

# Syllabus for the Session: 2021-2022-STD-XII

## ENGLISH CORE -301

### PRESCRIBED BOOKS:

1. FLAMINGO BY NCERT
2. VISTAS BY NCERT

### TYPOLOGY OF QUESTION :

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

### TERM - I (MCQ) (40 + 10 = 50 MARKS)

#### WEIGHTAGE (IN MARKS)

**Reading Comprehension:** 8+6 marks = 14 marks

**Creative Writing Skills:** 3+5 marks = 08 marks

**Literature:** 11 marks for Flamingo + 7 marks for Vistas =18 marks

[MCQ: Case Based / Situation Based / Assertive/Reasoning Type MCQ Questions]

### DETAILED QUESTION PATTERN YET TO BE RELEASED BY CBSE

COURSE STRUCTURE (TERM-I)	
TERM-I (40 Marks) As per CBSE Guidelines	
SEC	NOVEMBER / DECEMBER 2021
A.	<b>Reading Comprehension:</b> <ul style="list-style-type: none"><li>• Unseen passage (factual, descriptive or literary/discursive or persuasive)</li><li>• Case Based Unseen Factual) Passage</li></ul>

<b>B.</b>	<p><b>Creative Writing Skills:</b></p> <p><u>Short Writing Tasks</u></p> <ul style="list-style-type: none"> <li>• Notice Writing</li> <li>• Classified Advertisements</li> </ul> <p><b>Long Writing Tasks (One)</b></p> <ul style="list-style-type: none"> <li>• Letter to an Editor (giving suggestions or opinion on issues of public interest)</li> <li>• Article Writing</li> </ul>
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<b>C.</b>	<p><b>LITERATURE:</b></p> <p>Literary-prose/poetry extracts (seen- texts) to assess comprehension and appreciation, analysis, inference, extrapolation</p> <p><b>Questions Based on Texts to assess</b> comprehension and appreciation, analysis, inference, extrapolation</p> <p><u>Book-Flamingo (Prose)</u></p> <ul style="list-style-type: none"> <li>• The Last Lesson</li> <li>• Lost Spring</li> <li>• Deep Water</li> </ul> <p><u>Book-Flamingo (Poetry)</u></p> <ul style="list-style-type: none"> <li>• My Mother at Sixty-Six</li> <li>• An Elementary School Classroom in a Slum</li> <li>• Keeping Quiet</li> </ul> <p><u>Book-Vistas (Prose)</u></p> <ul style="list-style-type: none"> <li>• The Third Level</li> <li>• The Enemy</li> </ul>						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; text-align: center;"><b>40</b></td> <td style="text-align: center;"><b>TOTAL</b></td> </tr> <tr> <td style="text-align: center;"><b>ALS</b></td> <td style="text-align: center;"><b>10</b></td> </tr> <tr> <td style="text-align: center;"><b>GRAND TOTAL</b></td> <td style="text-align: center;"><b>40 + 10 = 50 Marks</b></td> </tr> </table>	<b>40</b>	<b>TOTAL</b>	<b>ALS</b>	<b>10</b>	<b>GRAND TOTAL</b>	<b>40 + 10 = 50 Marks</b>
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<b>ALS</b>	<b>10</b>						
<b>GRAND TOTAL</b>	<b>40 + 10 = 50 Marks</b>						

**TERM-II (40+10 = 50 MARKS)**

**Reading Comprehension:** 8 + 6 marks = 14 marks

**Creative Writing Skills:** 3 + 5 marks = 08 marks

**Literature:** 11 marks for Flamingo + 7 marks for Vistas =18 marks

**[Case Based / Situation Based / Open Ended / Short Answer/ Long Answer Questions]**

**DETAILED QUESTION PATTERN YET TO BE RELEASED BY CBSE**

	<b>COURSE STRUCTURE (TERM-II)</b>
	<b>TERM-II</b> <b>40 marks</b> <b>As per CBSE Guidelines</b>
<b>SEC</b>	<b>MARCH/APRIL- 2022</b>
<b>A.</b>	<b>Reading Comprehension:</b> (Two Passages) <ul style="list-style-type: none"> <li>• Unseen passage (factual, descriptive or literary/discursive or persuasive)</li> <li>• Case Based Unseen Factual) Passage</li> </ul>
<b>B.</b>	<b>Creative Writing Skills:</b> <u><b>Short Writing Tasks</b></u> <ul style="list-style-type: none"> <li>• Formal &amp; Informal Invitation Cards or the Replies to Invitation/s</li> </ul> <u><b>Long Writing Tasks (One)</b></u> <ul style="list-style-type: none"> <li>• Letter of Application for a Job</li> <li>• Report Writing</li> </ul>

<b>C</b>	<b>LITERATURE:</b> Questions based on extracts/texts to assess comprehension and appreciation, analysis, inference, extrapolation <u><b>Book-Flamingo (Prose)</b></u> <ul style="list-style-type: none"> <li>• The Rattrap</li> <li>• Indigo</li> </ul> <u><b>Book-Flamingo (Poetry)</b></u> <ul style="list-style-type: none"> <li>• A Thing of Beauty</li> <li>• Aunt Jennifer’s Tigers</li> </ul> <u><b>Book-Vistas (Prose)</b></u> <ul style="list-style-type: none"> <li>• Should Wizard Hit Mommy?</li> <li>• On the Face of It</li> <li>• Evans Tries an O level</li> </ul>	
	<b>TOTAL</b>	40
	ALS	10
	<b>GRAND TOTAL</b>	40 + 10 =50 Marks

## **Guidelines for Assessment in Listening and Speaking Skills (ALS)**

### **Term I: 10 marks: Assessment of Listening and Speaking Skills**

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.

#### **Listening Skill:**

The focus is to use the assessment of Listening Skills for improving learners' competency to listen for basic interpersonal, instructional and academic purposes. A number of sub-skills need to be developed in the everyday classroom transaction. Given below are some of the sub-skills of listening which need to be assessed for the Internal Assessment component of Listening:

- i. Listening for Specific Information
- ii. Listening for General Understanding
- iii. Predictive Listening
- iv. Inferential Listening
- v. Listening for Pleasure
- vi. Intensive Listening
- vii. Evaluative Listening

Hence, the assessment items being prepared by subject teachers must assess the above.

#### **Speaking Skill:**

Assessment of speaking skills must be made an important component of the overall assessment, using this assessment as learning.

##### **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 ALS :**

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

##### **iii. Schedule:**

- The practice of listening and speaking skills should be done throughout the academic year.
- **The final Term- I ALS to be conducted latest by last week of September.**

## **TERM II: 10 MARKS – PROJECT WORK + VIVA-VOCE**

- Out of ten marks allotted for the term, **5 marks will be allotted for the project report/script /essay etc. and 5 for the viva.**
- The Project will be **ONE** small project work to be covered in the **Term II.** However, the planning for the project by students in consultation with the teachers can begin early.

### **Schedule:**

- Students are expected to adhere to the timeline for the planning, preparation and viva-voce of ASL based projects.

### **Suggestions for Project Work:**

- The Project can be inter-disciplinary in theme. The ideas/issues highlighted in the chapters/ poems/ drama given the prescribed books can also be developed in the form of a project. Students can also take up any relevant and age-appropriate theme.
- Such topics may be taken up that provide students with opportunities for listening and speaking.

## **SUGGESTED PROJECT WORK**

### **a. Interview-Based research:**

#### **Example:**

- Students can choose a topic on which to do their research/ interview, e.g. a student can choose the topic: “Evolving food tastes in my neighbourhood” or “Corona pandemic and the fallout on families.” Read the available literature.
- The student then conducts interviews with a few neighbours on the topic. For an interview, with the help of the teacher, student will frame questions based on the preliminary research/background.
- The student will then write an essay/ write up / report etc. up to 1000 words on his/her research and submit it. He / She will then take a viva on the research project. The project can be done in individually or in pairs/ groups

### **b. Self-made video/ Audio based on a script.**

The following elements should be taken into consideration:

- Theme/topic of the audio / video
- Presentation of the script
- Video/audio of an interview
- Duration- Maximum 5 min

### **Rubrics for Project Viva : (5 Pointers)**

#### **1. Pronunciation: (1 mark)**

- Pronunciation of clearly articulated words ,unusual spellings and intonation.

#### **2. Vocabulary (1 mark)**

- Extensive and appropriate **vocabulary** during the viva.

**3. Accuracy: (1 mark)**

- Accuracy of **grammatical structures**.

**4. Communication & Interaction (1 mark)**

- Creative usage of the language for effective communication.
- Effective interaction skills to answer questions with relative ease and follow the flow of conversation on the chosen topic.

**5. Fluency: (1 mark)**

- Pronunciation, vocabulary, accuracy & interaction.

**Project-Portfolio/ Project Report**

The **Project-Portfolios** is a compilation of the work that the students produce during the process of working on their ALS Project.

**The Project-Portfolio may include the following:**

- Cover page, with title of project, school details/details of students.
- Statement of purpose/objectives/goals
- Certificate of completion under the guidance of the teacher.
- Action plan for the completion of assigned tasks.
- Materials such as scripts for the questionnaires for interview, written assignments, essays, survey-reports and other material evidence of learning progress and academic accomplishment.
- The 800-1000 words essay/Script/Report.
- Student/group reflections.
- Photographs that capture the positive learning experiences of the students.
- List of resources/bibliography.

**Rubrics for assessing the project portfolios: (5 Pointers)**

- Quality of content of the project (1 mark)
- Accuracy of information (1 mark)
- Clarity of thoughts , ideas & creativity ( 1 mark)
- Contributions by group members (1 mark)
- Knowledge and experience gained (1 mark)

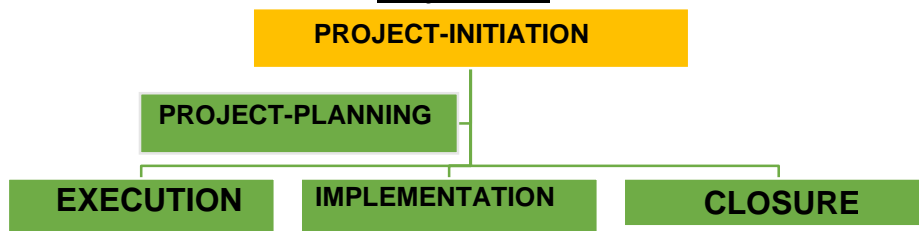
**N.B.**

**PROJECT SHOULD BE AN ORIGINAL AND CREATIVE MANUSCRIPT.**

**SUBMISSION DATE – 2<sup>nd</sup> week of January**

**CONDUCT OF VIVA – Last week of January**

**Timeline**  
**The FIVE Steps in**  
**Project Plan**



Month	Objectives
<p><b>Planning and Research for the Project Work</b></p> <p><b>Preferably till November-December</b></p>	<ul style="list-style-type: none"> <li>• Teachers plan a day to orient students about the ALS projects, details are shared with all stakeholders.</li> <li>• Students choose a project, select team members and develop project-plan.</li> <li>• Group meets (preferably online) and reports to the team leader about the progress: shortfalls and successes are detailed.</li> <li>• Team leader apprises teacher-mentor.</li> <li>• Students working individually or in pairs also update the teachers.</li> <li>• A logical, deliverable and practical plan is drafted by the team/ pair/individual. Goals/objectives are clearly defined for all.</li> <li>• Work is delegated to team members by the team leader. Students wishing to work alone develop their own plan of Action.</li> <li>• Detailed project schedules are shared with the teacher.</li> </ul>
<p><b>December-January</b></p>	<ul style="list-style-type: none"> <li>• Suggestions and improvements are shared by the teacher, wherever necessary.</li> <li>• Group members coordinate and keep communication channels open for interaction.</li> <li>• Gaps (if any) are filled with the right skill sets by the Team Leader/individual student.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• The final draft of the project portfolio/ report is prepared and submitted for evaluation.</li> </ul>

<b>January-February</b>	<ul style="list-style-type: none"><li>• Students are assessed on their group/pair/ individual presentations on allotted days. Final Viva is conducted by the External/Internal examiner.</li></ul>
<b>February-March or as per the timelines given by the Board</b>	<ul style="list-style-type: none"><li>• Marks are uploaded on the CBSE website.</li></ul>



# SYLLABUS OF MATHEMATICS (041) FOR CLASS – XII (2021-22)

Special Scheme for the session 2021 – 22

1. Academic session 2021 -22 is divided into 2 Terms as TERM – I and TERM – II.
2. All questions of Term – I are of Multiple Choice Questions (MCQs) including case-based MCQs and MCQs on assertion – reasoning type. Duration of the test is 90 minutes. The responses of students will be captured on OMR sheets.
3. At the end of the second term TERM – II/Year End Examination will be conducted.
4. TERM – II Examination will be of 2 hours duration and have questions of different formats as case-based/situation based, open ended - short answer/long answer type.
5. In case the situation is not conducive for normal descriptive examination a 90 minutes MCQ based exam will be conducted at the end of the TERM – II also.
6. The chapters of TERM – I will not be asked in TERM – II Examination.

**PRESCRIBED BOOKS :**

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

## COURSE STRUCTURES

### Class XII (2021-22)

Sl. No		TYPE OF TEST →	TERM - I (40 marks)		TYPE OF TEST →	TERM – II (40 marks)
		TIME PERIOD OF THE TEST →	November/ December - 2021		TIME PERIOD OF THE TEST →	March/April - 2022
		Name of the Topics for Term - I	Unit wise Marks Distribution	Units for TERM - II	Name of the Topics for Term - II	Unit wise Marks Distribution
1	I Relations and Functions	Relations and Functions	8	III	Integrals	
		Inverse			Application	

2		Trigonometric Functions		Calculus	of Integrals	18
3	II Algebra	Matrices	10		Differential Equations	
4		Determinants		IV	Vectors	
5	III Calculus	Continuity and Differentiability	17	Vectors and Three – Dimensional Geometry	Three – Dimensional Geometry	14
6		Application of Derivatives		VI Probability	Probability	8
7	V Linear Programming	Linear Programming	5			
		<b>TOTAL</b>	<b>40</b>			<b>40</b>
		Internal Assessment	10			10
		<b>TOTAL</b>	<b>50</b>			<b>50</b>

- No chapter wise weightage for Term – I and Term – II

## SYLLABUS DETAILS FOR TERM - I

### Unit-I: Relations and Functions

#### 1. Relations and Functions

Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.

