VISHWA BHARTI PUBLIC SCHOOL, GREATER NOIDA

Textbook prescribed-

1. English Reader- Hornbill
2. Supplementary Reader- Snapshot

MONTH	BOOK /MAIN SKILL	UNIT/TOPIC
APRIL	HORNBILL SNAPSHOT WRITING SKILL	• The Portrait of a Lady • A Photograph (poem) • The Summer Of The Beautiful White Horse. • Speech writing
MAY	HORNBILL SNAPSHOT WRITING SKILLS	• We Aren't Afraid to Die • Laburnum Top • The Address • Poster making
JULY	HORNBILL WRITING SKILLS	• Discovering Tut-The Saga Continues • The Voice Of The Rain(poem) • Classified Advertisements
AUG	HORNBILL SNAPSHOT WRITING SKILLS AND GRAMMAR	Adventure • Father To Son • Mother's Day • Note-Making and abstractions • Integrated Grammar
SEPT	FIRST TERM EXAMINATION	• Assessment of Speaking & Listening Skills

OCT	HORNBILL WRITING SKILLS AND GRAMMAR	• Silk Road • Debate writing • Integrated grammar practice
NOV	HORNBILL SNAPSHOT WRITING SKILL	• Childhood • Birth • Revision.
DEC	SNAPSHOT HORNBILL WRITING SKILLS & GRAMMAR	• The Tale of Melon City • Revision • Comprehension skills(Revision)
JAN- FEB	REVISION	• Revision • Assessment of Speaking & Listening Skills

SUBJECT: MATHS

BOOK PRESCRIBED: NCERT

MONTH	UNIT	TOPICS
APRIL	Chapter -1 SETS	• Introduction • Sets and their Representation, Empty Set, Finite and Infinite Sets, Equal Sets, Subsets. • Universal Set • Venn Diagrams • Operations on Sets • Complement of a Set
	Chapter -2 RELATIONS AND FUNCTIONS	• Introduction • Cartesian Product of Sets, • Relations • Functions and its types
	Chapter-3 TRIGONOMETRIC FUNCTIONS	• Introduction • Angle measurement in degree and radians with their relation. • Trigonometric Functions
MAY	Chapter -3 TRIGONOMETRIC FUNCTIONS (cntd)	• Trigonometric Functions of Sum and Difference of two Angles.
	Chapter -4 COMPLEX NUMBERS AND QUADRATIC EQUATIONS	• Introduction • Complex Numbers • Algebra of Complex Numbers • The Modulus and the Conjugate of a Complex Number • Argand Plane and Polar Representation.
	Chapter -5 LINEAR INEQUALITIES	• Introduction • Inequalities • Algebraic solutions of Linear Inequalities in One Variable and their Graphical Representation.
JULY	Chapter -6 PERMUTATIONS AND COMBINATIONS	• Introduction • Fundamental Principle of Counting. • Permutations when all the objects are distinct and when all the objects are not distinct. • Combinations with its Practical applications.
	Chapter -7 BINOMIAL THEOREM	• Introduction • Expansion using Binomial Theorem For Positive Integral • Indices. •

	Chapter -8 SEQUENCES AND SERIES	• Introduction • Sequences • Series • Geometric Progression (G.P.) Relationship Between A.M and G.M
AUG	Chapter – 9 STRAIGHT LINE	• Introduction • Slope of a line, Conditions for parallelism and Perpendicularity of lines • Various Forms of Equations of a line. • Distance of a Point from line.
FIRST TERM EXAMINATION		
OCT	Chapter -10 CONIC SECTIONS Chapter -11 INTRODUCTION TO THREE-DIMENSIONAL GEOMETRY	• Introduction • Sections of a Cone • Standard Equation of Circle • Parabola • Ellipse • Hyperbola • Introduction • Coordinate Axis and Coordinate Planes in Three-Dimensional Space • Coordinates of a Point in Space • Distance between two points.
NOV	Chapter-12 LIMITS AND DERIVATIVES Chapter -13 STATISTICS	• Introduction • Intuitive Idea of Derivatives • Limits • Limits of Trigonometric Functions. • Derivatives • • Introduction • Measures of Dispersion • Range • Mean Deviation • Variance and Standard Deviation.
DEC	Chapter -14 PROBABILITY APPENDIX 1: INFINITE SERIES	• Event • Axiomatic approach to probability. • Introduction • Binomial Theorem for any Index. • Infinite Geometric Series. • Exponential Series • Logarithmic Series

