



Syllabus

2026 - 2027

CLASS - XI

DELHI PUBLIC SCHOOL

SAIL TOWNSHIP, RANCHI

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**CLASS-XI****PRESCRIBED BOOKS:**

1. HORNBILL (HB)
2. SNAPSHOTS(SS)

AWS - Advanced Writing Skills

Month-June **Working Days-16**

Topics

- | | |
|----------------|-----------------------------------|
| HB | - The Portrait of A Lady (Prose) |
| READING | - Note Making and Summary Writing |
| WRITING | - Poster Making |
| GRAMMAR | - Tenses |

Month-July **Working Days-22**

Topics

- | | |
|----------------|--|
| HB | - We're not Afraid to Die.... If we can all be together. (Prose) |
| | A Photograph (Poem) |
| SS | - The Summer of the Beautiful White Horse (Prose) |
| WRITING | - Classified Advertisement |
| GRAMMAR | - Reordering of Sentences |

Month-August **Working Days-22**

Topics

- | | |
|----------------|---|
| HB | - Discovering TUT : The Saga Continues. (Prose) |
| | The Laburnum Top (Poem) |
| SS | - The Address (Prose) |
| WRITING | - Speech Writing |
| | Debate Writing |
| ASL | - Listening Skill Test |

**CLASS-XI****Month-September****Working Days-23****Topics**

- | | |
|-----------|-------------------------|
| HB | - The Adventure (Prose) |
| | Childhood (Poem) |
| SS | - Mother's Day (Play) |

Month-October**Working Days-18****Topics****REVISION FOR HALF-YEARLY**

- | | |
|-----------|--------------------------------|
| HB | - The Voice of the Rain (Poem) |
|-----------|--------------------------------|

Month-November**Working Days-13****Topics**

- | | |
|----------------|------------------------|
| HB | - Father to Son (Poem) |
| | Silk Road (Prose) |
| GRAMMAR | - Clauses |
| PROJECT | - Viva |

Month-December**Working Days-22****Topics**

- | | |
|----------------|---------------------------|
| SS | - Birth (Prose) |
| GRAMMAR | - Sentence Transformation |
| PROJECT | - Viva Continues |

Month-January**Working Days-17****Topics**

- | | |
|-----------|---------------------------------|
| SS | - The Tale of Melon City (Poem) |
| | REVISION |

**CLASS – XI****Course Objectives :**

- To develop an understanding of essential mathematical and statistical concepts that are relevant to areas such as business, economic and social sciences.
- To enable students to interpret real-life situations into structured numerical, algebraic and graphical representations for analysis and decision making.
- To develop ability to organise, analyse and interpret data, and to draw meaningful conclusions in practical contexts.
- To strengthen logical thinking and reasoning by engaging students in problem-solving situations that require nuance understanding of qualification and relative change.
- To develop clarity in mathematical communication, including the ability to justify solutions, examine assumptions and validate results.
- To help students recognise connections between mathematics and other disciplines, and to use these connections meaningfully.

Month – June**Working Days – 16****Unit – 1 : Numbers and Quantification**

1.1	Numbers in Indian Knowledge System and Binary Numbers	• Introduction to Numbers in Indian Knowledge System • Conversion of decimal numbers to binary system and vice-versa and its applications.
1.2	Indices, Logarithm and Antilogarithm	• Indices and its properties • Common and Natural logarithm • Laws of logarithms • Logarithm and exponential as inverse operations • Procedure of finding logarithm and antilogarithms of given number • Applications of logarithms

**CLASS – XI**

1.3	Clocks	• Evaluate the angular value of a minute • Measure of angle formed between two hands of clock at given time • Calculation of the time for which hands of clock meet
1.4	Calendar	• Odd days in a month / year / century • Decode the day for the given date

Month – July**Working Days – 22**

1.5	Time and Work	• Relationship between work and time • Comparison of the work done by the individual / group w.r.t. time
1.6	Speed, Distance and Time	• The time taken/ distance covered from the given data.
1.7	Seating arrangement	• Creation of seating plan / draft as per given conditions (Linear/circular). • Locating the position of a person in a seating arrangement.
2.1	Introduction to Sets – Sets and their representation	• Set as well-defined collection of objects. • Representation of a set in Roster form and Set builder form • Different types of sets on the basis of number of elements in the set • Differentiate between equal set and equivalent set

**CLASS – XI**

2.2	Subsets, Intervals as subsets	• Subsets • Power set and its elements • Universal Set • Subset of real numbers as intervals
2.3	Venn Diagrams and Operations on Sets	• Concept of Venn diagram to understand the relationship between sets • Problems using Venn diagram
2.4	Ordered pairs	• Significance of specific arrangement of elements in a pair • Cartesian product of two sets

Month – August**Working Days – 22**

2.5	Relations	• Expressing relation as a subset of Cartesian product • Domain and range of a relation
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Mathematical Logic

2.6	Mathematical Logic	• Logical problems involving odd man out, syllogism, blood relation and coding-decoding
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Sequences and Series

2.7	Sequence and Series	• Differentiate between sequence and series
2.8	Arithmetic Progression	• Arithmetic mean (AM) of two positive numbers



CLASS–XI

2.9	Geometric Progression	• Introduction of Geometric Progression (GP) • n^{th} term of a GP • sum of n terms and sum of infinite terms of a GP • Problems based on applications of GP • Geometric mean (GM) of two positive numbers • Relation between AM and GM and related problems • Application problems based on AP and GP
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UNIT–III CALCULUS

Functions

Month–September

Working Days–23

3.1	Functions and their graphs	• Dependent and independent variables • Definition of function using dependent and independent variable • Domain, range and co-domain of a given Function • Types of functions • Graphical representation of function
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Limits, Continuity and Derivatives

3.2	Limits and continuity of functions	• Limit of a function • Continuity of a function
3.3	Differentiation	• Instantaneous rate of change • Finding the derivative of the functions

**CLASS – XI**

3.4	Algebra of derivatives	• Differentiation of addition, subtraction, multiplication and division of two or more functions • Differentiation of a function of a function
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UNIT – 4 PERMUTATIONS AND COMBINATIONS & PROBABILITY**Combinatorics****Month – October****Working Days – 18**

4.1	Combinatorics	• Factorial of a number • Fundamental Principle of Counting • Concept of Permutation • Simple problems based on permutations • Define combination • Difference between permutation and combination • Problems based on Combinations HALF YEARLY EXAMINATION (REVISION)
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Month – November**Working Days – 13****Probability**

4.2	Probability	• Random experiment and sample space with suitable examples • Event and its Types • Concept of Probability • Problems based on calculating probabilities in real life situations • Concept of conditional probability
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**UNIT – 5 DESCRIPTIVE STATISTICS****Measures of Dispersion and Percentiles**

5.1	Measures of Dispersion	• Meaning of dispersion in a data set • Range, mean deviation, standard deviation and variance
5.2	Percentiles	• Concept of Percentile rank • Calculate and interpret Percentile rank of scores in a given ungrouped data set.

Correlation

5.3	Correlation	• Concept of Correlation • Karl Pearson's coefficient of Correlation for ungrouped data • Spearman's Rank Correlation for ungrouped data
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Month – December**Working Days – 22****Regression**

5.4	Regression	• Concept of Regression analysis • Dependent and Independent variables • Regression Coefficients • Regression Equations • Properties of Regression Equations
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**UNIT – 6 FINANCIAL MATHEMATICS****Interests and Annuities**

6.1	Interest and Interest Rates	• Concept of Interest Rates • Comparison between Nominal Interest Rate, Effective Rate and Real Interest Rate • Practical applications of interest rate w.r.t simple and compound interest • Concept of effective rate of interest
6.2	Annuities	• Meaning of Immediate Annuity, Annuity due and Deferred Annuity • Future and present value of ordinary annuity, annuity due (up to 3 period) • Concept of Annuity in real life situations

Tax and Utility Bills

6.3	Taxes and Utility Bills	• Concept of Income tax and GST w.r.t. tax new tax guidelines • Utility bills and its various types – Electricity, Water and PNG Bills
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Month – January**Working Days – 17****UNIT – 7 COORDINATE GEOMETRY****Straight Lines**

7.1	Straight lines	• Concept of slope of a line • Various forms of equation of line
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**Circles and Parabola**

7.2	Circles	• Determination of the equations of circle • Different form of equations of a circle • Solve problems based on applications of circle
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Month – February**Working Days – 21****Parabola**

7.1	Parabola	• The properties of a parabola and express its standard form • Equation based on its focus and directrix. REVISION (ANNUAL EXAMINATION)
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Suggested Practicals using spreadsheet

- Visualizing Functions and Their Properties: Plotting graphs of functions in Geo Gebra to observe how coefficients change the graph's shape and to find out their domain and range graphically.
- Understanding Derivatives: Constructing a tangent line to a curve in Geo Gebra and observing its slope as the point moves and demonstrating the derivative as the instantaneous rate of change.
- Personal Budgeting: Designing a comprehensive monthly budget tracker in a spreadsheet to manage income and expenditures using summation and percentage formulas.
- Comparative Cost-Benefit Analysis: Building a decision-making model to identify the most economical purchase for a high-value product by comparing cost, shipping charges, tax and other hidden costs.
- Descriptive Measures of Data: Using spreadsheet functions (e.g., AVERAGE, STDEV.P etc.) to compute the mean, median, mode, variance, and standard deviation of a raw dataset.
- Interest Growth Analysis: Developing a comparative sheet for Simple vs. Compound Interest to track the growth of an investment over time.
- Environmental & Economic Data Modelling: Analysing real-world datasets regarding local weather, inflation or AQI by generating and interpreting scatter plots, histograms, bar graphs etc. to identify correlations and seasonal trends.



DELHI PUBLIC SCHOOL

CLASS-XI

**SUBJECT – APPLIED
MATHEMATICS**

No.	Units	Marks
1.	Numbers, Quantification and Numerical Applications	10
2.	Algebra	18
3.	Calculus	12
4.	Combinatory and Probability	10
5.	Descriptive Statistics	10
6.	Basics of Financial Mathematics	15
7.	Coordinate Geometry	05
	Total	80
	Internal Assessment	20

**Topics**

1. SET THEORY : Sets and their representations, Empty set, Finite and infinite sets, equal sets, subsets. Sub sets of set of real numbers especially intervals (with notations). Universal set. Venn- Diagrams. Union and intersection of sets. Difference of sets, Complement of a set, Properties of complement.

Topics

2. RELATIONS AND FUNCTIONS : Ordered pairs. Cartesian product of sets, Number of elements in Cartesian Product of two finite sets. Cartesian product of the sets of reals with itself (Up to $\mathbb{R} \times \mathbb{R}$) Definition of Relation. Pictorial diagrams, domain, co- domain and range of a function Real valued functions, domain and range functions, constant identity. Polynomial, Rational, exponential, modulus, signum logarithmic and greatest integer functions with their graphs. Sum, Difference, product and quotient of functions.

3. TRIGONOMETRIC FUNCTIONS : Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity for all x Signs of trigonometric functions Domain and range of trigonometric functions and their graphs. Expressing $\sin(x+y)$ and $\cos(x+y)$ in terms of $\sin x$, $\sin y$, $\cos x$ and $\cos y$ and their simple applications, deducing identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ and $\tan 3x$. Transformation formula.