#### 2. Inverse Trigonometric Functions

Definition, range, domain, principal value branch.

### Unit-II: Algebra

#### 1. Matrices

Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non-commutativity of multiplication of matrices, Invertible matrices; (Here all matrices will have real entries).

## 2. Determinants

Determinant of a square matrix (up to  $3 \times 3$  matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.

## Unit-III: Calculus

### 1. Continuity and Differentiability

Continuity and differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives.

### 2. Applications of Derivatives

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

## Unit-V: Linear Programming

### 1. Linear Programming

Introduction, related terminology such as constraints, objective function, optimization, different types of linear programming (L.P.) problems. Graphical method of solution for problems in two variables, feasible and infeasible regions (bounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).

INTERNAL ASSESSMENT	10MARKS
PeriodicTest/Chapter End Test/Unit Test	5Marks
Mathematics Activities: Activity file record +Term end assessment of one activity &Viva	5 Marks

**Note:** For activities NCERT Lab Manual may be referred

ACTIVITY		(5 MARKS)
SI No	ACTIVITIES	TERM - I
1	ACTIVITY 1(To verify that the relation R in the set L of all lines in a plane, defined by $R = \{(l, m) : l \parallel m\}$ is an equivalence relation)	
2	ACTIVITY 2(To draw the graph of $y = \sin^{-1}x$ , using the graph of $\sin x$ and demonstrate the concept of mirror reflection (about the line $y = x$ )	

3	ACTIVITY 3(To find analytically the limit of a function f (x) at x = c and also to check the continuity of the function at that point)	
4	ACTIVITY 4(To construct an open box of maximum volume from a given rectangular sheet by cutting equal squares from each corner)	

### Unit-III: Calculus

#### 1. \*Integrals :

Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them.

$$\int \frac{dx}{x^2 \pm a^2}, \int \frac{1}{\sqrt{x^2 \pm a^2}} dx, \int \frac{dx}{\sqrt{a^2 - x^2}}, \int \frac{dx}{ax^2 + bx + c}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}, \int \frac{px + q}{ax^2 + bx + c} dx, \int \frac{px + q}{\sqrt{ax^2 + bx + c}} dx, \int \sqrt{a^2 \pm x^2} dx, \int \sqrt{x^2 - a^2} dx$$

Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

#### 2. \*Applications of the Integrals :

Applications in finding the area under simple curves, especially lines, parabolas; area of circles /ellipses (in standard form only) (the region should be clearly identifiable).

**NB: The \* marked chapters will be taught before TERM – I, but not asked in TERM – I and it will be asked in TERM – II.**

**NB:-Assessment of Activities**

**TERM – I and Term - II**

**Record – 2 Marks**

**Viva voce - 1 Mark**

**Activity – 2 Marks (Out of above 4 activities)**

**Total Internal Assessment will be done for 10 marks (5 from activity and 5 from Periodic test/Unit test/ Chapter End Test).**

### SYLLABUS DETAILS FOR TERM – II

### Unit-III: Calculus

#### 1. Integrals :(Will be taught before TERM – I)

Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them.

$$\int \frac{dx}{x^2 \pm a^2}, \int \frac{1}{\sqrt{x^2 \pm a^2}} dx, \int \frac{dx}{\sqrt{a^2 - x^2}}, \int \frac{dx}{ax^2 + bx + c}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}, \int \frac{px + q}{ax^2 + bx + c} dx, \int \frac{px + q}{\sqrt{ax^2 + bx + c}} dx, \int \sqrt{a^2 \pm x^2} dx, \int \sqrt{x^2 - a^2} dx$$

Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.

## 2. Applications of the Integrals :(Will be taught before TERM – I)

Applications in finding the area under simple curves, especially lines, parabolas; area of circles /ellipses (in standard form only) (the region should be clearly identifiable).

## 3. Differential Equations :

Definition, order and degree, general and particular solutions of a differential equation.

Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree of the type:  $dydx = f(y/x)$ . Solutions of linear differential equation of the type:

$\frac{dy}{dx} + py = q$ , where p and q are functions of x or constant.

## Unit-IV: Vectors and Three-Dimensional Geometry

### 1. Vectors

Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors.

### 2. Three - dimensional Geometry

Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, coplanar and skew lines, shortest distance between two lines. Cartesian and vector equation of a plane. Distance of a point from a plane.

## Unit-VI: Probability

### 1. Probability

Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution.

INTERNALASSESSMENT	10MARKS
PeriodicTest/Chapter End Test/Unit Test	5Marks
Mathematics Activities: Activity file record +Term end assessment of one activity &Viva	5 Marks

**Note:** For activities NCERT Lab Manual may be referred.

ACTIVITY		(5 MARKS)
SI No	ACTIVITIES	TERM - II
1	ACTIVITY 5(To verify that angle in a semi-circle is a right angle, using vector method)	
2	ACTIVITY 6(To find the distance of given point (in space) from a plane (passing through three non-collinear points) by actual measurement and also analytically)	

3	ACTIVITY 7(To measure the shortest distance between two skew lines and verify it analytically)	
4	ACTIVITY 8(To explain the computation of conditional probability of a given event A, when event B has already occurred, through an example of throwing a pair of dice)	

**NB .:**

**Assessment of Activities**

**TERM – I and Term - II**

**Record – 2 Marks**

**Viva voce - 1 Mark**

**Activity – 2 Marks(Out of above 4 activities)**

**Total Internal Assessment will be done for 10 marks (5 from activity and 5 from Periodic test/Unit test/ChapterEndTest)**

## PHYSICS (042)

### 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 XII Published by NCERT
5. Any related books and manuals brought out by NCERT (Also consider multimedia)

### QUESTIONWISE BREAK-UP

#### 1. BREAK UP OF QUESTIONS (as per modified term-wise pattern)

##### Term I Examination:

- The Question Paper will have Multiple Choice Questions (MCQ) including case-based MCQs and MCQs on assertion-reasoning type.
- Duration of test will be 90 minutes.
- This examination would be held around November-December 2021.

##### Term II Examination/ Year-end Examination:

- The Question Paper will have (case-based/ situation based, open ended- short answer/ long answer type) questions.
- Duration of test will be 2 hours.
- This examination would be held around March-April 2022 at the examination centres fixed by the Board.

#### 2. TIME SCHEDULE FOR STD – XII EXAMINATIONS:-

NAME OF THE TEST	MONTH AND DATES	FULL MARK	SYLLABUS
PRE-TERM-I	21 OCT TO 30 OCT 2021	35	TERM-I
TERM-I	NOVEMBER/DECEMBER-2021	AS PER CBSE GUIDELINES	TERM-I
PRE-TERM-II	7 FEB TO 16 FEB 2022	35	TERM-II
TERM-II	MARCH/APRIL-2022	AS PER CBSE GUIDELINES	TERM-II

**\*N.B.** –1. End of topic/ unit test will be conducted at school level along with internal assessment/ exploratory activities/ practicals.

2. The question paper pattern and typology shall be at par with the sample paper to be released by CBSE.

**COURSE STRUCTURE (THEORY)****Class-XII (Term-I)**

Time : 1 and 1/2 hrs

F.M. : 35

UNITS	NAME OF THE TEST	PRE-TERM-I	TERM-I
	TIME PERIOD OF THE TEST	21 OCT to 30 OCT 2021	NOVEMBER/ DECEMBER- 2021
	NAME OF THE CHAPTER		
Unit I	<b>Electrostatics</b>	17	17
	Chapter 1 : Electric Charges and Fields		
	Chapter 2: Electrostatic Potential and Capacitance		
Unit II	<b>Current Electricity</b>	17	17
	Chapter 3: Current Electricity		
Unit III	<b>Magnetic effect of Current and Magnetism</b>	18	18
	Chapter 4: Moving charges and magnetism		
	Chapter 5: Magnetism and Matter		
Unit IV	<b>Electromagnetic Induction and Alternating Current</b>	18	18
	Chapter 6: Electromagnetic Induction		
	Chapter 7: Alternating Current		
	<b>TOTAL</b>	<b>35</b>	<b>35</b>

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

**SYLLABUS DETAILS****UNIT-I: ELECTROSTATICS****Chapter -1: Electric Charges and Field**

Electric Charges; Conservation of charge, Coulomb's law-force between two-point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet

**Chapter - 2: Electrostatic Potential and capacitance**

Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor.



## UNIT-II: CURRENT ELECTRICITY

### Chapter - 3 Current Electricity

Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity; temperature dependence of resistance. Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's laws and simple applications, Wheatstone bridge, metre bridge (**qualitative ideas only**). Potentiometer - principle and its applications to measure potential difference and for comparing EMF of two cells; measurement of internal resistance of a cell (**qualitative ideas only**)

## UNIT-III: MAGNETIC EFFECTS OF CURRENT AND MAGNETISM

### Chapter -4: Moving charges and Magnetism

Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight and toroidal solenoids (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; moving coil galvanometer-its current sensitivity and conversion to ammeter and voltmeter.

### Chapter -5: Magnetism and matter

Current loop as a magnetic dipole and its magnetic dipole moment, magnetic dipole moment of a revolving electron, bar magnet as an equivalent solenoid, magnetic field lines; earth's magnetic field and magnetic elements.

## UNIT-IV: ELECTROMAGNETIC INDUCTION AND ALTERNATING CURRENTS

### Chapter -6: Electromagnetic Induction

Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Eddy currents. Self and mutual induction.

### Chapter -7: Alternating Currents

Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LC oscillations (qualitative treatment only), LCR series circuit, resonance; power in AC circuits. AC generator and transformer.

## PRACTICALS( TERM-I)

### Syllabus for Term I

First term practical examination will be organised by schools as per the directions of CBSE. The record to be submitted by the students at the time of first term examination has to include a record of at least 4 Experiments and 3 Activities to be demonstrated by teacher.

## EVALUATION SCHEME

Time Allowed:1 and 1/2 hrs

Max Marks:15

	TERM-I
Two experiments	8 Marks
Practical record (experiment and activities)	2 Marks
Viva on experiments and activities	5 Marks
<b>Total</b>	<b>15 Marks</b>

### Experiments assigned for Term I

1. To determine resistivity of two / three wires by plotting a graph between potential difference versus current.
2. To find resistance of a given wire / standard resistor using metre bridge.

**OR**

To verify the laws of combination (series) of resistances using a metre bridge.

**OR**

To verify the laws of combination (parallel) of resistances using a metre bridge.

3. To compare the EMF of two given primary cells using potentiometer.

**OR**

To determine the internal resistance of given primary cell using potentiometer.

4. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit.
5. To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same.

**OR**

To convert the given galvanometer (of known resistance and figure of merit) into an ammeter of desired range and to verify the same.

6. To find the frequency of AC mains with a sonometer.

### Activities assigned for Term I

1. To measure the resistance and impedance of an inductor with or without iron core.
2. To measure resistance, voltage (AC/DC), current (AC) and check continuity of a given circuit using multimeter.
3. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source.
4. To assemble the components of a given electrical circuit.
5. To study the variation in potential drop with length of a wire for a steady current.
6. To draw the diagram of a given open circuit comprising at least a battery, resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.

**CLASS-XII (TERM-II)**

Time: 2 hours

F. M. :35

UNITS	NAME OF THE TEST	PRE-TERM-II	TERM-II
	TIME PERIOD OF THE TEST	7 FEB to 16 FEB 2022	MARCH/ APRIL-2022
	NAME OF THE CHAPTER		
Unit-V	<b>Electromagnetic Waves</b>	17	17
	Chapter 8: Electromagnetic Waves		
Unit-VI	<b>Optics</b>		
	Chapter 9: Ray Optics and Optical Instruments		
	Chapter 10 : Wave Optics		
Unit-VII	<b>Dual Nature of Radiation and Matter</b>	11	11
	Chapter 11: Dual Nature of Radiation and Matter		
Unit-VIII	<b>Atoms and Nuclei</b>	07	07
	Chapter 12: Atoms		
	Chapter 13: Nuclei		
Unit-IX	<b>Electronics Devices</b>	35	35
	Chapter 14: Semiconductor Electronics: Materials, Devices and Simple Circuits.		
<b>TOTAL</b>			

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

**UNIT-V: ELECTROMAGNETIC WAVES****Chapter -8: Electromagnetic waves**

Electromagnetic waves, their characteristics, their Transverse nature (qualitative ideas only).

Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.

**UNIT-VI: OPTICS****Chapter -9 :Ray Optics and Optical instruments**

Refraction of light, total internal reflection and its applications, optical fibers, refraction at spherical surfaces, lenses, thin lens formula, lensmaker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism.

Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.

**Chapter -10: Wave optics**

Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's principle. Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light, diffraction due to a single slit, width of central maximum

## UNIT VII: DUAL NATURE OF MATTER AND RADIATION

### Chapter -11: Dual Nature of Radiation and Matter

Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light.

Experimental study of photoelectric effect

Matter waves-wave nature of particles, de-Broglie relation

## UNIT VIII: ATOMS AND NUCLEI

### Chapter -12: Atoms

Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum.

### Chapter -13: Nuclei

Composition and size of nucleus Nuclear force, Mass-energy relation, mass defect, nuclear fission, nuclear fusion.

## UNIT IX: ELECTRONIC DEVICES

### Chapter -14: Semiconductor electronics, Materials, Devices and Simple Circuits

Energy bands in conductors, semiconductors and insulators (qualitative ideas only)

Semiconductor diode - I-V characteristics in forward and reverse bias, diode as a rectifier;

Special purpose p-n junction diodes: LED, photodiode, solar cell.