SUBJECT: BIOLOGY

TEXT BOOK PRESCRIBED: NCERT

Month	Chapter	Topics And Sub Topics
APRIL	Chapter 5 Morphology of flowering plants Chapter 6 Anatomy of flowering plants Chapter 7 Structural Organization in Animals	Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed. Description of family Solanaceae Anatomy and functions of tissue systems in dicots and monocots. Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog. **Practicals** 1. To study the vegetative & floral characteristics of Solanaceae families. 2. To prepare a temporary slide of T.S. of dicot root, monocot root, dicot stem and monocot stem.
MAY	Chapter-1: The Living World Biodiversity Chapter-2: Biological Classification Chapter-3: Plant Kingdom	Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature Five kingdom classifications; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroid. Classification of plants into major groups; Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyte, Gymnosperm (Topics excluded – Angiosperms, Plant Life Cycle and Alternation of Generations) Practicals: 1. 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. 2. Virtual specimens/slides/models and identifying features of - Amoeba, Hydra, liver fluke, Ascaris, leech, earthworm, prawn, silkworm, honeybee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.

Month	Chapter	Topics And Sub Topics
JULY	Chapter-4: Animal Kingdom	Salient features and classification of animals, non-chordates up to phyla level and chordates up to class level (salient features and at a few examples of each category). (No live animals or specimen should be displayed.)
	Chapter-8: Cell- The Unit of Life	Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, Golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus.
	Chapter-9: Biomolecules	Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, and nucleic acids; Enzyme - types, properties, enzyme action. (Topics excluded: Nature of Bond Linking Monomers in a Polymer, Dynamic State of Body Constituents – Concept of Metabolism, Metabolic Basis of Living, The Living State)
AUG	Chapter-10: Cell Cycle and Cell Division	Cell cycle, mitosis, meiosis and their significance Revision for Term I examination **Practicals** 1. Mitosis in onion root tip cells and animals' cells (grasshopper) from permanent slides
SEPT		Term I Examination

Month	Chapter	Topics And Sub Topics
OCT	Chapter-13: Photosynthesis in Higher Plants	Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.
	Chapter-14: Respiration in Plants	Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.
	Chapter-15: Plant- Growth and Development	Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; plant growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA.
NOV	Chapter-17: Breathing and Exchange of Gases	Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders.
	Chapter-18: Body Fluids and Circulation	Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure.
	Chapter-19: Excretory Products and their Elimination	Modes of excretion - ammoniotelic, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uraemia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant.

Month	Chapter	Topics And Sub Topics
DEC	Chapter-20: Locomotion and Movement	Types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.
	Chapter-21: Neural Control and Coordination	Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse
JAN	Chapter-22: Chemical Coordination and Integration	Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goitre, exophthalmic goitre, diabetes, Addison's disease. Note: Diseases related to all the human physiological systems to be taught in brief. Revision for Annual Examination
FEB		**REVISION**

SUBJECT: CHEMISTRY

Textbooks prescribed

1. NCERT Textbook Part I & II
2. NCERT Lab manual of Chemistry Class: XI

TERM – I

MONTH	CHAPTER	TOPICS
APRIL	Unit 1: Some Basic Concepts of Chemistry	General Introduction: Importance and scope of Chemistry. Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry.
	Practical	Experiment: To determine the melting point of the given organic compound. Experiment: To determine the boiling point of the given organic compound.
MAY	Unit 2: 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.
	Practical	Experiment: Preparation of standard solution of oxalic acid and sodium carbonate. Experiment: Volumetric Analysis; acid-base titration
JULY	Unit 3: Classification of Elements and Periodicity in Properties	Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements - atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100.
	Unit 4: Chemical Bonding and Molecular Structure	Valence electrons, ionic bond, covalent bond, bond parameters, Lewis's structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules (qualitative idea only),

		Hydrogen bond. Experiment: To prepare crystals of copper Sulphate.
	Practical	Experiment: Salt Analysis- detection of group-1 acid radicals
AUG	Unit 4: Chemical Bonding and Molecular Structure	Molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), Hydrogen bond.
	Unit 7: Redox Reactions	Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, applications of redox reactions
	Practical	Experiment: Detection of group-2 and 3 acid radicals Experiment: Salt Analysis- detection of basic radicals
SEPT	Revision and Term 1 Exams	
TERM 2		
OCT	Unit 5: Thermodynamics	Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat, measurement of U and H, Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and non-spontaneous processes, criteria for equilibrium. Third law of thermodynamics (brief introduction).
	Unit 6: Equilibrium	Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle
	Practical	Experiment: Salt Analysis- detection basic radicals
NOV	Unit 6: Equilibrium	Ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, Henderson Equation, solubility product, common ion effect (with illustrative examples).