Topics

4. COMPLEX NUMBERS : Need for complex numbers to be motivated by inability to solve some of the quadratic equations, Algebraic properties of complex numbers, Argand Plane



5. LINEAR INEQUALITIES : Algebraic solutions of Linear Inequalities in one variable and their representation on the number line. Graphical solution of linear inequalities in two variables.

Month–September

Working Days–23

Topics

6. PERMUTATIONS AND COMBINATIONS : Fundamental Principles of counting Factorial n . Permutations, derivation of formulae and their connections and simple applications.

Combination, derivation of formulae and their connections and simple applications.

7. BINOMIAL THEOREM : Historical perspective, statement and proof of the binomial theorem for positive integral indices, Pascal's triangle.

Month–October

Working Days–18

Topics**Revision****Half Yearly Examination**

8. SEQUENCE AND SERIES : A.M., G.P., General term of a G.P. Sum of n terms of a G.P infinite G.P. and its sum, G.M, Relation between AM. and G.M.

Month–November

Working Days–13

Topics

9. STRAIGHT LINES : Slope of a line and angle between two lines Various forms of equations of a line; parallel to axis. point-slope form slope intercept form, two point or intercept form and Distance of a point from a line. .

10. CONIC SECTION

CIRCLE : Standard equation of circle, circle centered at origin and radius r , circle centered at a point other than the origin and a radius r , circle with extremities of a diameter, general form of the circle.



PARABOLA, ELLIPSE, HYPERBOLA : A pair of intersecting lines as a degenerated case of a conic section, Standard equations and simple properties of parabola, ellipse and hyperbola.

11. THREE-DIMENSIONAL COORDINATE GEOMETRY : Coordinate axes and coordinate planes in three dimensions Coordinates of point Distance between two points and section formula

12. LIMITS AND DERIVATIVES : Derivatives introduced as a rate of change both as that of distance function and geometrically intuitive idea of limit. Limits of polynomials and rational functions, trigonometric, exponential and logarithmic functions. Definition of derivative relate it to slope of tangent of the curve. Derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.

Month – January

Working Days – 17

Topics

13. STATISTICS

Measures of dispersion : Range, Mean deviation, variance and standard deviation of ungrouped/grouped data.

14. PROBABILITY: Random experiments, outcomes, Sample spaces, events, occurrence of events, 'not', 'and', and 'or' events, exhaustive events, mutually exclusive events, axiomatic probability. Probability of an event, probability of 'not', 'and' and 'or' events.

Month – February

Working Days – 21

Topics

Revision**Annual Examination**

**• LIST OF MATHEMATICS ACTIVITIES BEFORE THE HALF YEARLY EXAMINATION**

- To find the number of subsets of a given set and verify that if a set has 'n' number of elements then the total number of subsets is 2^n .
- To find the values of the sine and cosine functions in second, third and fourth quadrant using their values in first quadrant.
- To plot the graph of $\sin x$, $\sin 2x$, $2\sin x$ and $\sin(x/2)$ in the same cartesian plane
- To interpret geometrically $i = \sqrt{-1}$ and its integral powers.
- To obtain a quadratic function graphically with the help of linear functions.

• LIST OF MATHS ACTIVITIES POST- HALF YEARLY EXAMINATION

- To distinguish between a relation and a function.
- To verify for Two sets A and B, $n(A \times B) = n(A) \times n(B)$ and the total number of relations from A to B is $2^{n(A) \times n(B)}$
- To construct different types of conic sections.
- To find analytically the Limit of the function $f(x) = \frac{x^n - a^n}{x - a}$ at the point $x=a$
- Verification of the geometrical significance of derivatives

**CLASS – XI****Month – June****Working Days – 16****Topics****Unit I : Physical World and Measurements**

Chapter – 1 : Units and Measurements : Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures, Determining the uncertainty in result. Dimensions of physical quantities, dimensional analysis and its applications.

Unit II : Kinematics

Chapter – 2 : Motion in a Straight Line : Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non- uniform motion, average speed and average velocity and instantaneous velocity.

Month – July**Working Days – 22****Topics**

Chapter – 2 : Motion in a Straight Line : uniformly accelerated motion, velocity–time and position–time graphs. Relations for uniformly accelerated motion (graphical and calculus treatment).

Chapter – 3 : Motion in a Plane : Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors.

Motion in a plane, cases of uniform velocity and uniform acceleration– projectile motion, uniform circular motion

**Topics****Unit III : Laws of Motion**

Chapter – 4 : Laws of Motion : Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication.

Dynamics of uniform circular motion: Centripetal force, examples of circular motion. (Vehicle on a level circular road, Vehicle on banked road).

Unit IV : Work, Energy and Power

Chapter – 5 : Work, Energy and Power : Work done by a constant force and a variable force; kinetic energy, work – energy theorem, Power.

Topics

Chapter – 5: Work, Energy and Power : Notion of potential energy, potential energy of a spring, conservative forces: non-conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.

Unit V: Motion of System of Particles and Rigid Body

Chapter – 6: System of Particles and Rotational Motion : Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications.

Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).

Unit VI: Gravitation

Chapter – 7: Gravitation : Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth.



CLASS–XI

Month–October

Working Days–18

Topics

HALF YEARLY EXAMINATION

Chapter – 7 : Gravitation : Gravitational potential energy and gravitational potential, escape speed, orbital velocity of a satellite, energy of an orbiting satellite.

Month–November

Working Days–13

Topics

Unit VII: Properties of Bulk Matter

Chapter–8: Mechanical Properties of Solids : Elasticity, Stress–strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy. Application of elastic behavior of materials (qualitative idea only).

Chapter–9: Mechanical Properties of Fluids : Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications (Torricelli's law and Dynamic lift).

Month–December

Working Days–22

Topics

Chapter–9: Mechanical Properties of Fluids

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

Chapter–10: Thermal Properties of Matter

Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; C_p , C_v – calorimetry; change of state – latent heat capacity. Heat transfer–conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law.

**Unit VIII : Thermodynamics**

Chapter–11 : Thermodynamics Thermal equilibrium and definition of temperature, zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: Thermodynamic state variable and equation of state. Change of condition of gaseous state-isothermal, adiabatic, reversible, irreversible, and cyclic processes.

Month–January

Working Days–17

Topics**Unit IX : Behavior of Perfect Gases and Kinetic Theory of Gases**

Chapter–12 : Kinetic Theory : Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases – assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free, Avogadro's number.

Unit X : Oscillations and Waves

Chapter–13 : Oscillations : Periodic motion – time period, frequency, displacement as a function of time, periodic functions and their applications.

Simple harmonic motion (S.H.M), uniform circular motion and its equations of motion; phase; oscillations of a loaded spring– restoring force and force constant; energy in S.H.M.

Kinetic and potential energies; simple pendulum derivation of expression for its time period.

Chapter–14: Waves Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats.

Month–February

Working Days–21

Topics**REVISION, ANNUAL EXAMINATION**



List of Experiments

Experiments

- To measure diameter of a small spherical /cylindrical body and to measure internal diameter and depth of a given beaker / calorimeter using Vernier Callipers and hence find its volume.
- To measure diameter of a given wire and thickness of a given sheet using screw gauge.
- To determine radius of curvature of a given spherical surface by a spherometer.
- To find the weight of a given body using parallelogram law of vectors.
- To find the force constant of a helical spring by plotting a graph between load and extension.
- To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.
- To study the relationship between the temperature of a hot body and time by plotting a cooling curve.
- To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.

**Topics****Some Basic Concepts of Chemistry : Unit-I:**

General Introduction: Importance and scope of Chemistry. Nature of matter, laws of chemical combination, Dalton's atomic theory: the concept of elements, atoms, and molecules. Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry, and calculations based on stoichiometry, concentration terms : $w/w\%$, $w/v\%$, $v/v\%$, mole fraction, Molarity, Molality.

Topics

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

Classification of Elements and Periodicity in Properties : Significance of classification, brief history of the development of periodic table, Modern periodic law and the present form of periodic table, periodic trends in properties of elements–atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100, Electronic Configuration of Elements and Types of Elements: s-, p-, d-, f-Blocks.



CLASS-XI

Month–August

Working Days–22

Topics

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

Month–September

Working Days–23

Topics

General Organic Chemistry : Some basic Principles and Techniques: General introduction, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electrometric effect, resonance and hyper conjugation.

Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions, methods of purification, qualitative and quantitative analysis

Hydrocarbons: Classification of Hydrocarbons Aliphatic Hydrocarbons, **Alkanes** – Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions, free radical mechanism of halogenation, combustion and pyrolysis.

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

Month–October

Working Days–18

Topics

REVISION AND HALF YEARLY EXAMINATION

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

**Topics**

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

Topics

Chemical Thermodynamics : Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics – internal energy and enthalpy, measurement of ΔU and ΔH , Calorimetry, Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and non-spontaneous processes, Criteria for equilibrium, Third law of thermodynamics (brief introduction).

Equilibrium : Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, Homogeneous Equilibria, Heterogeneous Equilibria, equilibrium constant, factors affecting equilibrium – Le Chatelier's principle, Relationship between Equilibrium Constant K, Reaction Quotient Q and Gibbs Energy G ionic equilibrium – ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, buffer solution, hydrolysis of salts (elementary idea), Henderson Equation, solubility product, common ion effect (with illustrative examples)

**CLASS-XI****Month-January****Working Days-17****Topics**

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

Month-February**Working Days-21****Topics**

Revision and Annual examination.

**CLASS–XI****Month–June****Working Days–16****Topics****UNIT: I****DIVERSITY IN LIVING ORGANISMS****Ch. 1:** The Living World

What is living? Biodiversity; Need for classification; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature.

Month–July**Working Days–22****Topics****UNIT: I & II**

Ch. 2. Biological Classification Five Kingdom Classification; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids.

Ch. 3. Plant Kingdom

Salient features and classification of plants into major groups – Algae, Bryophyta, Pteridophyta, Gymnospermae.

Ch. 4. Animal Kingdom

Basis of Classification; Salient features and classification of animals, non chordates upto phyla level and chordates up to class level (salient features and distinguishing features of a few examples of each category).

STRUCTURAL ORGANISATION IN PLANTS & ANIMALS

Ch. 5. Morphology of Flowering Plants Morphology and modifications; Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed. Description of family Solanaceae.

**Topics****UNIT : II & III**

Ch. 6. Anatomy of Flowering Plants Anatomy and functions of different tissues and tissue systems in dicots and monocots.

Ch. 7. Structural Organisation in Animals

Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog.

Cell : Structure and Functions

Ch. 8. Cell : The Unit of Life

Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles – structure and function; endomembrane system – endoplasmic reticulum, ribosomes, golgi bodies, lysosomes, vacuoles; mitochondria, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus.

Ch. 10. Cell Cycle and Cell Division

Cell Cycle, mitosis, meiosis and their significance

UNIT : III

Ch. 9. : Biomolecules

Chemical constituents of living cells : biomolecules, structure and function of proteins, carbohydrates, lipids, nucleic acids; Enzymes – types, properties, enzyme action, factors, classification, Co-factors.