## PRACTICALS (TERM-II)

### Syllabus for Term II

The second term practical examination will be organised by schools as per the directions of CBSE and viva will be taken by both internal and external observers. The record to be submitted by the students at the time of second term examination has to include a record of at least 4 Experiments and 3 Activities to be demonstrated by teacher.

## EVALUATION SCHEME

Time Allowed:1 and 1/2hrs

Max Marks:15

	TERM-I
Two experiments	8 Marks
Practical record (experiment and activities)	2 Marks
Viva on experiments and activities	5 Marks
<b>Total</b>	<b>15 Marks</b>

### Experiments assigned for Term-II

1. To find the focal length of a convex lens by plotting graphs between  $u$  and  $v$  or between  $1/u$  and  $1/v$ .
2. To find the focal length of a convex mirror, using a convex lens.

OR

To find the focal length of a concave lens, using a convex lens.

3. To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation.
4. To determine refractive index of a glass slab using a travelling microscope.
5. To find refractive index of a liquid by using convex lens and plane mirror.
6. To draw the I-V characteristic curve for a p-n junction diode in forward bias and reverse bias.

### **Activities assigned for Term-II**

1. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items.
2. Use of multimeter to see the unidirectional flow of current in case of a diode and an LED and check whether a given electronic component (e.g., diode) is in working order.
3. To study effect of intensity of light (by varying distance of the source) on an LDR.
4. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.
5. To observe polarization of light using two Polaroids.
6. To observe diffraction of light due to a thin slit.
7. To study the nature and size of the image formed by a (i) convex lens, (ii) concave mirror, on a screen by using a candle and a screen (for different distances of the candle from the lens/mirror).
8. To obtain a lens combination with the specified focal length by using two lenses from the given set of lenses.

## CHEMISTRY (043)

### 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 XII Published by NCERT
5. Any related books and manuals brought out by NCERT (Also consider multimedia)

### QUESTION PAPER

The Question Paper will have Multiple Choice Questions (MCQ) including case-based MCQs and MCQs on assertion-reasoning type.

### N.B

The Sample Question Papers for the academic session (21-22) may also be referred to for details of changes in the QP design of the subjects.

### COURSE STRUCTURE (THEORY)

Time: 90 minutes

F.M:35

Sl. No.	UNIT	TYPE OF TEST	PT-I (35 Marks)	PT-II (35Marks)	PRE-TERM-I (35Marks)	PT-III (35Marks)	PRE-TERM-II (35Marks)
		TIME PERIOD OF THE TEST	26 JULY-31JULY	13SEPT-18-SEPT	21OCT-30OCT	24JAN-29JAN	17FEB-24FEB
		NAME OF THE CHAPTER					
1	Unit – I	Solid state	5	5	10		
2	Unit – II	Solution	8	7			
3	Unit –VII	p – Block elements		8	10		
4	Unit –X	Haloalkanes and haloarenes	10	7	15		
5	Unit -XI	Alcohols, Phenols and Ethers	12	8			
6	Unit – XIV	Bio molecules					
7	Unit –III	Electrochemistry				8	13

8	Unit- IV	Chemical Kinetics				8	
9	Unit –V	Surface Chemistry				4	
10	Unit – VIII	d-and f-Block Elements					9
11	Unit -IX	Coordination Compounds					
12	Unit -XII	Aldehydes, Ketones and Carboxylic Acids				10	13
13	Unit -XIII	Amines				5	
<b>Total</b>			<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>

### SYLLABUS DETAILS

#### UNIT I: SOLID STATE

Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea). Unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects.

#### UNIT II: SOLUTIONS

Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law, colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties.

#### UNIT III: ELECTROCHEMISTRY

Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis.

#### UNIT IV: CHEMICAL KINETICS

Rate of a reaction (Average and instantaneous), factors affecting rate of reaction : concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions).

#### UNIT V: SURFACE CHEMISTRY

Adsorption - physisorption and chemisorption, factors affecting adsorption of gases on solids, colloidal state: distinction between true solutions, colloids and suspension; lyophilic, lyophobic, multi-molecular and macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation.

## **UNIT VII: "p"-BLOCK ELEMENTS**

Group -15 Elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; Nitrogen preparation properties and uses; compounds of Nitrogen: preparation and properties of Ammonia and Nitric Acid.

Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties, dioxygen: preparation, properties and uses, classification of Oxides, Ozone, Sulphur -allotropic forms; compounds of Sulphur: preparation properties and uses of Sulphur-dioxide, Sulphuric Acid: properties and uses; Oxoacids of Sulphur (Structures only).

Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens, Preparation, properties and uses of Chlorine and Hydrochloric acid, interhalogen compounds, Oxoacids of halogens (structures only).

Group 18 Elements: General introduction, electronic configuration, occurrence, trends in physical and chemical properties, uses.

## **UNIT VIII: "d" AND "f" BLOCK ELEMENTS**

General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals –metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation.

Lanthanoids - Electronic configuration, oxidation states and lanthanoid contraction and its consequences.

## **UNIT IX: COORDINATION COMPOUNDS**

Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT.

## **UNIT X: HALOALKANES AND HALOARENES**

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

Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only).

## **UNIT XI: ALCOHOLS, PHENOLS AND ETHERS**

Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration.

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

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

## **UNIT XII: ALDEHYDES, KETONES AND CARBOXYLIC ACIDS**

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

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



### UNIT XIII: AMINES

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

### UNIT XIV: BIOMOLECULES

Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration

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

Nucleic Acids: DNA and RNA

### PRACTICALS

EVALUATION SCHEME FOR EXAMINATION	TERM-I	TERM-II
VOLUMETRIC ANALYSIS	4	4
SALT ANALYSIS	4	4
CONTENT BASED EXPERIMENT	2	2
CLASS RECORD AND VIVA (INTERNAL EXAMINER)	5	
PROJECT WORK AND VIVA (INTERNAL AND EXTERNAL BOTH)		5
<b>Total</b>	<b>15</b>	<b>15</b>

### PRACTICAL SYLLABUS

#### TERM-I

##### (1) Volumetric analysis (4 marks)

Determination of concentration/ molarity of  $\text{KMnO}_4$  solution by titrating it against a standard solution of:

i. Oxalic acid,

ii. Ferrous Ammonium Sulphate

(Students will be required to prepare standard solutions by weighing themselves).

##### (2) Salt analysis (Qualitative analysis) (4 marks)

Determination of one cation and one anion in a given salt.

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

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

(Note: Insoluble salts excluded)

##### (3) Content Based Experiments (2 marks)

#### A. Chromatography

i. Separation of pigments from extracts of leaves and flowers by paper chromatography and determination of  $R_f$  values.

ii. Separation of constituents present in an inorganic mixture containing two cations only (constituents having large difference in  $R_f$  values to be provided).

B. Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given foodstuffs.

## TERM-II

### 1) Volumetric analysis (4 marks)

Determination of concentration/ molarity of  $\text{KMnO}_4$  solution by titrating it against a standard solution of:

i. Oxalic acid,

ii. Ferrous Ammonium Sulphate

(Students will be required to prepare standard solutions by weighing themselves).

### 2) Salt analysis (Qualitative analysis) (4 marks)

Determination of one cation and one anion in a given salt.

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

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

(Note: Insoluble salts excluded)

### 3) Content based experiment

#### A. Preparation of Inorganic Compounds

Preparation of double salt of Ferrous Ammonium Sulphate or Potash Alum. Preparation of Potassium Ferric Oxalate.

#### B. Tests for the functional groups present in organic compounds:

Unsaturation, alcoholic, phenolic, aldehydic, ketonic, carboxylic and amino (Primary) group

## PROJECT

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

### A few suggested Projects.

- Study of the presence of oxalate ions in guava fruit at different stages of ripening.
- Study of quantity of casein present in different samples of milk.
- Preparation of soybean milk and its comparison with the natural milk with respect to curd formation, effect of temperature, etc.
- Study of the effect of Potassium Bisulphate as food preservative under various conditions (temperature, concentration, time, etc.)
- Study of digestion of starch by salivary amylase and effect of pH and temperature on it.
- Comparative study of the rate of fermentation of following materials: wheat flour, gram flour, potato juice, carrot juice, etc.
- Extraction of essential oils present in Saunf (aniseed), Ajwain (carum), Illaichi (cardamom).
- Study of common food adulterants in fat, oil, butter, sugar, turmeric powder, chilli powder and pepper.

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

## BIOLOGY (Code No. 044)

### PRESCRIBED BOOKS:

1. TEXT BOOK OF BIOLOGY FOR CLASS-XII (NCERT).
2. EXEMPLAR BIOLOGY-CLASS-XII (NCERT).
3. BIOLOGY SUPPLEMENTARY MATERIAL (REVISED), AVAILABLE ON CBSE WEBSITE.
4. OTHER RELATED BOOKS AND MANUALS BROUGHT OUT BY NCERT (INCLUDING MULTIMEDIA).
5. COMPREHENSIVE LABORATORY MANUAL IN BIOLOGY-XII (LAXMI PUBLICATION).

### Question Paper Design

#### XII Biology (Theory)

Term I (2021-22)

Time: 90 Minutes

Max. Marks: 35

Typology of Questions →	Section A	Section B	Total No of Questions	%
Competencies ↓	Case based MCQs (5marks)	Assertion & Reason Questions (1 mark)		
Demonstrate Knowledge and Understanding	2	7	9	50%
Application of Knowledge / Concepts	1	6	7	30%
Formulate, Analyse, Evaluate and Create	1	2	3	20%
<b>Total</b>	<b>4(5) = 20</b>	<b>15 (1)=15</b>	<b>19 (35)</b>	<b>100%</b>

**Note: All questions are compulsory.**

**Section- 'A'** is having 4 Case based questions (Each case-based question has 5 MCQs of one mark each).

**Section –'B'** is having 15 Assertion and Reason type questions of one mark each.

**Question Paper Design**  
**XII Biology (Theory)**  
**Term II (2021-22)**

Time: 2 HOURS

Max. Marks: 35

Typology of Questions →	Section A	Section B Short/Long			Section C	Total	%
		Case based (5marks)	SA question (2 marks)	LA-I (3 marks)			
Competencies ↓							
Demonstrate Knowledge and Understanding	1	1		1	1	4	50%
Application of Knowledge / Concepts	1		2			3	30%
Analyse, Evaluate and Create		1			1	2	20%
<b>Total</b>	<b>2(5) =10</b>	<b>2(2) =4</b>	<b>2(3)=6</b>	<b>1(5) =5</b>	<b>2(5) =10</b>	<b>9(35)</b>	<b>100%</b>

**Note: All questions are compulsory. However, an internal choice of approximately 33% are provided.**

- **Section- 'A'** is having 2 case based questions (Each question with 5 MCQs of one mark each).
- **Section B** is having Short/Long type questions: SA (2 marks)-two questions, LA-I (3 marks)-two questions and LA II (5 marks)-one question.
- **Section 'C'** is having 2 situation based questions (Each question with 5 MCQs of 1 mark each).
- **Internal Choice** is provided in one of the MCQs of any one Case based question under Section A, 1 question of section SA I, One question of LA I and 1 question of LA II under section 'B', and one of the MCQs of any one Situation based question under Section 'C'.

### SUGGESTIVE VERBS FOR VARIOUS COMPETENCIES

- **Demonstrate Knowledge and Understanding**  
State, name, list, identify, define, suggest, describe, outline, summarize, etc.
- **Application of Knowledge/Concepts**  
Calculate, illustrate, show, adapt, explain, distinguish, etc.
- **Formulate, Analyze, Evaluate and Create**  
Interpret, analyse, compare, contrast, examine, evaluate, discuss, construct, etc.

### MARK DISTRIBUTION:

#### XII BIOLOGY(2021-22)

Time: 90 Minutes (Term I)/ 2 Hours (Term II)

Max. Marks: 35

UNIT	Name of the Unit	Pre -Term I	Term I (As per CBSE guidelines)	Pre-Term II	Term II (As per CBSE guidelines)
	Time period of the Test	21-30 October 2021	Nov/Dec 2021	7 Feb-16 Feb 2022	Mar/Apr 2022
<b>6</b>	Reproduction	15	15		
<b>7</b>	Genetics and Evolution	20	20		
<b>8</b>	Biology and Human Welfare			14	14
<b>9</b>	Biotechnology and its Applications			11	11
<b>10</b>	Ecology and Environment			10	10
	<b>Total</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>

**XII**  
**BIOLOGY**  
**(Code No. 044)**  
**(COURSE STRUCTURE-2021-22)**

<b>EVALUATION SCHEME</b>		
<b>Theory</b>		
<b>Units</b>	<b>Term – I</b>	<b>Marks</b>
VI	Reproduction: Chapter - 2, 3 and 4	15
VII	Genetics and Evolution: Chapter - 5 and 6	20
<b>Units</b>	<b>Term – II</b>	<b>Marks</b>
VIII	Biology and Human Welfare: Chapter - 8 and 10	14
IX	Biotechnology and its Applications: Chapter - 11 and 12	11
X	Ecology and Environment: Chapter - 13 and 15	10
Total Theory (Term - I and Term - II)		70
Practicals Term – I		15
Practicals Term – II		15
Total		100

**THEORY**

**TERM - I**

**Unit-VI Reproduction**

**Chapter-2: Sexual Reproduction in Flowering Plants**

Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; outbreeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.

**Chapter-3: Human Reproduction**

Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis- spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development up to blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).

**Chapter-4: Reproductive Health**

Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).

## Unit-VII Genetics and Evolution

### **Chapter-5: Principles of Inheritance and Variation**

Heredity and variation: Mendelian inheritance; deviations from Mendelism incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination - in human being, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

### **Chapter-6: Molecular Basis of Inheritance**

Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.