	Unit 8: Organic Chemistry – Some Basic principles and Techniques	General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electrometric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.
	Practical	Experiment: To determine the pH of different samples of fruit and vegetable juices. Experiment: To study the change in pH of acetic acid and ammonia solution by the addition of common ion. Experiment: To study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/ Decreasing the concentration of either of the ions.
DEC	Unit 9: Hydrocarbons	Classification of Hydrocarbons Aliphatic Hydrocarbons: Alkanes - Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis. Alkenes - Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition. Alkynes - Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water.
	Practical	Project: Investigatory project
JAN	Unit 9: Hydrocarbons	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
	Practical	Experiment: To detect the presence of N, S and Cl in the given organic compound.
FEB		Revision Work & Final Exam

SUBJECT- PHYSICS

Textbook: N.C.E.R.T PART 1 AND 2

Month	Unit	Chapter	Topics
APRIL	**Unit-I** Physical World & Measurement	**Chapter-2:** Units and Measurements	Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures. Dimensions of physical quantities, dimensional analysis and its applications.
	Unit-II Kinematics	**Chapter–3:** Motion in a Straight Line	Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and nonuniform motion, and instantaneous velocity, uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).
MAY	**Unit-II** Kinematics	**Chapter–4:** Motion in a Plane	Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors. Motion in a plane, cases of uniform velocity and uniform acceleration projectile motion, uniform circular motion.
JULY	**Unit III**: Laws of Motion	**Chapter–5:** Laws of Motion	Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).
	Unit IV: Work Energy and Power	**Chapter – 6:** Work Energy and Power	Work done by a constant force and a variable force; kinetic energy, work-energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non-conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions.

AUG	**Unit V:** Motion of System of Particles and Rigid Body	**Chapter – 7:** System of Particles and Rotational Motion	Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).
	Unit VI: Gravitation	**Chapter – 8** Gravitation	Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape speed, orbital velocity of a satellite.
SEPT.	**Revision for Term Exam-1**		
OCT.	**Unit – VII:** Properties of Bulk Matter	**Chapter – 9** Mechanical Properties of Solids	Elasticity, Stress-strain relationship, Hooke's law, young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy
		Chapter – 10 Mechanical Properties of 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. Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.
		Chapter -11 Thermal Properties of Matter	Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv, 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.
NOV	**Unit – VIII:** Thermodynamics	**Chapter -12:** Thermodynamics	Thermal equilibrium and definition of temperature, zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, second law of thermodynamics: gaseous state of matter, change of condition of gaseous state - isothermal, adiabatic, reversible, irreversible, and cyclic processes.

	Unit – IX: Behaviour of Perfect Gases and Kinetic Theory of Gases	**Chapter - 13:** Kinetic Theory	Equation of state of a perfect gas, work done in compressing a gas. Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equip-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.
DEC	**Unit X:** Oscillations and Waves	**Chapter–14:** Oscillations	Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their applications. Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period.
JAN	**Unit X:** Oscillations and Waves	**Chapter–15:** Waves	Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats

SUBJECT: ACCOUNTANCY

Textbook Prescribed: NCERT, Double Entry Bookkeeping (Financial Accounting) T.S. Grewal

Month	Topic	Subtopic
April May	**Unit-1: Theoretical Framework** **1. Introduction to Accounting**	Accounting- concept, objectives, advantages and limitations, types accounting, information; users of accounting information and their needs. Qualitative Characteristics of Accounting Information. Role of Accounting in Business
	2. Basic Accounting Terms	Business Transaction, Capital, Drawings, Liabilities (Non- Current and Current). Assets (Non- Current, Current); Fixed assets (Tangible and intangible), Expenditure (Capital and Revenue), Expense, Income, Profit, Gain, Loss, Purchase, Sales, Goods, Stock, Debtor, Creditor, Voucher, Discount (Trade discount and Cash Discount)
	3. Theory Base of Accounting	Theory Base of Accounting Fundamental accounting assumptions: GAAP: Concept Business Entity, Money Measurement, Going Concern, Accounting Period, Cost Concept, Dual Aspect, Revenue Recognition, Machinating Full Disclosure, Consistency, Conservatism, Materiality and Objectivity System of Accounting. Accounting Standards: Applicability in Ind AS Goods and Services Tax (GST
	4. Basis of Accounting	Basis of Accounting: cash basis and accrual basis Characteristics and Objective.
July	**Unit-2: Accounting Process**	
	5. Origin of Transactions: Source Documents and preparation of vouchers	Recording of Business Transactions Voucher and Transactions: Source documents and Vouchers, Preparation of Vouchers
	6. Accounting Equation	Accounting Equation Approach: Meaning and Analysis.
	7. Accounting Procedures: Rules of Debit and Credit	Rules of Debit and Credit.