UNIT : IV & V

Plant Physiology

Ch. 11. Photosynthesis in Higher Plants

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

**CLASS – XI****Month – October****Working Days – 18****Topics****REVISION & HALF YEARLY EXAMINATION****Month – November****Working Days – 13****Topics****Ch. 12. Respiration in Plants**

Exchange of gases; do plants breathe; cellular respiration glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations – number of ATP molecules generated; amphibolic pathways; respiratory quotient.

Ch. 13. Plant-Growth and Development Seed germination; characteristics, measurements and phases of plant growth, growth rate; conditions for growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; growth regulators – auxin, gibberellin, cytokinin, ethylene, ABA.

Month – December**Working Days – 22****Topics****UNIT : IV & V****Human Physiology****Ch. 14. Breathing and Exchange of Gases**

Introduction to respiratory organs in animals; Respiratory system in humans; mechanism of breathing and its regulation in humans – exchange of gases, transport of gases and regulation of respiration, respiratory volumes; disorders related to respiration – asthma, emphysema, occupational respiratory disorders.



Ch. 15. Body Fluids and Circulation Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; circulatory pathways; human circulatory system–Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system–hypertension, coronary artery disease, angina pectoris, heart failure.

Ch. 16. Excretory Products and their Elimination

Modes of excretion–ammonotelism, ureotelism, uricotelism; human excretory system–structure and function; urine formation, osmoregulation; regulation of kidney function–renin–angiotensin, atrial natriuretic factor, ADH, diabetes insipidus; micturition; role of other organs in excretion; disorders–uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant

Month–January

Working Days–17

Topics

UNIT : V

Ch. 17. Locomotion and Movement

Types of movement – amoeboid, ciliary, flagellar, muscular; types of muscles; skeletal muscle, contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems– myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.

Ch. 18. Neural Control and Coordination

Neuron and nerves; Nervous system in humans – central nervous system and peripheral nervous system; generation, conduction and transmission of nerve impulse.

Ch. 19. Chemical Coordination and Integration

Endocrine glands and hormones; human endocrine system hypothalamus, pituitary, pineal, thyroid, parathyroid, thymus, adrenal, pancreas, gonads; hormones of heart, kidney and gastrointestinal tract; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo – and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goiter, diabetes, Addison's disease.

**Topics****REVISION & ANNUAL EXAMINATION**

- **PRACTICALS**
- **List of Experiments :**
- Parts of a compound microscope.
- Study and description of three locally available common flowering plants, one from each of the families Solanaceae, Fabaceae and including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams). Types of root (Tap and adventitious); types of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound).
- Preparation and study of T.S. of dicot and monocot roots and stems (primary).
- Study of osmosis by potato osmometer.
- Study of plasmolysis in epidermal peels (e.g. Rhoeo/lily leaves or flashy scale leaves of onion bulb).
- Study of distribution of stomata in the upper and lower surface of leaves.
- Comparative study of the rates of transpiration in the upper and lower surfaces of leaves.
- Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
- Separation of plant pigments through paper chromatography.
- Study of rate of respiration in flower buds/leaf tissue and germinating seeds.
- Test for presence of urea in urine.
- Test for presence of sugar in urine.
- Test for presence of albumin in urine.
- Test for presence of bile salts in urine.
- Study and observe the following (Spotting):
- Specimens / slides / models and identification with reasons – Bacteria, Oscillatoria, Spirogyra, Rhizopus, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
- Virtual specimens / slides / models and identification features of – Amoeba, Hydra, liverfluke, Ascaris, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.
- Mitosis in onion root tip cells and animal cells (grasshopper) from permanent slides.
- Different types of inflorescence (cymose and racemose).
- Human skeleton and different types of joints with the help of virtual images / models only.

**Topics****Unit I: Computer Systems and Organisation**

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

Topics**Unit II: Computational Thinking and Programming - I**

- Introduction to Problem-solving: Steps for Problem-solving (Analyzing the problem, developing an algorithm, coding, testing, and debugging), representation of algorithms using flowchart and pseudocode, decomposition
- Familiarization with the basics of Python programming: Introduction to Python, Features of Python, executing a simple "hello world" program, execution modes: interactive mode and script mode, Python character set, Python tokens(keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments
- Knowledge of data types: Number(integer, floating point, complex), boolean, sequence(string, list, tuple), None, Mapping(dictionary), mutable and immutable data types.

**CLASS–XI**

- Operators: arithmetic operators, relational operators, logical operators, assignment operators, augmented assignment operators, identity operators (is, is not), membership operators (in, not in)
- Expressions, statement, type conversion, and input/output: precedence of operators, expression, evaluation of an expression, type-conversion (explicit and implicit conversion), accepting data as input from the console and displaying output.
- Errors– syntax errors, logical errors, and run-time errors
- Flow of Control: introduction, use of indentation, sequential flow, conditional and iterative flow
- Conditional statements: if, if-else, if-elif-else, flowcharts, simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number.

Month–August**Working Days–22****Topics****Unit II: Computational Thinking and Programming - I**

- Iterative Statement: for loop, range(), while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number, etc.

Month–September**Working Days–23****Topics****Revision for Half Yearly Examination + H.Y Exam****Month–October****Working Days–18****Topics****Unit II: Computational Thinking and Programming - I**

Strings: introduction, string operations (concatenation, repetition, membership and slicing),
traversing a string using loops, built-in functions/methods–len(), capitalize(), title(), lower(),

**CLASS–XI**

upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(),
isdigit(),
islower(), isupper(), isspace(), lstrip(),rstrip(), strip(), replace(), join(),
partition(), split()

Month–November**Working Days–13****Topics****Unit II: Computational Thinking and Programming – I**

Lists: introduction, indexing, list operations (concatenation, repetition, membership and slicing), traversing a list using loops, built-in functions/methods–len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list.

- Tuples: introduction, indexing, tuple operations (concatenation, repetition, membership and slicing); built-in functions/methods – len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple; suggested programs: finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple.

Month–December**Working Days–22****Topics****Unit II: Computational Thinking and Programming – I**

Dictionary: introduction, accessing items in a dictionary using keys, mutability of a dictionary (adding a new term, modifying an existing item), traversing a dictionary, built-in functions/methods – len(), dict(), keys(), values(), items(), get(), update(), del(), del, clear(),

**CLASS–XI**

fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), sorted();
Suggested

programs: count the number of times a character appears in a given string
using a

dictionary, create a dictionary with names of employees, their salary and
access them.

- Introduction to Python modules: Importing module using 'import <module>' and using from statement, importing math module (pi, e, sqrt(), ceil(), floor(), pow(), fabs(), sin(), cos(), tan()); random module (random(), randint(), randrange()), statistics module (mean(), median(), mode()).

Month–January**Working Days–17****Topics****Unit III : Society, Law and Ethics**

- Digital Footprints
- Digital Society and Netizen: net etiquettes, communication etiquettes, social media etiquettes
- Data Protection: Intellectual property rights (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source software and licensing (Creative Commons, GPL and Apache)
- Cyber Crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, cyber trolls, cyber bullying
- Cyber safety: safely browsing the web, identity protection, confidentiality
- Malware: viruses, trojans, adware
- E-waste management: proper disposal of used electronic gadgets.
- Information Technology Act (IT Act)
- Technology and society: Gender and disability issues while teaching and using computers

Revision for Annual Examination

**Topics****Unit 1: Introduction to Computer System**

Introduction to computer and computing : evolution of computing devices, components of a computer system and their interconnections, Input/output devices.

Computer Memory : Units of memory, types of memory – primary and secondary, data deletion, its recovery and related security concerns.

Software : purpose and types – system and application software, generic and specific purpose software.

Topics

Understanding Programming Logic: Algorithm and Flowchart

Topics**Unit 2: Introduction to Python :**

Basics of Python programming, Python interpreter – interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants, variables, types of operators, precedence of operators, data types, mutable and immutable data types, statements, expressions, evaluation and comments, input and output statements, data type conversion, Control Statements: if-else, if-elif-else, while loop, for loop

Topics

Lists : list operations-creating, initializing, traversing and manipulating lists, list methods and built-in functions – len(), list(), append(), insert(), count(), index(), remove(), pop(), reverse(), sort(), min(), max(), sum()

**CLASS–XI**

Dictionary : concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions – dict(), len(), keys(), values(), items(), update(), del(), clear()

NumPy : Concept of NumPy Array, Creating Array (1D & 2D) in NumPy, Accessing Data, 2-D Array, Shaping Dimension, Joining Array, Mathematical Functions, Sorting of the Array

Month–October**Working Days–18****Topics**

Unit 3 : Database concepts and the Structured Query Language

Database Concepts : Introduction to database concepts and its need, Database Management System.

Relational data model : Concept of domain, tuple, relation, candidate key, primary key, alternate key

Advantages of using Structured Query Language, Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL, creating a database using MySQL, Data Types

Data Definition : CREATE DATABASE, CREATE TABLE, DROP, ALTER

Data Query : SELECT, FROM, WHERE with relational operators, BETWEEN, logical operators, IS NULL, IS NOT NULL

Data Manipulation: INSERT, DELETE, UPDATE

Month–November**Working Days–13****Topics**

Unit 4 : Introduction to the Emerging Trends

Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology.



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CLASS-XI

**SUBJECT- INFORMATION
PRACTICES**

Month-December

Working Days-22

Topics

Project Work

Month-January

Working Days-17

Topics

Revision

**Topics****PART – A : FINANCIAL ACCOUNTING – I****UNIT 1 : Theoretical Frame Work****Introduction to accounting**

Accounting - Concept, Meaning, as a source of information, objectives, advantages, limitations, types of accounting information; users of accounting information and their needs. Qualitative Characteristics of Accounting Information. Role of Accounting in Business.

Basic accounting terms : Entity, Business transaction, Capital, Drawings, Liabilities (Non Current and Current), Assets (Non Current and Current), Expenditure (Capital and Revenue), Expense, Revenue, Income, Profit, Gains, Loss, Purchase, Sales, Goods, Stock, Debtor, Creditor, Voucher, Discount (Trade discount and Cash discount).

Theory Base Accounting**Fundamental accounting assumptions**: GAAP – CONCEPT

Basic Accounting Concepts: Business entity, Money Measurement, Going Concern, Accounting Period, Cost Concept, Dual Aspect, Revenue Recognition, Matching Concept, Full Disclosure, Consistency, Conservatism, Materiality and Objectivity.

Systems of accounting.

Basis of accounting: Cash basis and Accrual basis.

Accounting standards ; Applicability of Accounting Standards (AS) and Indian Accounting Standards (IndAS)

Goods and services tax (GST) characteristics and objectives.

Topics**UNIT 2 : Accounting Process****Recording of business transactions**

Voucher and Transactions : Source Documents and Vouchers, Preparation of Vouchers.

Accounting equation Approach : Meaning and Analysis, Rules of Debit and Credit.