## **TERM - II**

## Unit-VIII Biology and Human Welfare

### **Chapter-8: Human Health and Diseases**

Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.

### **Chapter-10: Microbes in Human Welfare**

Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.

## Unit-IX Biotechnology and its Applications

### **Chapter-11: Biotechnology - Principles and Processes**

Genetic Engineering (Recombinant DNA Technology).

### **Chapter-12: Biotechnology and its Application**

Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms – Bt. crops; transgenic animals; biosafety issues, biopiracy and patents.

## Unit-X Ecology and Environment

### **Chapter-13: Organisms and Populations**

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

## Chapter-15: Biodiversity and its Conservation

Biodiversity - Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.

### PRACTICALS

Evaluation Scheme			
	TERM - I	TERM - II	MARKS
Part A			
One Major Experiment	Experiment No. - 1	Experiment No. - 3	4
One Minor Experiment	Experiment No. - 2	Experiment No. - 4, 5	3
Part B			
Spotting (3 Spots of 1 mark each)	B.1, 2, 3, 4, 5	B.6, 7, 8	3
Practical Record + Investigatory Project & Record + Viva Voce			5
Total			15

**Max. Marks: 15 for each Term**

Practicals should be conducted alongside the concepts taught in theory classes.

#### A. List of Experiments

##### TERM - I:

1. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.
2. Prepare a temporary mount to observe pollen germination.

##### TERM - II:

3. Prepare a temporary mount of onion root tip to study mitosis.
4. Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organism.
5. Collect and study soil from at least two different sites and study them for texture, moisture content, pH and water holding capacity. Correlate with the kinds of plants found in them.

#### B. Study/Observation of the following (Spotting)

##### TERM - I:

1. Flowers adapted to pollination by different agencies (wind, insects, birds).
2. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).
3. Meiosis in onion bud cell or grasshopper testis through permanent slides. B.4 T.S. of blastula through permanent slides (Mammalian).
4. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness.



**TERM - II:**

5. Common disease - causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images. Comment on symptoms of diseases that they cause.
6. Two plants and two animals (models/virtual images) found in xeric conditions. Comment upon their morphological adaptations.
7. Two plants and two animals (models/virtual images) found in aquatic conditions. Comment upon their morphological adaptations.

## COMPUTER SCIENCE (083)

### PRESCRIBED BOOKS:

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

### COURSE STRUCTURE (THEORY)

TIME PERIOD		21 Oct'21 To 30 Oct'21	Nov/Dec'21	7 Feb'22 to 16 Feb'22	Mar/Apr 2022
Unit	Name of Unit	PRE TERM-I	TERM-1	PRE TERM-II	TERM-II
<b>1</b>	<b>Computational Thinking and Programming – 2</b>		35		5
	Revision of the basics of Python	12		1	
	Functions	8		1	
	Using Python libraries	5		1	
	File handling	10		1	
	Data-structures	--		1	
<b>2</b>	<b>Computer Networks</b>	--	--		10
	Evolution of Networking & Data Communication terminologies			1	
	Transmission media & Network devices			2	
	Network Topologies and types			1	
	Network Protocol			1	
	Mobile Telecommunication Technologies			1	
	Network Security Concepts			2	
	Introduction To Web services			1	
	E-commerce payment			1	
<b>3</b>	<b>Database Management</b>	--	--		20
	Database Concepts & Relational data model			2	
	Structured Query Language, General Concepts			3	
	Data Types and SQL commands:			8	
	SQL functions and Join			3	
	Interface of Python with an SQL database			4	
<b>TOTAL</b>		<b>35</b>	<b>As per CBSE Guideline</b>	<b>35</b>	<b>As per CBSE Guideline</b>
<b>After completion of Term-1 contents teachers may proceed with Term-2 contents to overcome shortage of timing for course completion.</b>					

## QUESTION LEVEL BREAK-UP

### DIFFICULTY LEVEL:

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

## SYLLABUS DETAILS

### TERM 1:

#### UNIT 1 : Computational Thinking and Programming - 2

(70 Theory + 50 Practical)

#### Prerequisites Computer Science- Class XI

- Revision of Python topics covered in Class XI.
- Functions: types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)
- Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths
  - Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file
  - Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file
  - CSV file: import csv module, open / close csv file, write into a csv file using csv.writerow() and read from a csv file using csv.reader( )
- Python libraries: creating python libraries

### TERM 2:

#### Unit I: Computational Thinking and Programming – 2

- Data Structure:
  - Stack, operations on stack (push & pop), implementation of stack using list.

#### UNIT 2 : Computer Networks

(15 Theory)

- Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)
- Data communication terminologies: concept of communication, components of data communication (sender, receiver, message, communication media, protocols),
- measuring capacity of communication media (bandwidth, data transfer rate), IP address,

- switching techniques (Circuit switching, Packet switching)
- Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves)
- Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)
- Network topologies and Network types: types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)
- Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP, wireless/mobile communication protocol such as GSM, GPRS and WLL
- Mobile telecommunication technologies: 1G, 2G, 3G, 4G and 5G
- Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting

### **UNIT 3: Database Management**

**(25 Theory + 20 Practical)**

- Database concepts: introduction to database concepts and its need
- Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key)
- Structured Query Language: introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create database, use database, show databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical), aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join
- Interface of python with an SQL database:
  - connecting SQL with Python, performing insert, update, delete queries using cursor,
  - display data by using fetchone(), fetchall(), rowcount,
  - creating database connectivity applications

## PRACTICAL

S.No		Marks (Total 30)	Term-1 (15 Marks)	Term-2 (15 Marks)
1	<b>Lab Test:</b>  1. Python program	8	6	2
	2. 3 SQL Queries based on one/two table(s), 2 output questions based on SQL queries	4	---	4
2	<b>Report file:</b> <b>Term – 1 :</b> Minimum 15 Python programs based on Term - 1 Syllabus <b>Term – 2 :</b> <ul style="list-style-type: none"> <li>• Minimum 3 Python programs based on Term-2 Syllabus</li> <li>• SQL Queries – Minimum 5 sets using one table / two tables.</li> <li>• Minimum 2 programs based on Python - SQL connectivity.</li> </ul>	7	4	3
3	<b>Project (using concepts learnt in Classes 11 and 12)</b> Term – 1 : Synopsis of the project to be submitted by the students (documentation only, may not submit the code during Term - 1)  Term - 2 : Final coding + Viva voce (Student will be allowed to modify their Term 1 document and submit the final executable code.)	8	3	5
4	<b>Viva voce</b>	3	2	1

### 1. Suggested Practical List:

#### Term-1

#### Python Programming

- Read a text file line by line and display each word separated by a #.
- Read a text file and display the number of vowels/consonants/uppercase/lowercase characters in the file.
- Remove all the lines that contain the character 'a' in a file and write it to another file.
- Create a binary file with name and roll number. Search for a given roll number and display the name, if not found display appropriate message.
- Create a binary file with roll number, name and marks. Input a roll number and update the marks.

- Write a random number generator that generates random numbers between 1 and 6 (simulates a dice).
- Create a CSV file by entering user-id and password, read and search the password for given user-id.

## Term-2

### Python Programming

- Write a Python program to implement a stack using list.

### Database Management

- Create a student table and insert data. Implement the following SQL commands on the student table:
  - ALTER table to add new attributes / modify data type / drop attribute
  - UPDATE table to modify data
  - ORDER By to display data in ascending / descending order
  - DELETE to remove tuple(s)
  - GROUP BY and find the min, max, sum, count and average
  - Joining of two tables.
- Similar exercise may be framed for other cases.
- Integrate SQL with Python by importing suitable module.

### Database Management

- Create a student table and insert data. Implement the following SQL commands on the student table:
  - ALTER table to add new attributes / modify data type / drop attribute
  - UPDATE table to modify data
  - ORDER By to display data in ascending / descending order
  - DELETE to remove tuple(s)
  - GROUP BY and find the min, max, sum, count and average
- Similar exercise may be framed for other cases.
- Integrate SQL with Python by importing suitable module.

## 2. Suggested Reading Material

- NCERT Textbook for COMPUTER SCIENCE (Class XII)
- Support Materials on the CBSE website.

## 3. Project

The aim of the class project is to create something that is tangible and useful using Python file handling/Python-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 sensitised to avoid plagiarism and violations of copyright issues while working on projects. Teachers should take necessary measures for this.

## **PHYSICAL EDUCATION (048)**

### **PRE-TERM-I (October)**

#### **THEORY (MCQ) FM- 35 MARKS**

- Unit-1.Planning in Sports
- Unit-2. Sports & Nutrition
- Unit-5. Children & Women in Sports
- Unit-6 .Test & Measurement in Sports
- Unit-8. Biomechanics & Sports

### **(November – December)**

#### **THEORY (MCQ) FM – 35 MARKS**

- Unit-1 Planning in Sports
- Unit-2 Sports & Nutrition
- Unit-5 Children & Women in Sports
- Unit-6 Test & Measurement in Sports
- Unit-8 Biomechanics & Sports
- \*Unit-9 Psychology & Sports
- \*Unit-10 Training in Sports

### **PRACTICAL**

#### **Term-I**

1. Project File (About one sport/game of choice as per the syllabus mentioned in Text book) 05 Marks
2. Demonstration of Fitness Activity 05 Marks
3. Viva Voice (From Project File; Fitness) 05 Marks

### **PRE-TERM-II (February)**

#### **THEORY**

#### **SHORT/LONG ANSWER – 35 MARKS**

- Unit-3 Yoga & Lifestyle
- Unit-4 Physical Education & Sports for CWSN (Children with Special Needs - DIVYANG)
- Unit-7 Physiology & Injuries in Sports
- Unit-9 Psychology & Sports
- Unit-10 Training in Sports

### **TERM-II (March-April)**

#### **THEORY**

#### **SHORT/LONG ANSWER – 35 MARKS**

- Unit-3 Yoga & Lifestyle
- Unit-4 Physical Education & Sports for CWSN (Children with Special Needs - DIVYANG)
- Unit-7 Physiology & Injuries in Sports
- Unit-9 Psychology & Sports
- Unit-10 Training in Sports



**TERM II – PRACTICAL**

- |  |          |
|--|----------|
| 1. Project File (Yoga and General Motor Fitness Test)          | 05 Marks |
| 2. Demonstration of Fitness Activity/Yoga                      | 05 Marks |
| 3. Viva Voice (From Project File; General Motor Fitness; Yoga) | 05 Marks |

**NB- \*Unit-9 Psychology & Sports**

**\*Unit-10 Training in Sports**

**The above mentioned two Units from Term-II syllabus can be covered in Term-I period but no questions shall come in Term-I examination.**

## PAINTING (049)

**Prescribed Book:** An introduction to Indian Art  
Part – II (NCERT)

**Reference Book:** History of Indian Art (Full circle)  
or  
Panoramic Indian Painting (R.C. Luthera)

Term-I: FM- 50	Term-II: FM - 50
Theory -15 marks (Time-1hr) Practical –35 marks(Time-3+3hr)	Theory -15 marks (Time-1hr) Practical –35 marks(Time-3+3hr)

### QUESTIONWISE BREAKS –UP

Half Yearly –

Forms of questions-MCQ

Pre-Annual and Annual

Forms of questions – (As per CBSE instruction)

### TYOLOGY OF QEUSTIONS

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

### SYLLABUS DETAILS

Std. – XII PAINTING (Code- 049)

#### Unit wise Weightage

Term	Units		Marks
		<b>History of Indian Art</b>	
I	1	The Rajasthani and Pahari Schools of Miniature Painting	8
	2	The Mughal and Deccan Schools of Miniature Painting	7
II	3	The Bengal School of Painting	8
	4	Indian National flag and the Modern Trends in Indian Art	7
			<b>30</b>

## TERM -I

<b>Unit 1</b>	<b>The Rajasthani and Pahari Schools of Miniature Painting</b> (16 <sup>th</sup> Century A.D. to 19 <sup>th</sup> Century A.D.) A brief introduction to Indian Miniature Schools: Western-Indian, Pala, Rajasthani, Mughal, Central India, Deccan and Pahari.	<b>18 Period</b>
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### **(a) The Rajasthani School**

- 1) Origin and Development
- 2) Sub-schools – Mewar, Bundi, Jodhpur, Bikaner, Kishangarh and Jaipur
- 3) Main features of the Rajasthani schools
- 4) Appreciation of the following Rajasthani Paintings.

Title	Painter	Sub-School
Maru -Ragini	Sahibdin	Mewar
Chaugan Players	Dana	Jodhpur
Krishna on swing	Nuruddin	Bikaner
Radha( Bani- Thani)	Nihalchand	Kishangarh
Bharat meets Rama at Chitrakuta	Guman	Jaipur

### **(b) The Pahari School**

- 1) Origin and development
- 2) Sub-Schools – Basohli, Guler, Kangra, Chamba and Garhwal
- 3) Main features of the Pahari School
- 4) Appreciation of the following Pahari Miniature Paintings:

Title	Painter	Sub-School
Krishna and Gopies	Manaku	Basohli
Nand, Yasoda and Krishna with Kinsmen going to Vrindavana	Nainsukh	Kangra

### **Unit – 2:**

#### **The Mughal and Deccan Schools of Miniature Painting**

(16th Century A.D. to 19th Century A.D.)

### **(a) The Mughal School**

- 1) Origin and development
- 2) Main features of the Mughal School.
- 3) Appreciation of the following Mughal Miniature Paintings:

<b>Title</b>	<b>Painter</b>	<b>Period</b>
Krishna lifting Mount Goverdhana	Miskin	Akbar
Falcon on a Bird- Rest	Ustad Mansoor	Jahangir
Kabir and Raidas	Ustad Faquirullah Khan	Sahajahan School
Marriage Procession of Dara Sikoh	Haji Madni	Provincial Mughal,Avadh

**(b) The Deccan School**

- 1) Origin and development
- 2) Main features of the Deccan School
- 3) Appreciation of the following Deccan Miniature Paintings

<b>Title</b>	<b>Painter</b>	<b>Sub-School</b>
Hazrat Nizamuddin Auliya and Amir Khusro	Unknown	Hyderabad
Chand Bibi Playing Polo	Unknown	Golconda

**Note: There will be a ' Chapter Ending Test' after completion of each chapter.**

**(PRACTICAL)  
TERM-I**

**FM: 35 Marks**

**Painting Composition**

**25 Marks**

Imaginative painting based on subjects from life and nature in water and poster colours with colour values.