August	**Unit-2: Accounting Process** **8. Journal** **9. Ledger** **10. Special Purpose books I-Cash Book** **11. Special Purpose books II-Other Books** **12. Bank Reconciliation Statement**	Recording of Transactions: Books of Original Entry- Journal Format, Posting from Journal and subsidiary books, Balancing of Accounts. Cash Book: Simple, cash book with bank column and petty cashbook Purchases book Sales book Purchases return book Sales return book Note: Including trade discount, freight and cartage Expenses for simple GST calculation. Need and preparation, Bank Reconciliation Statement with Adjusted Cash Book
September and October	**13.Depreciation**	Depreciation: Concept, Features, Causes, factors Other similar terms: Depletion and Amortization Methods of Depreciation: i. Straight Line Method (SLM) ii. Written Down Value Method (WDV) Note: Excluding change of method Difference between SLM and WDV; Advantages of SLM and WDV Accounting treatment of depreciation i. Charging to asset account ii. Creating provision for depreciation/accumulated depreciation account iii. Treatment for disposal of asset
October	**14. Provisions and Reserves**	Difference Types of Reserves: i. Revenue reserve ii. Capital reserve iii. General reserve iv. Specific reserve v. Secret Reserve Difference between capital and revenue Reserve

	15.Trial Balance and Rectification of error	Trial balance and Rectification of Error Trial balance: objectives and preparation (Note: Trial balance with balance method only) Errors: types-errors of omission, commission, Principles, and compensating; their effect on Trial Balance. Detection and rectification of errors; preparation of suspense account
November	**Part B: Financial Accounting - II** **Unit 3:** **16. Financial Statements of Sole Proprietorship** **17. Adjustments in preparation of Financial Statements** **18. Accounts for incomplete Records-Single entry System**	Financial Statements Meaning, objectives and importance; Revenue and finances. Capital Receipts; Revenue and Capital Expenditure; Deferred Revenue expenditure. Trading and Profit and Loss Account: Gross Profit, Operating profit and Net profit. Preparation. Balance Sheet: need, grouping and marshalling of assets and liabilities. Preparation. Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, Abnormal loss, Goods taken for personal use/staff welfare, interest on capital and managers commission. Preparation of Trading and Profit and Loss account and Balance Sheet of a sole proprietorship with adjustments. Incomplete Records Features, reasons and limitations. Ascertainment of Profit/Loss by Statement of Affairs method. Difference between accounts from incomplete records and Statement of Affairs. Preparation of Trading, Profit and Loss account and Balance Sheet.
December	**Unit 4:** **19. Computers in Accounting**	Introduction to computer and accounting information system {AIS}: Introduction to computers (elements, capabilities, limitations of computer system) Introduction to operating software, utility Software and application software. Management Information System. Automation of accounting process: meaning Stages in automation: (a) Accounting process in a computerized environment; comparison between manual accounting process and computerized accounting process, (b) Sourcing of accounting software; kinds of software: readymade software; customized software and tailor-made software; generic

		considerations before sourcing accounting software (c) creation of account groups and hierarchy (d) generation of reports - trial balance, profit and loss account and balance sheet
December	**Project Work**	As per CBSE guidelines
January	Revision	

SUBJECT-BUSINESS STUDIES
TEXTBOOK PRESCRIBED: NCERT

MONTH	UNITS	UNIT & SUBUNIT
APRIL	Part-A: Foundation of Business Unit 1. Evolution and Fundamentals of Business History of Trade and Commerce in India: Indigenous Banking System, Rise of Intermediaries, Transport, Trading Communities: Merchant Corporation, Major Trade Centres, Major Imports and Exports, Position of Indian Sub-Continent in the World Economy	Concept Economic and non-economic activities Business Risk Objectives of Business Industry Types Commerce and Trade
APRIL – MAY	Unit 2. Forms of Business Organisation	Sole Proprietorship Joint Hindu Family Partnership Co-operative society One Person Company Private Company Vs. Limited Liability Partnership Choice of form of business organization
JULY	Unit 3. Private Public And Global Enterprises Unit4. Business Services	Private Sector Public Sector Forms of public sector enterprises Changing Role of public sector Global Enterprises. Business Services Meaning and Types Banking: Types of bank accounts Banking Services – Bank Draft, Bank Overdraft, Cash Credit E Banking – meaning, types of digital payments Insurance: Principles Types of insurance: life, health, fire and marine - concept Discuss the meaning of different types of insurance-life, health, fire, marine insurance. Postal Service - Mail, Registered Post, Parcel, Speed Post, Courier - meaning