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Recording of Transactions –
Books of Original Entry Journal, Special purpose books,
Cash Book: simple, cash book with bank column and petty cash book;

Month–August**Working Days–22****Topics**

Purchases book, sales book, Purchases return book,
Sales returns book. Journal Proper
Note : Including Trade Discount, Freight and Cartage expenses for simple GST Calculation.
Ledger : Format, Posting from Journal and Subsidiary books, Balancing of accounts.
Bank Reconciliation Statement : Need and Preparation, Bank Reconciliation Statement.
(Balance as per Cash Book and Pass Book, Favourable and Unfavourable Balance)

Month–September**Working Days–23****Topics**

Depreciation, Provisions and Reserves
Depreciation : Meaning, Features, Need, Causes, Factors
Other similar terms : Depletion and Amortisation
Methods of Depreciation :

- Straight line Method (SLM)
- Written down value Method (WDV):

Note : Excluding Change of Method.
Difference between SLM and WDV
Advantages of SLM and WDV
Accounting Treatment of Depreciation:

- Charging to asset account
- Creating provision for depreciation/accumulated depreciation account
- Treatment for disposal of Asset.

**CLASS-XI****Month–October****Working Days–18****Topics****Half – Yearly Examinations :****Provisions and Reserves :** Difference between Provisions and Reserves.**Types of Reserves :**

- (i) Revenue Reserve (ii) Capital Reserve (iii) General Reserve
(iv) Specific Reserve (v) Secret Reserve

Difference between Capital and Revenue Reserve.

Month–November**Working Days–13****Topics**

Trial Balance and Rectification of Errors

Trial Balance : Objectives, Meaning and Preparation**(Scope :** trial Balance with balance method only)**Errors :** Classification – Errors of Omission, Commission, Principles and Compensating; their effect on Trial Balance. Detection and Rectification of errors;

- (i) Errors which do not affect trial balance
(ii) Errors which affect trial balance

Preparation of Suspense Account.

PART B : FINANCIAL ACCOUNTING – II**UNIT 3 : Financial Statements of Sole Proprietorship****Financial Statements :**

Meaning, objectives and importance; Revenue and Capital Receipts; Revenue and Capital Expenditure; Deferred Revenue expenditure. Opening Journal Entry.

Month–December**Working Days–22****Topics****Trading and Profit and Loss Account :** Gross Profit, Operating Profit and Net Profit. Preparation.**Balance Sheet :** Need, grouping and marshalling of assets and liabilities. Preparation.

**CLASS–XI**

Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, Abnormal loss Goods taken for personal use/staff welfare, interest on capital and manager's commission.
Preparation of Trading and Profit and Loss Account and Balance Sheet of a sole proprietorship with adjustments.

Month–December**Working Days–19****Topics**

Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, Abnormal loss Goods taken for personal use/staff welfare, interest on capital and manager's commission.
Preparation of Trading and Profit and Loss Account and Balance Sheet of a sole proprietorship with adjustments.

Month–January**Working Days–17****Topics****Incomplete Records**

Features, Reasons and Limitations. Ascertainment of Profit/loss by Statement of Affairs Method.
(Excluding Conversion Method)

Month–February**Working Days–21****Topics****PROJECT WORK
ANNUAL EXAMINATION**

**Topics****PART A : FOUNDATIONS OF BUSINESS**

(Imp. Note: Concept includes meaning and features)

Ch. 1: Evolution and fundamentals of business

History of trade and commerce in India ; Indigenous Banking system, Rise of intermediaries, Transport, Trading Communities, Merchant Corporations, Major Trade Centres, Major Imports and Exports, Position of Indian Sub-Continent in the World Economy.

Business – Meaning and Characteristics.

Business, Profession and Employment – Concept.

Differentiate between business, profession and employment.

Objectives of Business : Economic and Social Objectives, Role of profit in business.

Classification of Business activities – Industry and Commerce.

Industry – types : Primary, secondary, tertiary– Meaning and sub groups.

Commerce – Trade (types – internal, external; wholesale and retail) and auxiliaries to trade; (banking, insurance, transportation, warehousing, communication and advertising) meaning.

Role of commerce – trade and auxiliaries to trade.

Business risk – concept, nature and causes of business risk.

Topics**Ch.2 : Forms of Business Organisations:**

Sole Proprietorship–Concept, merits and limitations.

Partnership – Concept, types, merits and limitations. Registration of partnership firm, partnership deed, types of partners. Understand the types of partnership on the basis of duration and on the basis of liability. State the need of registration of a partnership firm. Discuss types of partners – Active, Sleeping, Secret, Nominal and partner by Estoppel.

Hindu undivided family business : concept.

Cooperative societies – concept, merits and limitations.

**CLASS–XI**

Understand the concept of Consumers, producers, marketing, farmers, credit and housing co-operatives.

Company- concept, merits and limitations;

Types: private, public and one person company – concept.

Distinguish between a private ltd. company and a public ltd. company.

Formation of company – Stages, important documents to be used in formation of a company.

Choice of form of business organisation : Factors that influence the choice of suitable form of business organisation.

Month–August**Working Days–22****Topics****Ch. 3 : Public, Private and Global Enterprises:**

Public sector and Private sector enterprises – Concept.

Forms of Public Sector enterprises: Departmental Undertakings, Statutory Corporations and Government Company – Features, merits and limitations.

Global Enterprises – Feature Joint Venture – Meaning and features

Public Private Partnership – Concept (Meaning and features)

Ch. 4 : Business services :

Meaning and types.

Banking- Types of bank accounts- Savings, current, recurring, fixed deposit and multiple option deposit account.

Banking services with particular reference to Bank Draft, Bank Overdraft, Cash Credit.

e-Banking-meaning, types of digital payments.

Insurance – Principles (Utmost Good Faith, Insurable Interest, Indemnity, Contribution, Subrogation and Causa Proxima)

Types – Life, Health, Fire and Marine insurance- Concept

Postal Services – Mail, Registered Post. Parcel, Speed Post, Courier –

Meaning. Understand the utility of different telecom services.

ess.

**CLASS–XI****Month–September****Working Days–23****Topics****Ch. 5 : Emerging Modes of Business:**

e-Business– concept, Scope, benefits, differentiation between e-Business and Traditional Business.

Ch. 6: Social Responsibility of Business and Business Ethics

Concept of social responsibility, Case for social responsibility, Responsibility towards owners, investors, consumers, employees, government and community.

Role of business in environment protection.

Business Ethics : Concept and Elements.

Month–October**Working Days–18****Topics****Half – Yearly Examinations:****Ch. 7 : Sources of Business Finance:**

Business Finance: Concept : Meaning, nature and importance – Owners' Funds– Equity shares, Preference shares, Retained earnings – Meaning

Month–November**Working Days–13****Topics****Ch. 7: (Continuation)**

Borrowed funds (Meaning): Debentures and Bonds, Loan from financial institution and commercial banks, public deposits, Trade credit, Inter Corporate Deposits. (ICD) – Concept

Differentiation between owners' funds and borrowed funds.

Ch. 8 : Small business and Entrepreneurship Development (ED):

Concept, Characteristics and Need.

Process of Entrepreneurship Development: Start up India Scheme, ways to fund Start up. Intellectual Property Rights and Entrepreneurship.

**CLASS–XI****Month–December****Working Days–22****Topics****Continuation of Ch. 8**

Small scale enterprise as defined by MSMED Act, 2006.

Role of small business in India with special reference to rural areas.

Government schemes and agencies for small scale industries: NSIC and DIC with special reference to rural, backward areas.

Winter Break:

Project work for Practical.

Month–January**Working Days–17****Topics****Ch. 9: Internal Trade:**

Meaning and types of services rendered by a wholesaler and retailer.

Types of retail trade: Itinerant and Small scale fixed shops retailers.

Large scale retailers – Departmental stores, Chain stores and Mail

Order Business: Concept (Meaning and Distinctive features)

GST (Goods and Services Tax): Concept and key features.

Ch. 10: International Trade:

Concept and Benefits to the nation and business firms.

Export Trade – Meaning and Objectives, Important Steps involved in executing export trade.

Import Trade : Meaning and Objectives, Important Steps involved in executing Import Trade.

Documents involved in International Trade: Indent, Letter of Credit, Shipping order, Shipping Bills, Mate's Receipt. (DA/DP)

World Trade Organisation (WTO) : Meaning and Objectives.

Month–February**Working Days–21****Topics****Revision****Annual Examinations**



CLASS–XI

Month–June

Working Days–16

Topic	Activity Assessment
STATISTICS Topics : What is economics, meaning scope and importance of Statistics in economics. Topics : Collection of data – Sources of Data, Methods of collecting data, Census and NSSO. Topics : Organisation of data : meaning and types of variables, frequency distribution. Topics : Presentation of data : tabular and diagrammatic presentation of data (bar diagrams, pie, diagrams, polygon and ogive, time series graph). MICROECONOMICS Topic : Central problem and production possibility curve Topic : Introduction to economics, micro and macro economics, central problems of an economy, production possibility curve and application. Positive and normative economics.	Class Notes Numericals Diagrams Mind Maps Sandeep Garg Exercises Previous Years Questions CBSE Sample Questions Lecture Method Discussion Method

Month–July

Working Days–22

Topic	Activity Assessment
MICROECONOMICS Topic : Consumer behaviour:- Cardinal and ordinal approach of utility, Law of Diminishing marginal utility, Consumer equilibrium single and more than one commodity, Indifference curve and budget line, Properties of IC, Consumer equilibrium under IC approach	Class Notes Numericals Diagrams Mind Maps Sandeep Garg Exercises Previous Years Questions CBSE Sample Questions Lecture Method Discussion Method



Topic	Activity Assessment
Topic : Demand and elasticity of demand: Demand Law, factors affecting Demand, market and individual demand, change in demand and change in quantity demanded, exceptions of demand, Elasticity of demand, methods of measuring elasticity, factors affecting elasticity, factors affecting elasticity of demand. STATISTICS Unit-3- Measures of Central Tendency: Mean (simple and weighted).	