**Portfolio assessment(10marks)**

- |  |            |
|--|------------|
| a) Record of the Term, performance from sketch to finished product | (05 marks) |
| b) One selected work based on any Indian Folk Arts (Painting)      | (02 marks) |
| c) Two selected works of paintings done during the Term.           | (03 marks) |

**HISTORY OF INDIAN ART**  
**TERM-II**

<b>Unit 3</b>	<b>The Bengal School of Painting and Modern trends in Indian art ( About the beginning to mid of the 20<sup>th</sup> Century)</b>	<b>18 Periods</b>
(i)	National Flag of India and the symbolic significance of its forms and the colours	
(ii)	Introduction to the Bengal School of Painting (i) Origin and development of the Bengal School of Painting (ii) Main features of the Bengal School of Painting	
(iii)	Appreciation of the following paintings of the Bengal School. i. Journey's End - Abanindranath Tagore ii. Shiv and Sati - Nandalal Bose iii, Rasa-Lila - Kshitindranath Majumdar iv. Radhika - M.A.R. Chughtai v. Meghdoot - Ram Gopal Vijaivargiya  Contribution of Indian artists in the struggle for National Freedom Movement.	
<b>Unit 4</b>	<b>Indian National Flag and the Modern Trends in Indian Art</b> Appreciation of the following contemporary (Modern) Indian Art	
(i)	<b>Paintings:</b> i. Rama Vanquishing the pride of the Ocean - Raja Ravi Verma ii. Mother and Child - Jamini Roy iii. Haldi Grinders - Amrita Sher Gill iv. Mother Teresa - M.F. Hussain	
(ii)	<b>Graphic Prints:</b> i. Children - Somnath Hore ii. Devi - Jyoti Bhatt iii. Of walls - Anupam Sud iv. Man, Woman and Tree - K. Laxma Goud	
(iii)	<b>Sculpture:</b> i. Triumph of Labour - D.P. Roychowdhury ii. Santhal family - Ramkinkar Baij iii. Cries Un-heard - Amarnath Sehgal iv. Ganesha - P.V. Jankiram	

The names of the artists and titles of their art works as listed above are only suggestive and in no way exhaustive. Teachers and students should expand this according to their own resources. However the questions will be set from the above artworks only.

**Note: There will be a ' Chapter Ending Test' after completion of each chapter.**

**PRACTICAL  
TERM-II**

**FM : 35 Marks**

**Nature and object study 25 Marks**

Studies on the basis of exercises done in class XI with two or three objects and two draperies (in different colours) for background and foreground. Exercises in pencil with light and shade and in full colour from a fixed point of view.

**Portfolio assessment**

**(10marks)**

- a) Record of the Term, performance from sketch to finished product.(05 marks)
- b) Four selected nature and object study exercises in any media done during the term. (05 marks)

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.

**Note:**

1. The candidates should be given one hour – break after first three hours.
2. The time-table to be so framed as to allow the students to work continuously for minimum of two periods at a stretch.

**Guidelines for Evaluations of Practical**

**1. Marking scheme**

<b>Nature and object study</b>	<b>25 Marks</b>
I. Drawing (Composition)	10
II. Treatment of media/colours	05
III. Overall impression	10
<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

**2. 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.

**Note: Any five subjects for painting composition are to be decided by the external and internal examiners jointly as per instructions and are to mentioned here strictly just before start of the examination for part-II.**

**ECONOMICS (030)****CLASS-XII****SESSION-2021-22**

Time: 3 hours

F.M.: 40(Term 1) +40(Term 2) +20(Project)

Prescribed Books: Introductory Macroeconomics – NCERT

Indian Economic Development – NCERT

Sl. NO	Units	TERM-I	TERM –II
	TIME PERIOD OF THE TEST	NOVEMBER/D ECEMBER 2021	MARCH/APRIL 2022
<b>Part A : INTRODUCTORY MACRO ECONOMICS</b>			
1	Money and Banking	6	NA
2	Government Budget and the Economy	6	
3	Balance of Payments	6	
4	National Income and Related Aggregates	NA	10
5	Determination of Income and Employment		12
<b>Part B : INDIAN ECONOMIC DEVELOPMENT</b>			
1	Development Experience (1947-90) and Economic Reforms since 1991: ● Indian Economy on the eve of Independence ● Indian Economy (1950-90) ● Liberalisation, Privatisation and Globalisation : An Appraisal	12	NA
2	Current challenges facing Indian Economy ● Poverty ● Human Capital Formation ● Rural development	10	
3	Current challenges facing Indian Economy ● Employment ● Infrastructure ● Sustainable Economic Development		12
4	Development Experience of India – A Comparison with Neighbours- ● Comparative Development Experience of India and its Neighbours		6
<b>Total</b>		<b>40</b>	<b>40</b>



## WEIGHTAGE OF CONTENT

Part C Project Work (Part 1): 10 Marks

Students would prepare only ONE project in the entire academic session, which is divided into 2 terms i.e. Term I and Term II.

### Scheme of Options

TERM 1	MCQ BASED QUESTION PAPER	Theory: 40 Marks Time: 90 minutes
TERM 2	As per the CBSE Guidelines	Theory: 40 Marks Time: 2 Hours

## SYLLABUS DETAILS

### TERM 1

#### **Part A: Introductory Macroeconomics**

#### **Unit 2: it 2: Money and Banking**

**15 Periods**

Money - meaning and supply of money - Currency held by the public and net demand deposits held by commercial banks.

Money creation by the commercial banking system.

Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.

#### **Unit 4: Government Budget and the Economy**

**15 Periods**

Government budget - meaning, objectives and components.

Classification of receipts - revenue receipts and capital receipts; classification of expenditure – revenue expenditure and capital expenditure.

Measures of government deficit - revenue deficit, fiscal deficit, primary deficit their meaning.

#### **Unit 5: Balance of Payments**

**15 Periods**

Balance of payments account - meaning and components; balance of payments deficit-meaning.

Foreign exchange rate - meaning of fixed and flexible rates and managed floating.

Determination of exchange rate in a free market.

## **Part B: Indian Economic Development**

### **Unit 6: Development Experience (1947-90) and Economic Reforms since 1991: 28 Periods**

A brief introduction of the state of Indian economy on the eve of independence. Indian economic system and common goals of Five Year Plans.

Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy), industry (IPR 1956; SSI – role & importance) and foreign trade.

#### **Economic Reforms since 1991:**

Features and appraisals of liberalisation, globalisation and privatisation (LPG policy);

Concepts of demonetization and GST

### **Unit 7: Current challenges facing Indian Economy: 60 Periods**

**Poverty**- absolute and relative; Main programmes for poverty alleviation: A critical assessment;

**Human Capital Formation**: How people become resource; Role of human capital in economic development; Growth of Education Sector in India

**Rural development**: Key issues - credit and marketing - role of cooperatives; agricultural diversification; alternative farming - organic farming

#### **TERM -2**

## **Part A: Introductory Macroeconomics**

### **Unit 1: National Income and Related Aggregates 30 Periods**

What is Macroeconomics?

Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.

Circular flow of income (two sector model); Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method.

Aggregates related to National Income:

Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost; Real and Nominal GDP, GDP Deflator.

GDP and Welfare

**Unit 3: Determination of Income and Employment****25 Periods**

Aggregate demand and its components.

Propensity to consume and propensity to save (average and marginal).

Short-run equilibrium output; investment multiplier and its mechanism.

Meaning of full employment and involuntary unemployment.

Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply.

**Unit 7: Current challenges facing Indian Economy:****60 Periods**

**Employment:** Growth and changes in work force participation rate in formal and informal sectors; problems and policies

**Infrastructure:** Meaning and Types: Case Studies: Energy and Health: Problems and Policies- A critical assessment;

**Sustainable Economic Development:** Meaning, Effects of Economic Development on Resources and Environment, including global warming

**Unit 8: Development Experience of India:****12 Periods**

A comparison with neighbours

India and Pakistan

India and China

Issues: economic growth, population, sectoral development and other Human Development Indicators.

**Suggested Question Paper Design  
Economics (Code No. 030)  
Class XII (2021-22)  
March 2022 Examination**

**Marks: 40+40**

**Duration: 1.5 hrs. & 2hrs**

SN	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>Analysing, 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>

**Guidelines for Project Work in Economics (Class XII)**

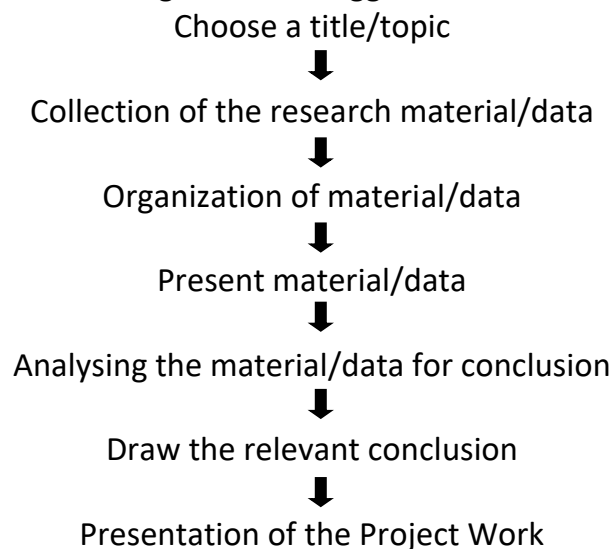
The **objectives** of the project work are to enable learners to:

- Probe deeper into theoretical concepts learnt in class XII
- 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.*

**Term-Wise 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 two terms.
- 20 marks assigned for Project Work can be divided in to two terms in the following manner:

**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

**FILES**

S. No.	Heading	Marks Allotted
1	Relevance of the topic Introduction, Objective	3
2	Knowledge Content/Research Work Questionnaire, Data Collection	4
3	Presentation Technique Diagrams, Graphs, Pictures	3
4	Analysis stating Limitations, Conclusion, Bibliography	5
5	Viva-voce <b>(1marks X 5 questions)</b>	5
	<b>Total</b>	20 Marks

## **POWER POINT PRESENTATION**

<b>S. No.</b>	<b>Heading</b>	<b>Marks Allotted</b>
<b>1</b>	Relevance of the topic	3
<b>2</b>	Design	4
<b>3</b>	Sequencing	5
<b>3</b>	Animations	3
<b>4</b>	Viva-voce <b>(2 marks X 4 questions)</b>	5
	<b>Total</b>	20 Marks

**Notes: In Power Point Presentation, The total number of slides must be within 15 to 20.**

### **Suggestive List of Projects:**

- Micro and Small Scale Industries
- Contemporary Employment situation in India
- Goods and Services Tax Act and its Impact on GDP
- Human Development Index
- Self-help group
- Monetary policy committee and its functions
- Government Budget & its Components
- Exchange Rate determination – Methods and Techniques
- Livestock – Backbone of Rural India
- Sarwa Siksha Abhiyan – Cost Ratio Benefits
- Minimum Support Prices
- Waste Management in India – Need of the hour
- Digital India- Step towards the future
- Vertical Farming – an alternate way
- Make in India – The way ahead

- Trends in Credit availability in India
- Role of RBI in Control of Credit
- Currency War – reasons and repercussions
- Rain Water Harvesting – a solution to water crises
- Bumper Production- Boon or Bane for the farmer
- Organic Farming – Back to the Nature
- **Any other topic**



## ACCOUNTANCY (055) 2021-22

### PRESCRIBED BOOKS:

1. Accountancy –Part I (NCERT)
2. Accountancy – Part II (NCERT)

### WEIGHTAGE TO FORM OF QUESTIONS (TERM –I)

TYPE	MARKS OF EACH QUESTION	NO. OF QUESTION	TOTAL MARKS
Objective type/ MCQ	1	40	40
<b>Total</b>		<b>40</b>	<b>40</b>

### TYOLOGY OF QUESTIONS:

- |                                    |   |        |
|------------------------------------|---|--------|
| 1. Remembering & Understanding     | : | 55%    |
| 2. Applying                        | : | 23.75% |
| 3. Analysing, Evaluating &Creating | : | 21.25% |

**Note**– No. of questions and total marks under each section are subject to change at par with typology with respect to CBSE sample paper 2021-22.

### COURSE STRUCTURE (THEORY)(TERM-I) (MCQ BASED QUESTION PAPER)

SL.NO.	CHAPTERS	MARKS (PRE-TERM-I 21 <sup>ST</sup> -30 <sup>TH</sup> OCT 2021)	MARKS (TERM-I NOV-DEC 2021)
	<b><u>PART- A</u></b> <b><u>UNIT</u></b> <b><u>ACCOUNTING FOR PARTNERSHIP FIRMS</u></b>	18	18
1	FUNDAMENTALS		
2	CHANGE IN PROFIT SHARING RATIO		
3	ADMISSION OF A PARTNER		
1	<b><u>ACCOUNTING FOR COMPANIES</u></b> ACCOUNTING FOR SHARES	12	12
1	<b><u>PART- B</u></b> <b><u>ANALYSIS OF FINANCIAL STATEMENTS</u></b> i)Statement of profit and loss and Balance sheet in prescribed form with major heading and sub headings (As per schedule III to the companies Act,2013) ii)Tools of Analysis- Ratio Analysis	10	10
2	ACCOUNTING RATIOS		
	Project Work(PART-I)	-	10
	<b>Total</b>	<b>40</b>	<b>50</b>

**N.B:** Question paper will be MCQs (case based, source based, open ended etc.) as per CBSE sample paper. Duration of the exam is 90 minutes.

