTOBER	<b>PART-A :Employability Skills</b> Unit 4.Entrepreneurial Skills		
<b>CETS</b>	NOVEMBER	Unit5. Green Skills		
	DECEMBER	<b>PART-B :Vocational Skills</b> Unit4.Negotiable Instruments <b>Project Work</b>		15 40
PRE-ANNUAL	JANUARY	<b>REVISION &amp; PRE- ANNUAL EXAMINATION</b>		
ANNUAL	FEBRUARY	<b>REVISION AND ANNUAL EXAMINATION</b>		
			<b>TOTAL:</b>	<b>100</b>

- Competency Focused Questions in the form of MCQs/ Case Based Questions, Source-based Integrated Questions or any other type = 50%
- Select response type questions (MCQ) = 20%
- Constructed response questions (Short Answer Questions/Long Answer type Questions, as per existing pattern) = 30%

**QUESTION PATTERN (HALF-YEARLY)**

TYPE OF QUESTION (S)	MARK(S) PER QUESTION	TOTAL NO. O QUESTIONS	TOTAL MARKS
VSA	1	30	30
SA-I	2	6	12
SA-II	3	2	06
LA-I	4	3	12
	<b>Total:</b>	<b>41</b>	<b>60</b>

NB : PROJECT WORK TOPIC – – 40 Marks

TOTAL- 100 Marks

N.B: Blue print of question paper will be as per CBSE guidelines.