Month–August

Working Days–22

Topic	Activity Assessment
STATISTICS Topic : Measures of Central Tendency : Median and Mode MICRO ECONOMICS Topic : Producer Behaviour :- Law of variable proportion, relation between TP, AP and MP, Cost – different cost curves and relation between TC, TVC, TFC, MC, AC, AVC, AFC, Explicit and Implicit cost curves.	Class Notes Numericals Diagrams Mind Maps Sandeep Garg Exercises Previous Years Questions CBSE Sample Questions Lecture Method Discussion Method



CLASS–XI

Month–September

Working Days–23

Topic	Activity Assessment
MICROECONOMICS Topic : Producer behaviour: Supply and elasticity of supply, factors affecting supply, law of supply, change in supply/ shift in the supply curve and change in quantity supplied/ movement on the supply curve. Revision for Half Yearly Examination	Class Notes Numericals Diagrams Mind Maps Sandeep Garg Exercises Previous Years Questions CBSE Sample Questions Lecture Method Discussion Method

Month–October/November

Working Days–18+13

Topic	Activity Assessment
STATISTICS Topic: Correlation : Meaning, scatter diagram, measure of correlation–Karl person and spearman's rank correlation. MICRO ECONOMICS Topic : Producer behaviour : shape of revenue curves in different markets. producer equilibrium $MR=MC$ approach.	Class Notes Numericals Diagrams Mind Maps Sandeep Garg Exercises Previous Years Questions CBSE Sample Questions Lecture Method Discussion Method

**CLASS–XI**

Month–December		Working Days–22
Topic	Activity Assessment	
MICROECONOMICS Topic : Main market forms :- Perfect competition, Monopoly, Monopolistic competition, Oligopoly. Features and their implication. STATISTICS Topic : Introduction to Index No.:- Meaning, Types, wholesale price index, consumer price index and index of Industrial production, methods of index number. Uses of index no., Inflation and index number.	Class Notes Numericals Diagrams Mind Maps Sandeep Garg Exercises Previous Years Questions CBSE Sample Questions Lecture Method Discussion Method	
Month–January		Working Days–17
Topic	Activity Assessment	
MICRO ECONOMICS Simple application of demand and supply, market equilibrium and change in equilibrium, price ceiling and price floor. Revision for Annual Examination	Class Notes Numericals Diagrams Mind Maps Sandeep Garg Exercises Previous Years Questions CBSE Sample Questions Lecture Method Discussion Method	

**CLASS–XI****Month–June****Working Days–16****Topics**

- Introduction to themes of world History.
- Beginning of Human History
- Writing and city life
- The ancient world and civilisations
- Mesopotamia, Egypt, Indus valley and China. Major focus on
- Mesopotamia and Indus valley civilisation

Month–July**Working Days–22****Topics**

- An empire across three continents
- The Roman Empire
 - Economy, Polity, Culture, society
- Early Roman Empire and Late Roman empire

Month–August**Working Days–22****Topics**

- Nomadic Empire. Mongol Empire. Ghengis and his successors.
- Political extension.
- Army upgradation.
- Trade Taxes
- New code
- Communication system

Month–September**Working Days–23****Topics**

- The three orders
- Feudalism – The Economic, social political system in Europe after the Roman empire
- France and England

HALF YEARLY EXAM

**CLASS–XI****Month–October****Working Days–18****Topics**

- Changing cultural traditions European Renaissance and Reformation
Science, culture, religion Humanities, Art and architecture

Month–November**Working Days–13****Topics**

- Displacing indigenous people–Europeans Taking over and
displacing original American and Australian original people

Month–December**Working Days–22****Topics**

- Paths to modernisation Japan and china
- The two paths to modernisation.
- Capitalism and communism

Month–January**Working Days–17****Topics**

- Continuation of paths to modernisation

Month–February**Working Days–21****Topics****Revision
Annual Examination**

**CLASS–XI****Month–June****Working Days–16****Topics****Book 1: Chapter 1 :** Constitution**Constitution :** The Philosophy and Making of the Constitution, Fundamental Rights and Duties, Directive Principles of State Policy, Amendments.**Month–July****Working Days–22****Topics****Continuation of Chapter 1****Book 1 : Ch–2 :** Election and Representation Election and Democracy
Election System in India Electoral Reforms**Book 2 : Ch–1 :** Political Theory What is Politics: Politics Vs Political
Theory
Importance of Political Theory**Month–August****Working Days–22****Topics****Book 1 : Ch–3 :** Legislature

Why do we need a Parliament?

Unicameral/Bicameral Legislature, Functions and Power of the
Parliament, Parliamentary Committees,
Parliamentary Officials: Speaker, Deputy Speaker, Parliamentary
Secretary.**Book 2 : Ch–2 :** Freedom

Liberty Vs Freedom

Negative and Positive Liberty

Month–September**Working Days–23****Topics****Book 1: Chapter 1:** Executive & Its Features

**CLASS–XI****Month–October****Working Days–18****Topics****Revision for Half Yearly Exam****Book 1 : Ch–5**

Judiciary Why do we need an Independent Judiciary?
Structure and Jurisdiction of the Judiciary,
Judicial Review,
Judicial Activism,
Judicial Over-reach.

Month–November**Working Days–13****Topics****Book 1 : Ch–5**

Local Government

73 and 74 Constitutional Amendment Book 2 Ch–

Ch 3 : JJ Equality

What is Equality?
Significance of Equality,
Various Dimensions of Equality,
How can we promote Equality?

Month–December**Working Days–22****Topics****Book 2 Ch– Social Justice**

What is justice?

History of rights, Kinds of rights Human Rights

Book 2 Rights

What are Rights? Where do Rights come from? Legal
Rights and the State. Kinds of Rights. Human
Rights.



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CLASS-XI

**SUBJECT- POLITICAL
SCIENCE**

Month-January

Working Days-17

Topics

Book 2 Nationalism

Nations and Nationalism, Variants of Nationalism,
Nationalism, Pluralism and Multiculturalism.

Month-February

Working Days-21

Topics

Revision for Annual Exams

**CLASS–XI****Month–June****Working Days–16****Topics****Section I****Chapter :1*****Sociology and society***

- Introducing Society: Individuals and collectives
- Plural Perspective and inequalities
- Emergence of Society
- Nature and Scope
- Relationship to other disciplines

Month–July**Working Days–22****Topics****Continued 1st Chapter : 2**

Terms, Concepts and their use in Sociology

- Social groups and society
- Status and Role
- Social Stratification
- Society and social control

Month–August**Working Days–22****Topics****Chapter : 3**

Understanding Social institutions

- Family, Marriage and Kinship
- Work and Economic Life
- Political Institutions
- Religion as a Social
- Education as a social institution

**CLASS–XI****Month–September****Working Days–23****Topics****Chapter : 4**

- Culture and Socialisation
- Culture, Values and Norms
- Dimensions of culture
- **Socialisation:** Conformity, Conflict and the shaping of personality

Revision and Half yearly exams**UNIT : II Understanding Sociology****Month–October****Working Days–18****Topics****Chapter: 7**

Social change and Social Order in Rural and Urban Societies

Social Change: Causes and consequences**Social order:** Domination Authority and law, Contestation, Crime and Violence Village, Town and city: Changes in Rural and Urban society.**Month–November****Working Days–13****Topics****Chapter : 9**

Introducing Western Sociologists

- Karl Marx on Class Conflict
- Emile Durkheim : Division of labour
- Max Weber: interpretive Sociology, Ideal type and Bureaucracy

**CLASS–XI****Month–December****Working Days–22****Topics****Chapter :10**

Indian Sociologists

- G.S.Ghurye on Caste and Race
- D.P Mukherjee on Tradition and changes
- A.R. Desai on the State
- M.N. Srinivas on the Village

Month–January/February**Working Days–17+21****Topics****Revision and
Annual Exams**

**CLASS–XI****Month–June****Working Days–16****Topics****B1 Geography as a Discipline**

- Introduction to Geography as a discipline
- Geography as an integrating discipline : Spatial and Temporal synthesis
- Approaches to study Geography: Systematic and Regional
- Branches of Geography : Physical Geography, Human Geography and Bio Geography
- Physical Geography and its importance

B2 India – Location

- Size
- Latitudinal and Longitudinal extent
- Indian Standard time
- India and its neighbours

B3 Introduction to Maps

- Essentials of map making
- History of map making
- Maps – types
- Uses of maps

Month–July**Working Days–22****Topics****B1 The Origin and Evolution of the Earth**

- Origin and evolution of the earth
- Early theories: Origin of the Earth
- Modern Theories: Origin of the universe
- Formation of Stars and Planets
- Evolution of the Earth: Lithosphere, Atmosphere and Hydrosphere
- Origin of Life

B1 Interior of the Earth

- Sources of Information about the Interior of the Earth (Direct and Indirect)



CLASS–XI

- Earthquakes: Earthquake Waves, Shadow zones, Types, Scales to measure earthquake intensity, effects, frequency of earthquake occurrences
- Structure of the Earth
- Volcanoes and Volcanic landforms

B2 Structure and Physiography

- Physiographic Divisions: (1) The Northern and North-eastern Mountains (2) The Northern Plain (3) The Peninsular Plateau (4) The Indian Desert (5) The Coastal Plains (6) The Islands.

B3 Map Scale

- Scales – methods and construction
- Conversion of scale

Month–August

Working Days–22

Topics

B1 Distribution of Oceans and Continents

- Continental Drift Theory and Evidence in support of Continental Drift and Force for Drift
- Post- Drift Studies
- Ocean Floor Configuration
- Distribution of Earthquakes and Volcanoes
- Concept of Seafloor Spreading
- Plate Tectonics: Types of Plate boundaries, Rate and forces for the Plate Movement
- Movement of the Indian Plate

B1 Geomorphic processes

- Geomorphic processes: Exogenic and Endogenic
- Endogenic Process: Diastrophism, Volcanism
- Exogenic Processes: Weathering, Landslides
- Soil: Processes and factors of Soil Formation

B3 Latitude, Longitude and Time

- Drawing of Parallels of latitude and Meridians of longitude
- Longitude and time
- International date line

**CLASS–XI****Month–September****Working Days–23****Topics****B1 Landforms and their Evolution**

- Running water : Erosional and Depositional Landforms
- Wind : Erosional and Depositional Landforms

B1 Composition and Structure of Atmosphere

- Atmosphere–composition and structure; elements of weather and climate

B2 Drainage System

- Drainage patterns
- Concepts of River basin, Catchment Area, Watershed
- Drainage and River systems of India: the Himalayan and the Peninsular
- Extent of Usability of River Water–linking of rivers, problems in using river water and water pollution

Revision**Month–October****Working Days–18****Topics****Half Yearly Examination****B1 Solar Radiation, Heat Balance and Temperature**

- Solar radiation: Variability of Insolation
- Processes of Heating and Cooling of Atmosphere
- Terrestrial Radiation
- Heat budget of the earth
- Temperature – Factors controlling temperature; Horizontal distribution of temperature; Inversion of temperature

B3 Map Projections

- Map projection– typology, construction and properties of projection: Conical with one standard parallel and Mercator's projection

**CLASS–XI****Month–November****Working Days–13****Topics****B2 Climate**

- Weather and climate
- Unity and diversity in the Monsoon Climate
- Factors determining the climate of India
- The Nature and characteristics of Indian Monsoon
- The Rhythm of Seasons
- Distribution of Rainfall
- Monsoon and the Economic Life in India
- Global Warming

B3 Topographical Maps

- Study of topographic maps (1 : 50,000 or 1 : 25,000 Survey of India maps); Conventional Symbols, contour cross section and identification of landforms – slopes, hills, valleys, waterfall, cliffs; distribution of settlements

Month–December**Working Days–22****Topics****B1 Atmospheric Circulations and Weather System**

- Atmospheric Pressure: Horizontal and Vertical Variation of Pressure
- Forces affecting velocity and direction of Wind
- General Circulation of the atmosphere : Pressure belts; Winds: Planetary, Seasonal and Local; Air masses and Fronts; Tropical and Extratropical cyclones; Thunderstorms and Tornadoes

B1 Water in the Atmosphere

- Humidity–Absolute and Relative humidity
- Evaporation and condensation
- Different Forms of Condensation: dew, frost, fog, mist and cloud
- Precipitation
- Types of Rainfall and world distribution of rainfall

B1 World Climate and Climate Change

- Koeppen's Scheme of Classification of Climate
- Climate Change



CLASS–XI

- Global Warming
- B2 Natural vegetation**
- Natural vegetation – Introduction
- Forest types and distribution
- Conservation of forests
- Wildlife; conservation; biosphere reserves
- B3 Introduction to Remote Sensing**
- Satellite imageries, stages in remote sensing data-acquisition, platform and sensors and data products, (photographic and digital)