For class XII end of topic/unit test will be conducted at school level along with internal assessment/exploratory activities/practicals/projects.

## SYLLABUS DETAILS

### Part –A:

#### **Unit: Accounting for Partnership Firms**

- Partnership: features, Partnership Deed.
- Provisions of the Indian Partnership Act 1932 in the absence of partnership deed.
- Fixed v/s fluctuating capital accounts. Preparation of Profit and Loss Appropriation account- division of profit among partners, guarantee of profits.
- Past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio).
- Goodwill: nature, factors affecting and methods of valuation-average profit, super profit and capitalization.

**Note:** *Interest on partner's loan is to be treated as a charge against profits. Goodwill to be adjusted through partners capital/current account. Raising and writing off goodwill is excluded.*

#### **Accounting for Partnership firms- Reconstitution**

- **Change in the Profit Sharing Ratio** among the existing partners-sacrificing ratio, gaining ratio, accounting for revaluation of assets and reassessment of liabilities and treatment of reserves and accumulated profits. Preparation of revaluation account and balance sheet.
- **Admission of a partner**-effect of admission of a partner on change in the profits sharing ratio, treatment of goodwill, treatment for revaluation of assets and re- assessment of liabilities, treatment of reserves and accumulated profits.

#### **Unit: Accounting for Companies**

#### **Accounting for Share Capital**

- Share and share capital: nature and types.
- Accounting for share capital: issue and allotment of equity and preferences shares. Public subscription of shares-oversubscription and under subscription of shares; issue at par and at premium, calls in advance and arrears (excluding interest), issue of shares for consideration other than cash.
- Concept of Private Placement and Employee Stock Option Plan (ESOP).
- Accounting treatment of forfeiture and re-issue of shares.
- Disclosure of share capital in the Balance Sheet of a company.

### Part–B:

#### **Unit: Analysis of Financial Statements**

#### **Financial statements of a Company:**

Statement of Profit and Loss and Balance Sheet in prescribed form with major headings and sub headings (as per Schedule III to the Companies Act, 2013)

**Note:** *Exceptional items, extraordinary items and profit (loss) from discontinued operations are excluded.*

- **Financial Statement Analysis:** Objectives, importance and limitations.
- **Accounting Ratios:** Meaning, Objectives, classification and computation.
- **Liquidity Ratios:** Current ratio and Quick ratio.
- **Solvency Ratios:** Debt to Equity Ratio, Total Asset to Debt Ratio, Proprietary Ratio and Interest Coverage Ratio
- **Activity Ratios:** Inventory Turnover Ratio, Trade Receivables Turnover Ratio, Trade Payables Turnover Ratio and Working Capital Turnover Ratio.
- **Profitability Ratios:** Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, Net Profit Ratio and Return on Investment.

**Note:** Net Profit Ratio is to be calculated on the basis of profit before and after tax

### COURSE STRUCTURE (THEORY)(TERM-II)

SL. NO.	CHAPTERS	MARKS (PRE-TERM-II 7 <sup>TH</sup> -16 <sup>TH</sup> FEB 2022)	MARKS (TERM-II MARCH/APRIL 2022)
1	<u>Accounting for not-for profit Organisation</u>	10	10
1	<u>Accounting for Partnership Firms</u>		
2	Retirement and death of a partner	12	12
	Dissolution of partnership Firms		
1	<u>Company Accounts</u>		
	Accounting for Debentures	8	8
1	<u>PART- B</u>		
	<u>Analysis of financial Statement</u>		
1	Financial statement of a company	10	10
2	i. Comparative and Commonsized Statements		
	Cash flow Statement		
	Project Work(PART –II)		10
	<b>Total</b>	<b>40</b>	<b>50</b>

**Note**– The paper will be of 2hours duration and have questions of different format (case-based/situation based, open ended, short answer/long answer type etc.)

In case situation is not suitable for normal descriptive examination a 90 minutes MCQ based exam will be conducted at the end of the term-II also.

For class XII end of topic/unit test will be conducted at school level along with internal assessment/exploratory activities/practicals/projects.

## **Part -A:**

### **Unit: Accounting for Not-For-Profit Organisations**

- Not-for-profit organizations: concept.
- Receipts and Payments Account: features and preparation.
- Income and Expenditure Account: features, preparation of income and expenditure account and balance sheet from the given receipts and payments account with additional information.

### **Scope:**

- Adjustments in a question should not exceed 3 or 4 in number and restricted to subscriptions, consumption of consumables and sale of assets/old material.*
- Entrance/admission fees and general donations are to be treated as revenue receipts.*
- Trading Account of incidental activities is not to be prepared.*

### **Unit: Accounting for Partnership Firms**

#### **Accounting for Partnership firms-Reconstitution and Dissolution.**

- **Retirement and death of a partner:** effect of retirement/death of a partner on change in profit sharing ratio, treatment of goodwill, treatment for revaluation of assets and reassessment of liabilities, adjustment of accumulated profits and reserves and preparation of balance sheet.
- Calculation of deceased partner's share of profit till the date of death.

#### **Dissolution of a partnership firm:**

Meaning of dissolution of partnership and partnership firm, types of dissolution of a firm. Settlement of accounts-preparation of realization account, and other related accounts: capital accounts of partners and cash/bank a/c (excluding piecemeal distribution, sale to a company and insolvency of partner(s)).

### **Note:**

- If realized value of an asset is not given, it is to be presumed that it has not realized any amount.
- If a partner has borne and/or paid the realisation expenses, it should be stated.

### **Unit-Accounting for Companies**

#### **Accounting for Debentures**

- Debentures: Issue of debentures at par, at a premium and at a discount. Issue of debentures for consideration other than cash; Issue of debentures with terms of redemption; debentures as collateral security- concept, interest on debentures. Writing off discount/loss on issue of debentures.

**Note:** Discount or loss on issue of debentures to be written off in the year debentures are allotted from Security Premium Reserve/Capital Reserve/ Statement of Profit and Loss as Financial Cost(AS16) in that order.

**Note:** Related sections of the Companies Act, 2013 will apply.  
Concept of Tax Deducted at Source (TDS) is excluded.

### **Unit: Analysis of Financial Statements**

#### **Financial statements of a Company:**

- **Tools for Financial Statement Analysis:**  
Comparative statements, common size statements.

### **Unit: Cash Flow Statement**

- Meaning, objectives and preparation (as per AS 3 (Revised))(Indirect Method only)

#### **Note:**

- (i) Adjustments relating to depreciation and amortization, profit or loss on sale of assets including investments, dividend (both final and interim) and tax.
- (ii) Bank overdraft and cash credit to be treated as short term borrowings.
- (iii) Current Investments to be taken as Marketable securities unless otherwise specified

**Note:** Previous years' Proposed Dividend to be given effect, as prescribed in AS-4, Events occurring after the Balance Sheet date. Current years' Proposed Dividend will be accounted for in the next year after it is declared by the shareholders.

### **Part C: Practical Work**

**Students would prepare only ONE project in the entire academic session, which is divided in to two terms i.e. Term-I and Term-II**

Detailed guidelines for project work are as follows-

Students need to create **one specific project** only in which they would be required to cover the company profile, assessment of financial statements, and specific report analysis. The main objective of preparing the project report is for the following reason:

1. Students are able to state the meaning, objectives and limitations of financial statement analysis.
2. Study the proper use of different tools of 'financial statements analysis' like comparative analysis, Ratios and Cash flow statement.
3. Capable to create Comparative Statements and Common Size Statement.
4. Understand the Meaning, objective, advantage, and limitation of Accounting Ratios.

#### **TERM -I**

<b>PARTICULARS</b>	<b>MAXIMUM MARKS</b>
<b>Written Test (based on Project– Accounting Ratios)</b>	<b>6</b>
<b>Practical file</b>	<b>2</b>
<b>Viva (Ratio Analysis)</b>	<b>2</b>

**TERM -II**

<b>PARTICULARS</b>	<b>MAXIMUM MARKS</b>
<b>Written Test (based on Comparative Statements and Common Size Statement and Cash Flow statement)</b>	<b>6</b>
<b>Practical file</b>	<b>2</b>
<b>Viva (Comparative Statements and Common Size Statement and Cash flow Statement)</b>	<b>2</b>

## BUSINESS STUDIES (054)

PRESCRIBED BOOKS:

1. **Business Studies – I (NCERT)**
2. **Business Studies – II (NCERT)**

### TERM - I

Time: 90 MINUTES

Total Theory Marks: 40

#### WEIGHTAGE TO FORM OF QUESTIONS:

TYPE	MARKS OF EACH QUESTION	NO. OF QUESTION	TOTAL MARKS
Objective Type/ MCQ	1	40	40
<b>Total</b>		<b>40</b>	<b>40</b>

#### TYOLOGY OF QUESTIONS:

- |                                       |   |                   |
|---------------------------------------|---|-------------------|
| 1. Remembering and Understanding      | - | 55% (44 marks)    |
| 2. Applying                           | - | 23.75% (19 marks) |
| 3. Analyzing, Evaluating and 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 2021-22.

#### COURSE STRUCTURE (THEORY) (TERM- 1) (MCQ BASED QUESTION PAPER)

UNIT	CHAPTERS	PRE-TERM – I 21 OCT – 30 OCT, 2021	TERM -I NOV/DEC 2021
PART - A	<b>PRINCIPLES AND FUNCTIONS OF MANAGEMENT</b>		
01	Nature and Significance of Management	16 Marks	16 Marks
02	Principles of Management		
03	Business Environment	14 Marks	14 Marks
04	Planning		
05	Organizing		
PART - B	<b>BUSINESS FINANCE AND MARKETING</b>		
06	Marketing Management	10 Marks	10 Marks
	Project Work (Part – 1)		10 MARKS
	<b>Total</b>		<b>50</b>

**N.B:** For Class XII end of Topic/Unit test will be conducted at school along with internal -- assessment/exploratory activities/practical/projects.

## SYLLABUS DETAILS

### **PART A: PRINCIPLES AND FUNCTIONS OF MANAGEMENT**

#### **Unit 1: Nature and Significance of Management**

- Management- concept, objectives and importance concept includes meaning and features
- Management as Science, Art and Profession
- Levels of Management
- Management functions- planning, organizing, staffing, directing and controlling
- Coordination- concept and importance

#### **Unit 2: Principles of Management**

- Principles of Management- concept and significance
- Fayol's principles of management
- Taylor's Scientific management- principles and techniques

#### **Unit 3: Business Environment**

- Business Environment - concept and importance
- Dimensions of Business Environment- Economic, Social, Technological, Political and Legal.

#### **Unit 4 : Planning**

- Concept, importance and limitations
- Planning process

#### **Unit 5: Organizing**

- Concept and importance.
- Organizing Process
- Structure of organization- functional and divisional- concept.
- Delegation: concept, elements and importance
- Decentralization: concept and importance

### **Part B : BUSINESS FINANCE AND MARKETING**

#### **Unit 11: Marketing Management**

- Marketing- Concept, functions and philosophies - Product, Price and Standard
- Marketing Mix - Concept & elements
- Product- branding, labelling and packaging – Concept
- Price- Concept, Factors determining price
- Physical Distribution- concept
- Promotion- Concept and elements; Advertising, Personal Selling, Sales Promotion and Public Relations

**PROJECT WORK IN BUSINESS STUDIES (ONLY ONE PROJECT): GUIDELINES AS GIVEN IN CLASS XII CURRICULUM**



**TERM - II**

Time: 2 HRS

Total Marks: 40

**WEIGHTAGE TO FORM OF QUESTIONS:**

TYPE	MARKS OF EACH QUESTION	NO. OF QUESTION	TOTAL MARKS
Subjective Type			40
<b>Total</b>		<b>40</b>	<b>40</b>

**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)

\*\* Note – No. of questions and total marks under each section are subject to change with respect to CBSE Sample Paper 2021-22, Which will follow the question pattern as mentioned below.

**COURSE STRUCTURE (THEORY) (TERM- II)  
(SUBJECTIVE TYPE QUESTION PAPER)**

UNIT	CHAPTERS	PRE-TERM – II 07 FEB-16 FEB 2022	TERM -II MARCH/APRIL 2022
PART – A	<b>PRINCIPLES AND FUNCTIONS OF MANAGEMENT</b>		
07	Staffing	20 Marks	20 Marks
08	Directing		
09	Controlling		
PART – B	<b>BUSINESS FINANCE AND MARKETING</b>		
10	Financial Management	15 Marks	15 MARKS
11	Financial Market		
12	Consumer Protection	5 Marks	5 Marks
	Project Work (Part – 1)		10 MARKS
	<b>Total</b>		<b>50</b>

**N.B:**

For Class XII end of Topic/Unit test will be conducted at school along with internal assessment/exploratory activities/practical/projects.

**A 90 Minutes MCQ based exam will be conducted at the end of the Term II if the situation is not favorable for descriptive examination.**

## SYLLABUS DETAILS

### PART A: PRINCIPLES AND FUNCTIONS OF MANAGEMENT

#### Unit 6: Staffing

- Concept and importance of staffing
- Staffing process
- Recruitment-process
- Selection- process
- Training and Development- Concept and importance. Methods of training- on the job and off the job-vestibule training, apprenticeship training and internship training.

#### Unit 7: Directing

- Concept and importance
- Elements of Directing
- Motivation-concept, Maslow's hierarchy of needs, Financial and non-financial incentives
- Leadership- concept, styles- authoritative, democratic and laissez faire
- Communication- concept, formal and informal communication.

#### Unit 8: Controlling

- Concept and importance
- Steps in the process of controlling

### Part B : BUSINESS FINANCE AND MARKETING

#### Unit 9: Financial Management

- Concept, role, and objectives of Financial Management
- Financial Decisions: investment, financing and dividend- Meaning and factors affecting them
- Financial Planning- Concept and importance
- Capital Structure- Concept and factors affecting capital structure.
- Fixed and Working Capital - Concept and factors affecting their requirements.