Month–January

Working Days–17

Topics

- B1 Water (Oceans)**
- Hydrological Cycle
- Major and Minor Relief Features of the Ocean Floor
- Temperature and Salinity of Ocean Waters : Factors, Horizontal and Vertical distribution of temperature and Salinity
- B1 Movements of Ocean Water**
- Movements of ocean water- Waves, Tides and Currents
- B1 Biodiversity and Conservation**
- Biodiversity
- Loss of Biodiversity
- Conservation of Biodiversity
- B2 Natural Hazards and Disasters**
- Classification of Natural Disasters
- Natural Disasters and Hazards in India
- Disaster Management
- Conclusion

Month–February

Working Days–21

Topics

Revision for Annual Examination

- B1 – Fundamentals of Physical Geography**
- B2 – India : Physical Environment**
- B3 – Practical Work in Geography Part I**

**CLASS–XI****Month–June****Working Days–16****Topics****Unit– 1 What is Psychology?***The topics in this unit are:*

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

Month–July**Working Days–22****Topics****Unit – II Methods of Enquiry in Psychology***The topics in this unit are:*

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



CLASS-XI

6. Limitations of Psychological Enquiry

Unit – III Human Development

The topics in this unit are:

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

Month-August

Working Days-22

Topics

Unit IV- Sensory, Attentional and Perceptual Processes

The topics in this unit are:

1. Introduction
2. Knowing the world
3. Nature and varieties of Stimulus
4. Sense Modalities
 - Functional limitation of sense organs
5. Attentional Processes
 - Selective Attention
 - Sustained Attention
6. Perceptual Processes
 - Processing Approaches in Perception
7. The Perceiver
8. Principles of Perceptual Organisation
9. Perception of Space, Depth and Distance
10. Monocular Cues and Binocular Cues
11. Perceptual Constancies
12. Illusions

Socio-Cultural Influences on Perception

Practical 1- Muller Lyer Illusion

**CLASS–XI****Month–September****Working Days–23****Topics****Half Yearly Examination
Project On Research****Month–October****Working Days–18****Topics****Unit V– Learning***The topics in this unit are:*

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

Practical 2– FREE RECALL METHOD**Month–November****Working Days–13****Topics****Unit VI – Human Memory***The topics in this unit are :*

1. Introduction
2. Nature of memory
3. Information Processing Approach : The Stage Model
4. Memory Systems : Sensory, Short-term and Long- term Memories

**CLASS-XI**

5. Levels of Processing
6. Types of Long-term Memory
 - Declarative and Procedural; Episodic and Semantic
7. Nature and Causes of Forgetting
 - Forgetting due to Trace Decay, Interference and Retrieval Failure
8. Enhancing Memory
9. Mnemonics using Images and Organisation

Month–December**Working Days–22****Topics****Unit VII–Thinking***The topics in this unit are:*

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

Month–January**Working Days–17****Topics****Unit VIII–Motivation and Emotion***The topics in this unit are:*

1. Introduction
2. Nature of Motivation
3. Types of Motives
 - Biological Motives
 - Psychosocial Motives



CLASS-XI

- 4. Maslow's Hierarchy of Needs
- 5. Nature of Emotions
- 6. Expression of Emotions
 - Culture and Emotional Expression
 - Culture and Emotional Labelling
- 7. Managing Negative Emotions
- 8. Enhancing Positive Emotions

Month-February

Working Days-21

Topics

Revision

Annual Examination

Month-March

Working Days-23



Topics

Unit-1**Changing Trends & Career in Physical Education**

- Concept, Aims & Objectives of Physical Education
- Development of Physical Education in India – Post Independence
- Changing Trends in Sports- playing surface, wearable gear and sports equipment, technological advancements
- Career options in Physical Education
- Khelo-India Program and Fit – India Programme

Topics

Unit-2**Olympism Value Education**

- Olympism – concept and Olympic values (Excellence, Values and Respect)
- Olympic Value Education – Joy of effort, fair play, Respect for others, pursuit of excellence, Balance among Body, Will and Mind.
- Ancient and Modern Olympics
- Olympics – Symbols, Motto, Flag, Oath and Anthem.
- Olympic Movement Structure – IOC, NOC, IFS and other members.

Unit-5**Physical Fitness, Wellness and lifestyle**

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

**Topics****Unit-6****Test, Measurement & Evaluation**

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

Unit-7**Fundamentals of Anatomy, Physiology in Sports**

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

Topics**Unit-4****Physical Education & Sports for CWSN (Children With Special Needs- Divyang)**

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

**Topics****Unit-3****Yoga**

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

Topics**Unit-8****Fundamentals of Kinesiology and Biomechanics in Sports**

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

Topics**Unit-9****Psychology & Sports**

- Definition & Importance of Psychology in Physical Education & Sports;
- Developmental Characteristics at Different Stages of Development;
- Adolescent Problems & their Management;
- Team Cohesion and Sports;
- Introduction to Psychological Attributes: Attention, Resilience, Mental Toughness.



DELHI PUBLIC SCHOOL

CLASS-XI

**SUBJECT- PHYSICAL
EDUCATION (048)**

Month-January

Working Days-17

Topics

Unit-10

Training and Doping in Sports

- Concept and Principles of Sports Training
 - Training Load: Over Load, Adaptation, and Recovery 3
 - Warming-up & Limbering Down – Types, Method & Importance
 - Concept of Skill, Technique, Tactics & Strategies
 - Concept of Doping and its disadvantages.
-

**Topics****Theory:**

Introduction of Fine Arts. Its different branches, medium and scope. Principles of Composition, Method and Materials. What is Painting?

Element of composition:- point, line, form, colour, tone, texture and space. **Principal of composition:-** Unity, Harmony, Balance, Rhythm, Proportion.

Pre-Historic Rock-Paintings Introduction, period and study of different Pre-historic Paintings. Bhimbetka rock shelters. Eg.- Wizard's Dance, A Roaring Animal.

Practical:

Introduction of Method and material, Pencil shading fixed point view, Drawing, Sketching & Colouring. Introduction Graphics- Linocut, Relief printing, Etching, Lithography, Silk Screen.

Subjects of composition:- Still life study, Folk and Traditional Design

Topics**Theory:**

Difference between Painting, Graphics, Sculpture, Commercial Art, Design and its different types. Concept of Colour Wheel.

Art of Indus Valley Civilization. Introduction of IVC, Harappa & Mohenjo-daro (now in Pakistan), Ropar, Lothal, Rangpur, Kali Bangan, Banawali and Dholavira (in India). Study of different Sculptures and Terracotta's of Indus Valley Civilization. Eg.- Dancing Girl, Male Torso, Mother Goddess. Study of different Seal and decorative earthen wares of Indus Valley Civilization. **Eg.-** Bull, Jar

Practical:

Human figure Drawing, Proportion, Object drawing, Perspective, Craft making. Black and white compositions, Different textures.



What is design? Simple exercises of basic design in variation of geometric and rhythmic shapes in geometrical and decorative designs and colours to understand designs as organised visual arrangements. Different types of design, Monochrome painting, Use of Primary, Secondary, Tertiary, Contrast, Cool and warm colour combinations.

Subjects of composition:- Vegetable, Foliage, and daily used object, Scenery, Landscape, Flowers.

Month–August**Working Days–22****Topics****Theory:**

Buddhist, Jain and Hindu Art. (3rd century B.C to 8th century A.D)
General Introduction to Art and Sculptures during Mauryan, Shunga, Kushana (Gandhara and Mathura) style and Gupta period. Eg.- Lion Capital, Chauri Bearer, Sanchi Stupa.

Practical:

Colour and Composition, Colour wheel, Black and white composition, Potato Print, Craft making, Stencil, Colour and Mono colour / Black & white Layouts.

Subjects of composition:- Fruits, Vegetables, Still life, Portrait, Human figures,

Month–September**Working Days–23****Topics****Theory:**

Buddhist, Jain and Hindu Art. (3rd century B.C to 8th century A.D)
Bodhisattva head, Seated Buddha from KatraTila, Seated Buddha from Sarnath, Jain Tirthankar. (Gupta period)

Practical:

Linocut, Woodcut, Black and white compositions, Print making, Technique of writing Artist's Proof (A/P), no. of prints (1/6), Medium, Subject, Name Class Sec. in prints. Hanging prints and Technique of wrapping prints and MDF in News-paper to take home for drying.

**Topics****Theory:**

Introduction to Ajanta. Location. Period Chaitya and Vihara Study of different Painting and Sculptures, Subject matter & technique of Ajanta.

Eg.- Jataka Stories, Padmapani Bodhisatava, Mara Vijay.

Practical:

Woodcut printing in black and white, using different textures. Print Making, Print quality- Pay special attention to print quality and neatness (no extra spot or impression) even boarder side & backside of the print & surrounding areas. All prints should be neat and clean always.

Subjects of composition:- Composition with flowers, birds, animals.

Topics**Theory:**

Artistic aspects of Indian Temple sculpture (6th century A.D to 13th Century A.D) and study of different Temple-Sculptures. Eg.- Descent of Ganga, Ravana Shaking Mount Kailash, Trimurti, Lakshmi Narayan / Kandariya Mahadev Temple, Cymbal Player, Mother and Child.

Practical:

Coloured printing in Woodcut using Registration methods.

Subjects of composition:-Composition with human figures, portraits; Village life, City life etc.

Topics**Theory:**

Introduction to Indian Bronzes. Method of Casting (solid and hollow). Study and appreciation of following and study of following different south Indian Bronzes (Chola Dynasty). Eg.- Nataraj, Devi (Uma).

**Practical :**

Colography, Silk screen printing introduction- Method Material and technique, Monochrome compositions for Silkscreen.

Subjects of composition:- Festival, Market, Daily life etc.

Month-January**Working Days-17****Topics****Theory :**

IArtistic aspects of the Indo-Islamic architecture- Introduction, study and appreciation & study of different Mughal architectures. Eg.- Qutab Minar, Gol Gumbad.

Practical :

Portfolio making- Finishing, mounting and file preparation, with record of the entire year's performance from layout to finished Art work. The selected prints (from Linocuts / Woodcuts / Paper-cardboard / Colography prints) prepared. Practical Exam.

Month-February**Working Days-21****Topics****Theory :**

Revision for Final Examination.

Practical :

Practical Exam:- Portfolio presentation with 10 best Graphics work. Black and white layout, tracing on MDF, cutting & creating different textures, printing, writing Artist's Proof & signature in prints. Submit two identical prints along with layout for marks for your final exam.

MATERIAL REQUIRED FOR PRACTICAL :

June- Sept. : Small poster colour set of 6 colours, Artists Water colour box (Camel), Good synthetic Brushes-Iset, Bowl, Palette, Drawing copy A/3 size or 1/4th Thick Chart papers, A/3 size plastic leaf file, Shading pencil set, Rough cloths, in a big Carry bag. Write your names in all.



Oct.-Feb. : Poster colour set of 6 colours, 5 MDF Board, 1 Linocut, Linocut Tools, Carbon Paper, Big paper knife cutter, Few brushes, Pencil, Small steel bowl-1, Turpentine oil- 1L (keep at home), Few Chart papers (cut in 1/4th size unrolled), Big spoon, Waste cloths small pieces, Fevicol tube, Old news papers, Apron, in a big Carry bag, Few file board for mounting Portfolio.

PRACTICAL EXAM :**Half Yearly Exam:-**

Paper-I- Pencil shading- Still life study, Nature study, Foliage study etc.

Paper-II- Colourful composition with human figures, flowers, bird, animal etc.

Annual Exam:-

(Paper-I) : Layout making with black and white poster colour on given subject (original composition). Transforming layout on MDF Board.

(Paper-II) : Print Making process. Prints should be identical. All prints should be of good quality, neat and clean. In Practical Exam submit one identical prints along with layout on given topic. For extra prints use own papers.

(Paper-III) : Portfolio with selected 10 Prints.

Written project on any Indian Folk or Traditional Art.

Viva / Oral on Method material, Fundamentals of art, History of Art.

**Topics****Theory:**

Introduction of Fine Arts. Its different branches, medium and scope. Principles of Composition, Method and Materials. What is Painting?

Element of composition : point, line, form, colour, tone, texture and space. **Principal of composition :** Unity, Harmony, Balance, Rhythm, Proportion.

Pre-Historic Rock-Paintings Introduction, period and study of different Pre-historic Paintings. Bhimbetka rock shelters. Eg.- Wizard's Dance, A Roaring Animal.

Practical:

Introduction of Method and material, Pencil shading fixed point view, Drawing, Sketching & Colouring.

Subjects of composition : Still life study, Object study

Topics**Theory:**

Difference between Painting, Graphics, Sculpture, Commercial Art, Design and its different types. Concept of Colour Wheel.

Art of Indus Valley Civilization. Introduction of IVC, Harappa & Mohenjo -daro (now in Pakistan), Ropar, Lothal , Rangpur, Kali Bangan ,Banawali and Dholavira (in India) Study of different Sculptures and Terracotta's of Indus Valley Civilization. **Eg.-** Dancing Girl, Male Torso, Mother Goddess. Study of different Seal and decorative earthen wares of Indus Valley Civilization. **Eg.-** Bull, Jar

Practical:

Nature and Object study Pencil shading, Pen & ink and water colour. What is design? Different types of design, Basic Design. (geometric and rhythmic, Decorative design) Monochrome painting, Use of Primary, Secondary, Tertiary, Contrast, Cool and warm colour combinations. (study Alpona & Rangoli)



Subjects of composition : Vegetable, Foliage, and daily used object, Nature and object study, Geometrical form objects, natural form life plants and flower, Decorative and ornamental design.

Month–August**Working Days–22****Topics****Theory:**

Buddhist, Jain and Hindu Art. (3rd century B.C to 8th century A.D)
General Introduction to Art and Sculptures of Mauryan,

Eg.– Lion Capital, Chauri Bearer, Sanchi Stupa.

Practical:

What is composition, Black and white and colour composition, Imaginative composition, Sketching, Shading and Water colour (transparent & opaque).

Subjects of composition : Portrait study, Human figure study with colour compositions, Village life, Landscape with human figure.

Month–September**Working Days–23****Topics****Theory:**

Buddhist, Jain and Hindu Art. (3rd century B.C to 8th century A.D)
Bodhisattva head Seated Buddha from Katra mound Mathura.
Jain Tirathankar (Gupta period)

Practical:

Concept of perspective, colour perspective, perspective with composition, Use of linear & aerial perspective.

Study Collage and Mosaic Art

Subjects of Collage, Mosaic Art composition : Landscape with different tree, reflection, water fall, mountain; City-scape, Living room & drawing room with perspective drawing

**CLASS-XI****Month-October****Working Days-18****Topics****Theory:**

Introduction to Ajanta. Location. Period Chaitya and Vihara Study of different Painting and Sculptures, subject matter & technique of Ajanta.

Eg.- Jataka Stories, Padmapani Bodhisatava, Mara Vijay.

Practical:

Wax resistance technique, Mixed medium technique, Composition with human figure using different textures.

Subjects of composition : Different birds and animals composition, Dream or fantasy imaginative composition, Rainy day.

Month-November**Working Days-13****Topics****Theory:**

Artistic aspects of Indian Temple sculpture (6th century A. D to 13th Century A. D and study of different Temple-Sculptures. Eg.- Descent of Ganga, Ravana Shaking Mount Kailash, Trimurti, Lakshmi Narayan / Kandariya Mahadev Temple, Cymbal Player, Mother and Child.

Practical:

Flower study with white and white flower, landscape, Nature study (mixed medium technique, wax resistance technique) Colour or monochrome.

Subjects of composition : Study room, Any festival, Park, Any social theme.

Month-December**Working Days-22****Topics****Theory:**

Introduction to Indian Bronzes, Method of Casting (solid & hollow) and study of different south Indian Bronzes. Eg.- Nataraj, (Chola)

**Practical:**

Method material and technique of water colour and acrylic colour and oil colour. Transparent water colour, opaque water colour and tempera water colour. Block painting and illusion.

Copy any one Indian Folk art and traditional art of India.

Subjects of composition : Illusionistic painting, optical illusionistic painting, 3D painting, block painting, block design and outdoor study, Architectural drawings.

Month–January**Working Days–17****Topics****Theory:**

Artistic aspects of the Indo–Islamic architecture & study of different Mughal architectures. **Eg.–** Qutab Minar, Gol Gumbad.

Practical:

Composition making with different elements in any medium.

Subjects of composition : Human figure with composition, winter day, festival, market, city life, village life, Practical Exam.

Month–February**Working Days–21****Topics****Theory:**

Revision for Final Examination.

Practical:

Practical Exam : Portfolio presentation with 15 paintings with record of the entire year's performance from sketch to finished Art work, Pencil shading, pen & ink work, Landscape paintings, Human figure composition, Still life painting, Human figure drawing & sketch, Portrait painting, Imaginative painting. And other compositions according to your syllabus.

**MATERIAL REQUIRED FOR PRACTICAL :**

Pen, pencil, eraser, shading pencil set, marker (thin and bold), pastel colour, Artist water colour cakes (18 shades Box), Synthetic hair brushes- 1set, Brush ink pen set, big bowl, big colour palette, rough cloth, A/4 size drawing copy, A/3 size chart papers (unrolled), file board, shading pencil, oil pastel, marker, Brush ink pen, Acrylic colours, Pen ink brush, News paper, Paper clip, Drawing board- A/3 size, A/3 size Portfolio for your art works presentation.

PRACTICAL EXAM:**Half Yearly Exam:**

Paper-I : Pencil shading-Still life study, Nature study, Foliage study etc.

Paper-II : Colourful composition with human figures, flowers, bird, animal etc.

Annual Exam:

Paper-I : Nature and Object study-Pencil shading-Still life study, Nature study, Foliage study, Object study.

Paper-II : Painting Composition-Colourful composition with human figure, Basic Design (geometric and rhythmic, Decorative design) Landscape, Nature study, daily life, village life, urban life, drawing room, rainy day, festival, market, city life, fantasy & dream, cultural & social events, bird and animal with human figure. Imaginative composition. (Sketches from Life and Nature)

Paper-III : Portfolio Assessment. Record of the entire year performance sketch to finished product. (Innovation, Technique, Execution of work, skills, Critical evaluation and aesthetic). Five selected nature & object study and Five Painting composition). Portfolio with selected 10 paintings, Written project on any Indian Folk or Traditional Art. Viva / Oral on Method material, Fundamentals of art, History of Art.

**CLASS-XI****Month-June****Working Days-16****Topics****Practical:**

- Raag Bihag (Dhrut Khyal)

Theory:

- Brief study of the following : Nada, Shruti, Swar, Saptak, Thaata, Jati, Laya, Taal.
- Simple elaboration of Raag Bihag.
- Recitation of thekas of Dadra.

Month-July**Working Days-22****Topics****Practical:**

- Taan of Raag Bihag.
- Sargam of Raag Bhairavi

Theory:

- Knowledge of the structure of Taanpura.
- Description of Teen Taal along with Taal notation (Thah, Dugun, Chaugun).

Month-August**Working Days-22****Topics****Practical:**

- Raag Bhairavi (Dhrut Khyal) with Taan.
- Raag Bihag (Vilabikhyal)

Theory:

- Simple elaboration of Raag Bhairavi.
- History of Dhrupad gayan.
- Life sketch and contribution of V.N. Bhattachande and Tansen



DELHI PUBLIC SCHOOL

CLASS-XI

**SUBJECT – HINDUSTANI MUSIC
VOCAL (CODE NO. 034)**

Month-September

Working Days-23

Topics

Practical:

- Revision
- Development

Theory:

- Revision.
- Recitation of keherwa taal.

Month-October

Working Days-18

Topics

Practical:

- FolkSong

Theory:

- Brief Study of the following
- Margi-Desi sangeet, Raga.
- History of Khyal and Tarana.

Month-November

Working Days-13

Topics

Practical:

- Raga Bhimpalasi (Dhrut Khyal)-Asthai & Antara

Theory:

- Writing in notation the compositions of Raga Bhimpalasi.
- Description of Ektaal (Thah, Dugun,Chaugun).



CLASS–XI

Month–December

Working Days–22

Topics

Practical:

- Raag Bhimpalasi –Taan
- Dhrupad khyal (Any raga) –asthai

Theory:

- Brief study of Musical elements in Natya Shashtra.

Month–January

Working Days–17

Topics

Practical:

- Dhrupad khyal (Any raga)–antara

Theory:

- Description of Chautaal (Thah, Dugun, Chaugun).
- Life sketch and contribution of Tansen and V.D. Paluskar

Month–February

Working Days–21

Topics

Practical:

- Revision

Theory:

- Revision & Assessment

**CLASS–XI****Month–June****Working Days–16****Topics****Theory:**

A Brief history of Indian Dance, The concept of Nat Raj

Practical:

Ability to demonstrate the elementary steps Chouka no 1 to no 6

Month–July**Working Days–22****Topics****Theory:**Short notes myths related to Kaliya Daman, Dashavatar, Vastra Haran
Cheer Haran and Neuni chor (Makhan chor)**Practical:**

Ability to demonstrate the elementary steps Tribhabga No 1 to No 4

Month–August**Working Days–22****Topics****Theory:**

Ekaa Taal and Rupak Taal. Devadasi and Mahari dance.

Practical:Learning of one Arasa in chaturasajati is ability to recite the
sthayiUkuta of the Arasa by showing the matra by hand,**Revision for half yearly Exam.****Month–September****Working Days–23****Topics****Theory :****Definition of the terms :**

- (a) Nritya, Nritya and Natya
- (b) Matra, Laya, Taal, Avartan and Vibhaga (anga)
- (c) Tandava and Lasya

**Practical : Learning of Mangalacharan**

- (a) Demonstration of the Item.
- (b) Recitation with hands of the Ukutas of the Item.
- (c) Naming the Rag and tala the Item is composed to.