#### Unit 10: Financial Markets

- Financial Markets: Concept, functions and types
- Money market and its instruments
- Capital market and its types (primary and secondary), methods of floatation in the primary market.
- Stock Exchange- Meaning, Functions and trading procedure
- Securities and Exchange Board of India (SEBI)- objectives and functions

## Unit 12: Consumer Protection

- Concept and importance of consumer protection
- Consumer Protection Act, 1986.
- Meaning of consumer
- Rights and responsibilities of consumers
- Who can file a complaint?
- Redressal machinery
- Remedies available


**PROJECT WORK IN BUSINESS STUDIES (ONLY ONE PROJECT): GUIDELINES  
AS GIVEN IN CLASS XII CURRICULUM**

## POLITICAL SCIENCE (Code No.028)

### Prescribed Books:

1. Contemporary World Politics, Class XII, Published by NCERT
2. Politics in India since Independence, Class XII, Published by NCERT
3. Uploaded additional Study Materials

### COURSE STRUCTURE

SL NO	<u>EXAM [TIME PERIOD]</u>	<u>Pre-Term 1 (35\40 Marks) [21.10.21-30.10.21]</u>	<u>Term 1 [Full Marks: 40] [November\December, 2021]</u>	<u>Pre-Term 2 [35 Marks] [07.2.22-16.2.22]</u>	<u>Term 2 [Full Marks: 40] [March\April. 2022]</u>
					

### TERM-WISE SYLLABUS

#### Pre-TERM 1

40 Marks

Units	Contents	WEIGHTAGE (IN MARKS)
<b>Part A: Contemporary World Politics</b>		
1	Cold War Era and Non-aligned Movement	10
2	The End of Bipolarity	10
<b>Part B: Politics in India Since Independence</b>		
4	Challenges of Nation-Building	10
5	Planning and Development	10
<b>Total</b>		<b>40</b>

#### TERM-1

40 Marks

Units	Contents	WEIGHTAGE (IN MARKS)
<b>Part A: Contemporary World Politics</b>		
1	Cold War Era and Non-aligned Movement	6
2	The End of Bipolarity	8
3	United Nations and its Organizations	6
<b>Part B: Politics in India Since Independence</b>		
4	Challenges of Nation-Building	08
5	Planning and Development	04
6	India's Foreign Policy	08
<b>Total</b>		<b>40</b>

**Pre-TERM 2****40 Marks**

Units	Contents	WEIGHTAGE (IN MARKS)
<b>Part A: Contemporary World Politics</b>		
7	New Centers of Power	10
8	South Asia and the Contemporary World	10
<b>Part B: Politics in India Since Independence</b>		
10	Parties and the Party Systems in India	10
11	Democratic Resurgence	10
	<b>Total</b>	<b>40</b>

**TERM 2****40 Marks**

Units	Contents	WEIGHTAGE (IN MARKS)
<b>Part A: Contemporary World Politics</b>		
7	New Centers of Power	08
8	South Asia and the Contemporary World	06
9	Globalization	06
<b>Part B: Politics in India Since Independence</b>		
10	Parties and the Party Systems in India	06
11	Democratic Resurgence	06
12	Indian Politics: Trends and Developments	08
	<b>Total</b>	<b>40</b>

**Grand Total: 100 marks**

Term 1 = 40 marks

Term 2 = 40 marks

★ Project Work = 20 marks [See the guidelines]

**COURSE CONTENTS****Part A: Contemporary World Politics**

1	<b>Cold War and Non-aligned Movement</b> Emergence of power blocs\Bi-polarity, Non-aligned Movement [NAM]	18 Periods
2	<b>The End of Bipolarity</b> Disintegration of Soviet Union, Unipolar World, Middle East Crisis,	18 Periods

	Afghanistan Crisis, Gulf War, Democratic Politics and Democratisation, CIS and the 21 <sup>st</sup> Century and Arab Spring.	
3	<b>New Centres of Power</b> Organisations: European Union, ASEAN, SAARC, BRICS Nations: Russia, China, Israel, India	16 Periods
4	<b>South Asia and the Contemporary World</b> Conflicts and efforts for peace and Democratisation in South Asia: Pakistan, Nepal, Bangladesh, Sri Lanka, Maldives	16 Periods
5	<b>United Nations and its Organisation</b> Principal Organs, Key Agencies: UNESCO, UNICEF, WHO, ILO Security Council and the need for its expansion	12 Periods
6	<b>Security in the Contemporary World</b> Security: Meaning and Types; Terrorism.	10 Periods
7	<b>Environment and Natural Resources</b> Environmental Movements, Global Warming and Climate Change, Conservation of Natural Resources	10 Periods
8	<b>Globalisation</b> Meaning, Manifestations and Debates	10 Periods
	<b>Total</b>	110

### Part B: Politics in India Since Independence

9	<b>Challenges of Nation-Building</b> Nations and Nation Building, Sardar Vallabh Bhai Patel and Integration of States. Legacy of partition: Challenge of Refugees, Resettlements, Kashmir Issue. Nehru's Approach to Nation Building, Political Conflicts over Language and Linguistic Organisation of States.	20 Periods
10	<b>Planning and Development</b> Changing nature of India's economic development, Planning Commission and Five Year Plans, National Development Council, NITI Ayog	16 Periods
11	<b>India's Foreign Policy</b> Principles of Foreign Policy; India's changing relations with other Nations: USA, Russia, China, Israel; India's relations with its neighbours: Pakistan, Bangladesh, Nepal, Sri Lanka and Myanmar; India's Nuclear Programme.	08 Periods
12	<b>Parties and Party Systems in India</b> The Congress System, Bi-Party System, the Multy-party Coalition System.	14 Periods
13	<b>Democratic Resurgence</b> Jai Prakash Narayan and Total Revolution, Ram Manohar Lohia and Socialism, Pandit Deen Dayal Upadhyaya and Integral	16 Periods

	Humanism, National Emergency, Democratic Upsurges- Participation of the Adults, Backwards and Youth.	
14	<b>Social and New Social Movements in India</b> Social vs New Social Movements, Farmers' Movements, Workers' Movements, Women's Movements, Ecological Movements.	10 Periods
15	<b>Regional Aspirations</b> Rise of Regional Parties, The Punjab Crisis, The Kashmir Issue, Movements for Autonomy	10 Periods
16	<b>Indian Politics: Trends and Developments</b> Era of Coalitions: National Front, United Front, United Progressive Alliance [UPA]-I & II, National Democratic Alliance [NDA]-I,II,III & IV, Issues of Development and Governance.	16 Periods
	<b>Total</b>	110

### **PROJECT GUIDELINES**

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

1. **The objectives of the project work:**

Objectives of project work are to enable learners to:

- probe deeper into personal enquiry ,initiate action and reflect on knowledge and skills, views etc. acquired during the course of class XI-XII
- analyse and evaluate real world scenarios using theoretical constructs and arguments
- demonstrate the application of critical and creative thinking skills and abilities to produce an independent and extended piece of work
- follow up aspects in which learners have interest
- develop the communication skills to argue logically

2. **Role of the teacher:**

The teacher plays a critical role in developing thinking skills of the learners. A teacher should:

- help each learner select the topic after detailed discussions and deliberations of the topic;
- play the role of a facilitator to support and monitor the project work of the learner through periodic discussions;
- guide the research work in terms of sources for the relevant data;
- ensure that students must understand the relevance and usage of primary evidence and other sources in their projects and duly acknowledge the same;
- ensure that the students are able to derive a conclusion from the content; cite the limitations faced during the research and give appropriate references used in doing the research work.
- educate learner about plagiarism and the importance of quoting the source of the information to ensure authenticity of research work.

- prepare the learner for the presentation of the project work.
- arrange a presentation of the project file.

**3. Steps involved in the conduct of the project:**

Students may work upon the following suggested lines:

- Choose a title/topic;
- Collection of the research material/data
- Organization of material/data
- Present material/data
- Analysing the material/data for conclusion
- Draw the relevant conclusion

**Presentation of the Project Work**

- The project work can be 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 so on. Any of these activities which are suitable to visually impaired/differentlyabled candidates can be performed as per the choice of the student.

**4. 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 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.

**5. Term-Wise 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 two terms.
- 20 marks assigned for Project Work can be divided in to two terms in the following manner:

**TERM- 1**

**Project Work: 10 Marks**

The teacher will assess the progress of the project work in the term I in the following manner:

Month	Periodic Work	Assessment Rubrics	Marks
1-3 July-	Instructions about Project guidelines; Background	Introduction, statement of	5



September	reading; Discussions on Theme and selection of the final topic, Initiation\Synopsis.	purpose\need and objectives of the study, Hypothesis\Research questions, Review of literature, Presentation of evidence, Methodology, Questionnaire, Data collection, etc.	
4-5 October- November	Planning and organization: Forming an action plan, feasibility or baseline study, updating or modifying the action plan, Data collection.	Significance and relevance of the topic; challenges encountered while conducting the research.	5
October- November	Mid-term Assessment by Internal Examiner	TOTAL	10

#### **TERM- 2**

#### **Project Work: 10 Marks**

The teacher will assess the progress of the project work in the term II in the following manner:

Month	Periodic Work	Assessment Rubrics	Marks
6-7 December -January	Content\data analysis and interpretation. Conclusion, limitations, suggestions, Bibliography, Annexures and overall presentation of the project.	Content analysis and its relevance in the current scenario. Conclusion, Limitations, Bibliography, Annexures and overall presentation.	5
8 January- February	Final assessment and VIVA by both Internal and External Examiners.	External\Internal VIVA based on the project.	5
		TOTAL	10

#### **6. 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.
- 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 any doubt, authenticity should be checked and verified.

## GEOGRAPHY(029)

### CLASS-XII, SESSION-2021-22

Prescribed books:

1. Fundamentals of Human Geography, Class XII(NCERT)
2. India-People and Economy, Class XII(NCERT)
3. Practical Work in Geography part 2, Class XII(NCERT)

	CHAPTERS	PRE-TERM-I (35 Marks )	TERM-I (35 Marks )	PRE-TERM-II (35 Marks)	TERM-II (35 Marks)
Units	TIME PERIOD OF THE TEST	21 Oct. to 30 Oct. 2021	Nov/Dec. 2021	7 Feb. to 16 Feb. 2022	March/Ap ril 2022
Book-1	<b>Fundamentals of Human Geography</b>	<b>15 Marks</b>	<b>15Marks</b>	<b>15 Marks</b>	<b>15 Marks</b>
I	Human Geography ch-1	3	3		
II	People ch-2,4	7	7		
III	Human activities ch-5	5	5		
	Human activities ch-6,7			9	9
IV	Transport, communication ch-8			6	6
Book-2	<b>India-People and Economy</b>	<b>15 Marks</b>	<b>15 Marks</b>	<b>15 Marks</b>	<b>15 Marks</b>
I	People ch-1,2	5	5		
II	Human Settlements ch- 4	5	5		
III	Resources and Development ch- 6	5	5		
	Resources and Development ch- 7,9			7	7
IV	Transport, communication ch 10			4	4
V	Geographical perspective on selected issues and problems –ch 12			4	4
	Map work( Term-1 from Book-1 & Term-2 from Book-2)	5	5	5	5
	<b>Total Marks</b>	<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>

N.B:

**END OF TOPIC/UNIT TESTS WILL BE CONDUCTED AT SCHOOL LEVEL ALONG WITH INTERNAL ASSESSEMENT/EXPLORATORY ACTIVITIES/PRACTICALS/PROJECTS.**

### PRACTICAL WORK IN GEOGRAPHY(Book-3)

PART-C	NAME	TERM-I	TERM-II
UNIT-1	Processing of data & thematic mapping Ch-1,2	10	-
	CH-3,4	-	10
	Practical record book & Viva voce	05	05
	Total Marks	15	15

## COURSE CONTENT

### Part A: Fundamentals of Physical Geography

#### Unit 1: Human Geography: Nature and Scope

#### Unit 2: People

- ☐ Population-distribution, density and growth
- ☐ Population change-spatial patterns and structure; determinants of population change
- ☐ Human development - concept; selected indicators, international comparisons

#### Unit 3: Human Activities

Primary activities – concept and changing trends; gathering, pastoral, mining, subsistence agriculture, modern agriculture; people engaged in agricultural and allied activities - some examples from selected countries

☐ Secondary activities-concept; manufacturing: types - household, small scale, large scale; agro based and mineral based industries; people engaged in secondary activities - some examples from selected countries

☐ Tertiary activities-concept; trade, transport and tourism; services; people engaged in tertiary activities – some examples from selected countries

☐ Quaternary activities-concept; people engaged in quaternary activities - case study from selected countries

#### Unit-4: Transport, Communication-

Land transport - roads, railways; trans-continental railways

- ☐ Water transport- inland waterways; major ocean routes
- ☐ Air transport- Intercontinental air routes
- ☐ Oil and gas pipelines
- ☐ Satellite communication and cyber space- importance and usage for geographical information; use of GPS

**Map Work** : On identification of features based on the above units on the Outline Political map of World.( In Term -I )

### Part B: India: People and Economy

#### Unit 1: People

Population: distribution, density and growth; composition of population - linguistic, religious; sex, rural-urban and occupational-regional variations in growth of population

☐ Migration: international, national-causes and consequences

#### Unit 2 Human Settlements

- ☐ Rural settlements - types and distribution
- ☐ Urban settlements - types, distribution and functional classification

#### Unit 3: Resources and Development

- ☐ Water resources-availability and utilization-irrigation, domestic, industrial and other uses; scarcity of water and conservation methods-rain water harvesting and watershed management