Month–October

Working Days–18

Topics**Theory :****Natyadharmi and Lokadharmi,**

- (a) Nritya, Nritya and Natya
- (b) Matra, Laya, Taal, Avartan and Vibhaga (anga)
- (c) Tandava and Lasya

Practical :**Learning of Mangalacharan**

- (d) Identification of the hastas used in the Item.
- (e) Identification and demonstration of the various components of the Item

Month–November

Working Days–13

Topics**Theory:**

Brief explanation of the five segments of the basic repertoire of Odissi dance.

- (a) MangalaCharan
- (b) Batu or Sthayi
- (c) Pallavi
- (d) Abhinaya
- (e) Mokshaya or any Tandava dance

Practical:

Mancha Pravesha, Pushpanjali, Bhumi Pranam, Ista deva vandana, Trikhandipranam or Sabhaparanam.

**Topics****Theory:**

Ability to write the notation of the sthayi Ukuta or Dharana of the three following Taalas

1. Ekatali,
2. Rupak Taal,
3. Triputa Taal.

Asanjukata and Samyukta Hasta Mudra from the Abhinaya Darpan.

Practical :

Explanation or Meaning of the sloka in the istha Deva vandana.
Learning of Sthayi, Identification of the hasta, Paadabheda and bhangis used in the Item. Recitation used hands ukutas if the item and Identification of the rag and tala the item composed to.

Topics**Theory :**

Revision for Annual yearly Exam

Practical :

Revision for Annual yearly Exam

Topics

Revision for Annual Exam

**Topics****THEORY:**

Introduction of Fine Arts. Its different branches, medium and scope. Principles of Composition, Method and Materials. What is Graphics?

Element of composition : point, line, form, colour, tone, texture and **space. Principal of composition :** Unity, Harmony, Balance, Rhythm, Proportion.

Pre-Historic Rock-Paintings Introduction, period and study of different Pre-historic Paintings. Bhimbetka rock shelters. **Eg.-** Wizard's Dance, A Roaring Animal.

PRACTICAL:

Introduction of Method and material, Pencil shading fixed point view, Drawing, Sketching & Colouring. Introduction Commercial Art-Lettering, Book cover design, calligraphy, cartoon, poster, Advertisements, newspaper and magazine, animation and printing processes, photography, computer-graphics, all designs, hoarding design and letter press and offset printing

Subjects of composition / illustration : Still life (object and Nature study), Basic concepts of Design. Folk, Traditional and modern design with monochrome colour, Book cover design.

Topics**THEORY:**

Difference between Painting, Graphics, Sculpture, Commercial Art, Design and its different types. Concept of Colour Wheel.

Art of Indus Valley Civilization. Introduction of IVC, Harappa & Mohenjo-daro (now in Pakistan) , Ropar, Lothal , Rangpur, Kali Bangan ,Banawali and Dholavira (in India). Study of different Sculptures and Terracotta's of Indus Valley Civilization. **Eg.-** Dancing Girl, Male Torso, Mother Goddess. Study of different Seal and decorative earthen wares of Indus Valley Civilization. **Eg.-** Bull, Jar

**PRACTICAL:**

Human figure Drawing, Proportion, Object drawing, Perspective. Black and white compositions, Creating different textures.

What is design? Simple exercises of basic design in geometrical and ornamental and colours to understand designs as organised visual arrangements. Different types of Commercial design- Model Drawing, illustration, Layout preparation and Poster and T.V. Heading design. Use of Primary, Secondary, Tertiary, Contrast, Cool and warm colour combinations in design.

Subjects of Composition / illustration : Vegetable, Foliage, and daily used object, Scenery, Landscape, Flowers.

Month-July**Working Days-22****Topics****THEORY:**

Difference between Painting, Graphics, Sculpture, Commercial Art, Design and its different types. Concept of Colour Wheel.

Art of Indus Valley Civilization Introduction of IVC, Harappa & Mohenjo-daro (now in Pakistan), Ropar, Lothal, Rangpur, Kali Bangan, Banawali and Dholavira (in India). Study of different Sculptures and Terracotta's of Indus Valley Civilization. **Eg.-** Dancing Girl, Male Torso, Mother Goddess. Study of different Seal and decorative earthen wares of Indus Valley Civilization. **Eg.-** Bull, Jar

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Subjects of composition / illustration : Vegetable, Foliage, and daily used object, Scenery, Landscape, Flowers.

**CLASS–XI****Month–August****Working Days–22****Topics****THEORY:**

Buddhist, Jain and Hindu Art. (3rd century B.C to 8th century A.D)
General Introduction to Art and Sculptures during Mauryan, Shunga, Kushana (Gandhara and Mathura) style and Gupta period. **Eg.–** Lion Capital, Chauri Bearer, Sanchi Stupa.

PRACTICAL:

Letter Writing, calligraphy, Typography, Block Print / Potato Print, Stencil print,

Subjects of Composition / illustration : Layouts on Fruits, Vegetables, Still life, Portrait, Human figures.

Month–September**Working Days–23****Topics****THEORY:**

Buddhist, Jain and Hindu Art. (3rd century B.C to 8th century A.D)
Bodhisattva head, Seated Buddha from Katra Tila, Seated Buddha from Sarnath, Jain Tirthankar. (Gupta period)

PRACTICAL:

Poster Making with specific Data and Slogan with the help of previous techniques.

Subjects of Poster Making : Education, Nature, Heritage.

Month–October**Working Days–18****Topics****THEORY:**

Introduction to Ajanta. Location. Period Chaitya and Vihara Study of different Painting and Sculptures, Subject matter & technique of Ajanta.

Eg.– Jataka Stories, Padmapani Bodhisattava, Mara Vijay

**PRACTICAL:**

Sketching, Freehand drawing, digital drawing-poster and composition, Photography editing, Use of different digital software, animated Cartoon Making.

Subjects of Composition / illustration:- Composition with three colours of flowers, birds, animals.

Month–November**Working Days–13****Topics****THEORY:**

Artistic aspects of Indian Temple sculpture (6th century A.D to 13th Century A.D) and study of different Temple–Sculptures. **Eg.-** Descent of Ganga, Ravana Shaking Mount Kailash, Trimurti, Lakshmi Narayan / Kandariya Mahadev Temple, Cymbal Player, Mother and Child.

Practical:

Coloured Digital print and Colography / Stencil printing.

Subjects of Composition : Illustration or Story board with human figures, Portraits; Village life, City life etc.

Month–December**Working Days–22****Topics****THEORY:**

Introduction to Indian Bronzes. Method of Casting (solid and hollow). Study and appreciation of following and study of following different south Indian Bronzes (Chola Dynasty). **Eg.-** Nataraj, Devi (Uma).

PRACTICAL:

Printing introduction– Method Material and technique, Monochrome compositions for Silkscreen.

Subjects of Composition : Illustration related with Festival, Market, Daily life etc.

**CLASS–XI****Month–January****Working Days–17****Topics****THEORY :**

Artistic aspects of the Indo-Islamic architecture– Introduction, study and appreciation & study of different Mughal architectures. **Eg.–** Qutab Minar, Gol Gumbad.

PRACTICAL :

Portfolio making– Finishing, mounting and file preparation, with record of the entire year's performance from layout to finished Art work. The Drawings, layouts, design, Lettering, posters, illustrations prepared. Practical Exam.

Month–February**Working Days–21****Topics****THEORY :**

Revision for Final Examination.

PRACTICAL :

Practical Exam:– Portfolio presentation with 10 best Commercial Art (Applied Art) work with layout for marks for your final exam.

Material required for practical

Poster colour set, Artists Water colour box (Camel), Good synthetic Round and Flat Brushes–1+1 set, Brush ink pen set, Calligraphy Pen set, Bowl, Palette, Drawing copy A/3 size or 1/4th Thick Chart papers, A/3 size plastic leaf file, Shading pencil set, 2 MDF Board (8x10inches), Paper Knife cutter, Rough cloths, in a big Carry bag. Write your names in all materials.

A/3 size Portfolio for your art works presentation.



Half Yearly Exam:-

Paper-I- Pencil shading- Still life study, Nature study, Foliage study etc.

Paper-II- Colourful illustration with human figures, flowers, bird, animal etc.

Annual Exam:-

(Paper-I):- Drawing and composition from Still-Life and Nature, medium- pencil monochrome / colour.

Layout making on given subject (original composition). Transforming layout in Poster Design.

(Paper-II) :- Calligraphy of lettering of Roman and Devnagri Scripts. Book Cover design. Making a simple layout with lettering as the main component.

(Paper-III):- Portfolio with selected 10 Commercial Art works. Record of entire year's performance from sketch to finished product. Written project on any Indian Folk or Traditional Art.

Viva / Oral on Method material, Fundamentals of art, History of Art.



CLASS-XI

Prescribed book : Aula Internacional – 3

Section – A: Applied Grammar:

Marks: 35

(Based on Aula Internacional-3)

- Revision of elementary grammatical categories like articles, nouns, pronouns (personal, demonstrative and interrogative), gender, number, adjectives, adverbs, conjunctions of verbs, auxiliary verbs, possessive, prepositions etc.
- Revision of uses of present tense: “Ser + adjetivo”, “Estar + adjetivo”, “Gustar, molestar + infinitivo”, Preferir.
- Revision of uses of Se: Se + 3ª persona singular.
- Verbs with prepositions: acostumbrarse a, interesarse por, pensar en, ir a, acordarse de, etc.
- Verbal parafrases: “Empezar a + infinitivo”, “Seguir + gerundio”, “Me parece/resulta + adjetivo + infinitivo”, “Creo que /pienso que + presente de indicativo”, “Me hace falta/lo que necesito es /me gustaría + infinitivo”, “Hace falta /Es necesario /Es importante /Se necesita /hay que /lo que hay que hacer + infinitivo”, “a lo mejor/quizá (s) + infinitivo”, “Se puede + infinitivo”, “Es posible + infinitivo”.
- Different forms of past tense (pretérito indefinido/imperfecto), including the perfect tense with the auxiliary verb 'haber' (pretérito perfecto /pluscuamperfecto).
- Imperative verbal mood -command and entreaties: revision of affirmative and negative commands.
- Direct and Indirect speech
- Use of very common idiomatic expressions (as contained in the prescribed book)
- Future (“Supongo que/ creo que + futuro”, “seguro que + futuro”) and Conditional tenses (“yo en tu lugar + conditional”)
- Present Subjunctive mood and the difference between the indicative mood and the subjunctive mood.

**• Section – B: Reading Comprehension****Marks: 15**

Learners will be expected to read and answer short questions from unseen passages.

Section – C: Composition and Writing:**Marks: 15**

Two short compositions in Spanish (one of 90-10 words and another of 150-180 words) based on a topic related to life and its surroundings.

Section – D: Culture/Civilization/Literature: Marks: 15

Cultural and civilizational information relating to Spanish-speaking countries acquired in class IX and X. Some aspects of Spanish history in brief such as Spanish history as the consolidation of the Spanish kingdom after the reconquest (la reconquista), the Civil War.

To explore different aspects of Spanish customs and traditions. In addition to 14 authors prescribed in Class IX and X, two more authors are added for class XI:

- a) Pedro Calderón de la Barca, works such as El príncipe constante and La vida es sueño
- b) Antonio Buero Vallejo, works such as Historia de una escalera and Hoy es fiesta.