- ☐ Mineral and energy resources- distribution of metallic (Iron ore, Copper, Bauxite, Manganese); non-metallic (Mica, Salt) minerals; conventional (Coal, Petroleum, Natural gas and Hydroelectricity) and non-conventional energy sources (solar, wind, biogas) and conservation
- ☐ Industries - types, factors of industrial location; distribution and changing pattern of selected industries iron and steel, cotton textiles, sugar, petrochemicals, and knowledge based industries; impact of liberalization, privatization and globalization on industrial location; industrial clusters
- ☐ Planning in India- target group area planning (case study); idea of sustainable development (case study)

**Unit 4: Transport & Communication**

Transport and communication-roads, railways, waterways and airways: oil and gas pipelines; Geographical information and communication net works

**Unit 5: Geographical Perspective on selected issues and problems**

- ☐ Environmental pollution; urban-waste disposal
- ☐ Urbanization, rural-urban migration; problems of slums
- ☐ Land degradation

Map work on locating and labelling of features based on above units on outline map of India( In term-2)

**Part C: Practical Work( Book-3)**

**Unit 1: Processing of Data and Thematic Mapping**

Type and Sources of data: Primary, Secondary and other sources  
 Tabulating and processing of data; calculation of averages, measures of central tendency  
 Representation of data- construction of diagrams: bars, circles and flowchart; thematic maps; construction of dot; choropleth and isopleths maps  
 ☐Data analysis and generation of diagrams, graphs and other visual diagrams using computers

**Fundamentals of Human Geography  
 Class XII - Textbook I (NCERT)**

**Map Items for identification only on outline political map of the World.**

Unit-1	Ch.-1	Nil	
Unit-2	Ch. 2 to 4	1	The largest country in each continent in terms of area
Unit-3	Ch. 5 to 8	1	Areas of subsistence gathering
	Primary Activities	2	Major areas of nomadic herding of the world
		3	Major areas of commercial livestock rearing
		4	Major areas of extensive commercial grain farming
		5	Major areas of mixed farming of the World
		6	Major areas of Mediterranean agriculture of the world.
	Secondary Activities	1	Ruhr region, Silicon Valley, Appalachian region, Great lakes region

Unit - 4 Ch. 8

- 2 Transcontinental Railways: Terminal Stations of transcontinental railways– Trans siberian, Trans Canadian, Trans Australian Railways
  - 3 Major Sea Ports :
    - Europe: North Cape, London, Hamburg
    - North America: Vancouver, San Francisco, New Orleans
    - South America: Rio De Janeiro, Colon, Valparaiso
    - Africa: Suez, Durban and Cape Town
    - Asia: Yokohama, Shanghai, Hong Kong, Aden, Karachi, Kolkata
    - Australia: Perth, Sydney, Melbourne
  4. Inland Waterways: Suez canal, Panama canal, Rhine waterway and St. Lawrence Seaway
  5. Major Airports:
    - Asia: Tokyo, Beijing, Mumbai, Jedda, Aden
    - Africa: Johannesburg & Nairobi
    - Europe: Moscow, London, Paris, Berlin and Rome
    - North America: Chicago, New Orleans, Mexico City
    - South America: Buenos Aires, Santiago
    - Australia: Darwin and Wellington
- Mega cities of the world –  
Tokyo, Delhi, Shanghai, Mumbai, Saopaulo

Unit - 5 Ch. 10

**India - People and Economy**  
**Class XII-Textbook II (NCERT)**

**Map Items for locating and labelling only on the outline political map of India**

- Units – 1 & 2 Ch.1 to 4
- State with highest level of urbanization and lowest level of urbanization
  - State with higher level of population density & one state with lowest level of population density(2011)
  - One out migrating state
  - One immigrating state
  - Any city with more than 10 million population – Greater Mumbai, Delhi, Kolkata, Chennai, Bengaluru

Unit - 3 Ch. 6 to 9

**Mines:**

- Iron-ore mines: Mayurbhanj, Bailadila, Ratnagiri, Bellary
- Manganese mines: Balaghat, Shimoga
- Copper mines: Hazaribagh, Singhbhum, Khetri
- Bauxite mines: Katni, Bilaspur and Koraput
- Coal mines: Jharia, Bokaro, Raniganj, Neyveli
- Oil Refineries: Mathura, Jamnager, Barauni

Unit - 4 Ch. 10 Transport:  
 (i) Important nodes on north south corridor, eastwest corridor  
 & golden quadriateral

Unit- 5 Ch-12 NIL

**QUESTION PAPER PATTERN (Class-XII)**

<b>Term-I</b>	<b>Term-II</b>	<b>Total No. of Questions</b>	<b>Total Marks</b>
MCQs Including -Case based & MCQs on assertion -reasoning type	Questions of different formats (case based/situation based ,open ended - SA/LA type	As per CBSE Guidelines	<b>35</b>

## PSYCHOLOGY

**Time: Term 1=90minutes; Term 2=2 Hours**

**F.M: 100 (Th: 70 + Pr: 30)**

**Subject code no.: 037**

**Class: XII (2021-22)**

**Prescribed Book: PSYCHOLOGY, Class XII, published by NCERT**

1. The question paper format shall be as follows:

### QUESTION PAPER FORMAT

#### TERM 1 EXAMINATION

The Question Paper will have Multiple Choice Questions (MCQ) including case-based MCQs and MCQs on assertion-reasoning type. Duration of test will be 90 minutes and it will cover only the rationalized syllabus of Term I only (i.e. approx. 50% of the entire syllabus). The responses of students will be captured on OMR sheets. Question Papers will be sent by the CBSE to schools.

**\*\* Note:** Marks of the Term I Examination will contribute to the final overall score of students.

#### TERM 2 EXAMINATION

The paper will be of 2 hours duration and have questions of different formats (case-based/ situation based, open ended- short answer/ long answer type). Question Papers will be sent by the CBSE to schools.

**\*\*Note:** Question paper of Term 2 may follow the below given pattern:

- Competency Based Questions = 20%
- Case- Based Questions, Source Based Integrated Questions or any other types Objective Questions = 20 %
- Short Answer/ Long Answer Questions = 60%

Marks of the Term I Examination will contribute to the final overall score of students.

**N.B: Classes XII Internal Assessment (throughout the year-irrespective of Term I and II) would include end of topic or unit tests/ exploratory activities/practicals/ projects.**

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

#### SYLLABUS DETAILS

Sl.No	TYPES OF TEST	Pre-Term 1 (35 marks)	TERM 1 (35marks+ 15marks)	Pre – Term 2 (35 marks)	TERM 2 (35marks + 15marks)
	TIME PERIOD OF THE TEST	21 October to 30 October 2021	November / December 2021	7February to 16 February 2022	March / April 2022
	CHAPTERS				
1	Variations in Psychological Attributes	<b>12</b>	<b>12</b>	-	-
2	Self and Personality	<b>13</b>	<b>13</b>	-	-
3	Meeting Life Challenges	<b>10</b>	<b>10</b>	-	-
4	Psychological Disorders	-	-	<b>13</b>	<b>13</b>
5	Therapeutic Approaches	-	-	<b>07</b>	<b>07</b>

6	Attitude and Social Cognition	-	-	08	08
7	Social Influence and Group Processes	-	-	07	07
<b>Total</b>		<b>35</b>	<b>35</b>	<b>35</b>	<b>35</b>

3. The structure of the course and the number of periods allotted to finish the chapters are as following:

<b>COURSE STRUCTURE</b>		
<b>TERM 1</b>		<b>TOTAL MARKS: 35</b>
<b>Unit I</b>	<b>Variations in Psychological Attributes</b> <i>The topics in this unit are:</i> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Individual Differences in Human Functioning</li> <li>3. Assessment of Psychological Attributes</li> <li>4. Intelligence</li> <li>5. Theories of intelligence: Psychometric Theories of Intelligence, Information Processing Theories, Theory of Multiple Intelligences, Triarchic Theory of Intelligence, Planning, Attention-arousal and Simultaneous successive Model of Intelligence</li> <li>6. Individual Differences in Intelligence</li> <li>7. Culture and Intelligence</li> <li>8. Emotional Intelligence</li> <li>9. Special Abilities: Aptitude: Nature and Measurement</li> <li>10. Creativity</li> </ol>	<b>20 Periods</b>  <b>12 MARKS</b>
<b>Unit II</b>	<b>Self and Personality</b> <i>The topics in this unit are:</i> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Self and Personality</li> <li>3. Concept of Self</li> <li>4. Cognitive and Behavioural Aspects of Self</li> <li>5. Culture and Self</li> <li>6. Concept of Personality</li> <li>7. Major Approaches to the Study of Personality <ul style="list-style-type: none"> <li>• Type Approaches</li> <li>• Trait Approaches</li> <li>• Psychodynamic Approach</li> <li>• Behavioural Approach</li> </ul> </li> </ol>	<b>24 Periods</b>  <b>13 MARKS</b>



	<ul style="list-style-type: none"> <li>• Cultural Approach</li> <li>• Humanistic Approach</li> </ul> <p>8. Assessment of Personality</p> <ul style="list-style-type: none"> <li>• Self-report Measures</li> <li>• Projective Techniques</li> <li>• Behavioural Analysis</li> </ul>	
<b>Unit III</b>	<p><b>Meeting Life Challenges</b></p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Nature, Types and Sources of Stress</li> <li>3. Effects of Stress on Psychological Functioning and Health <ul style="list-style-type: none"> <li>• Stress and Health</li> <li>• General Adaptation Syndrome</li> <li>• Stress and Immune System</li> <li>• Lifestyle</li> </ul> </li> <li>4. Coping with Stress <ul style="list-style-type: none"> <li>• Stress Management Techniques</li> </ul> </li> <li>5. Promoting Positive Health and Well-being <ul style="list-style-type: none"> <li>• Stress resistant personality</li> <li>• Life Skills</li> <li>• Positive health</li> </ul> </li> </ol>	<p><b>14 Periods</b></p> <p><b>10 MARKS</b></p>
<b>PRACTICAL – TERM 1</b>		<b>15 MARKS</b>
<p>A. In term 1 the student is introduced to administration, scoring, interpretation, &amp; report writing of any <u>2 psychological tests</u> related to various psychological attributes like intelligence, aptitude, attitude, personality, self-concept, adjustment, anxiety, interest etc.</p> <p>B. In Practical examination of term 1, the student will be required to administer and interpret any <u>one psychological test</u>.</p> <p><b>Distribution of Marks (Term 1)</b></p> <ul style="list-style-type: none"> <li>• Practical File – 05 Marks</li> <li>• Viva Voce – 03 Marks</li> <li>• Administration of one test &amp; report writing – 07 Marks</li> </ul>		
<b>TERM 2</b>		<b>TOTAL MARKS: 35</b>
<b>Unit IV</b>	<p><b>Psychological Disorders</b></p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Concepts of Abnormality and Psychological Disorders <ul style="list-style-type: none"> <li>• Historical Background</li> </ul> </li> <li>3. Classification of Psychological Disorders</li> </ol>	<p><b>24 Periods</b></p> <p><b>13 MARKS</b></p>

	<p>4. Factors Underlying Abnormal Behaviour</p> <p>5. Major Psychological Disorders</p> <ul style="list-style-type: none"> <li>• Anxiety Disorders</li> <li>• Obsessive-Compulsive and Related Disorders</li> <li>• Trauma-and Stressor-Related Disorders</li> <li>• Somatic Symptom and Related Disorders</li> <li>• Dissociative Disorders</li> <li>• Depressive Disorder</li> <li>• Bipolar and Related Disorders</li> <li>• Schizophrenia Spectrum and Other Psychotic Disorders</li> <li>• Neurodevelopmental Disorders</li> <li>• Disruptive, Impulse-Control and Conduct Disorders</li> <li>• Feeding and Eating Disorders</li> <li>• Substance Related and Addictive Disorders</li> </ul>	
<b>Unit V</b>	<p><b>Therapeutic Approaches</b></p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> <li>1. Nature and Process of psychotherapy <ul style="list-style-type: none"> <li>• Therapeutic relationship</li> </ul> </li> <li>2. Types of Therapies <ul style="list-style-type: none"> <li>• Behaviour Therapy</li> <li>• Cognitive Therapy</li> <li>• Humanistic-Existential Therapy</li> <li>• Alternative Therapies</li> </ul> </li> <li>3. Rehabilitation of the Mentally Ill</li> </ol>	<p><b>16 Periods</b></p> <p><b>07 MARKS</b></p>
<b>Unit VI</b>	<p><b>Attitude and Social Cognition</b></p> <p><i>The topics in this unit are:</i></p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Explaining Social Behaviour</li> <li>3. Nature and Components of Attitudes</li> <li>4. Attitude Formation and Change <ul style="list-style-type: none"> <li>• Attitude Formation</li> <li>• Attitude Change</li> <li>• Attitude-Behaviour Relationship</li> </ul> </li> <li>5. Prejudice and Discrimination</li> <li>6. Strategies for Handling Prejudice</li> </ol>	<p><b>12 Periods</b></p> <p><b>08 MARKS</b></p>
<b>Unit VII</b>	<p><b>Social Influence and Group Processes</b></p> <p><i>The topics in this unit are:</i></p>	<b>08 Periods</b>

	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Nature and Formation of Groups</li> <li>3. Type of Groups</li> <li>4. Influence of Group on Individual Behaviour <ul style="list-style-type: none"> <li>• Social Loafing</li> <li>• Group Polarisation</li> </ul> </li> </ol>	<b>07 MARKS</b>
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**PRACTICAL – TERM 2**

**15 Marks**

- A. In term 2 the student is introduced to administration, scoring, interpretation & report writing of any one psychological test related to various psychological attributes like intelligence, aptitude, attitude, personality, self-concept, adjustment, anxiety, interest etc.
- B. In Practical examination of term 2, the student will be required to administer and interpret one psychological test.

**Distribution of Marks:**

- Practical File – 05 Marks
- Viva Voce – 03 Marks
- Administration of one test & report writing – 07 Marks

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