		Understand the utility of different telecom services
AUG	Unit 5 Emerging Modes of Business Unit 6. Social responsibility of Business and Business Ethics	Emerging Modes of Business E business – concept, scope, benefits Outsourcing concepts: BPO, KPO Social responsibility of Business and Business Ethics Concept of social responsibility Case for social responsibility Responsibility towards owners, investors, consumers, employees, government and community Appreciate the role of business in environment protection. Business Ethics – Concept and elements
SEPT	Part-B Finance and Trade Unit 7 Formation of a Company.	Formation of a Company Stages in formation of company Documents prepared for formation of a Company.
OCT	Unit 8. Sources of Business Finance.	Concept of Business Finance Types of business finance Owners' funds - equity shares, preferences share, retained earnings, Global Depository receipt (GDR), American Depository Receipt (ADR) and International Depository Receipt (IDR) – concept Borrowed funds: debentures and bonds, loan from financial institution and commercial banks, public deposits, trade credit, Inter Corporate Deposits (ICD) Factors determining choice of source of fund
NOV	Unit 9. Small Scale Business and Enterprises Unit 10. Internal Trade.	-Small Scale Industry - Role Of Govt. -Small Business -Govt. Assistance. -Entrepreneurship Development Internal Trade. Wholesale Trade and Retail trade. Types of Retailing Role of Indian Chambers of Commerce Documents
DEC	Unit 11 International Business	International Business Nature and Significance. Export Procedure. Import Procedure.

		Documents. World Trade Organisation
JAN	Project Work	As per CBSE guidelines
FEB		Revision

SUBJECT: GEOGRAPHY

BOOKS: 1) Fundamentals of Physical Geography

N.C.E.R.T 2) India: Physical Environment

3) Practical Work in Geography – Part 1

MONTHS	CHAPTER	UNIT/SUBUNITS
APRIL	India – Location	Location, space relations, India's place in the world.
	Geography as a Discipline	Meaning of geography as an integrating discipline. The fields of geography and its relationship with other disciplines. The approaches to study geography
	Structure and Physiography	Introduction- The Peninsular block, The Himalaya and other peninsular mountains.
MAY	Structure and Physiography (contd.)	Physiography, The North and North-eastern mountains, The Northern Plains, The Peninsular plateau, The Coastal Plains, The islands.
	The Origin and Evolution of the Earth	The Big Bang, Planetesimal theory, Nebular Hypothesis related to the origin of the universe.
	Drainage System	Concept of river basins, watershed; the Himalayan and the Peninsular rivers
	Practical-1 Hazards and Disasters (To be tested through internal assessments in the form of project and presentation)	Maps -types; scales-types; construction of simple linear scale,
JULY	Interior of the Earth	Direct and indirect sources of information about the interior of the earth. Earthquakes—its causes and effects, define: Epicentre, Earthquake waves and its propagation, Shadow zones, Measuring the intensity of earthquakes. The interior structure of the earth. Volcanoes, its types and volcanic landform

	Distribution of seas and oceans Geomorphic Processes Practical-2	Evidence in support of continental drift and force for drifting. • Post drift studies, Convectional current theory, Mapping of the ocean floor, Ocean floor configuration, Concept of seafloor spreading, • Theory of plate tectonics and different types of plate boundaries. • Μοϖεμεντσ of Indian Plates Exogenic and endogenic processes responsible to bring changes in the configuration of the surface of the earth. Differentiate between geomorphic processes and geomorphic agents . • Factors that affect soil formation. • Define the following terms: Exfoliation, Denudation, Weathering etc. Map Scale
AUG	Landform and their Evolution Climate Practical- 3	Erosional and depositional landforms created by different agents like running water, ground water (limestone/Kast topography, glaciers &wind Factors affecting climate of the country and its effect on country's economic life; Annual cycle of four main seasons in India; Causes and problems of climate changes; Concept of Global Warming. Latitudes& longitudes
SEPT	Composition and Structure of Atmosphere	The composition of the atmosphere. Characteristics &the structure of different layers of atmosphere. Elements of weather and climate
	REVISION AND TERM1	
OCT	Solar Radiation, Heat Balance and Temperature	Differentiate between solar radiation and terrestrial radiation. Variability of insolation at the surface of the earth. The heat budget of the planet earth. Factors controlling temperature distribution. Inversion of

		temperature.
	Atmospheric Circulation and Weather Systems	Permanent pressure belts and the prevailing winds. • Explain different types of winds. • Differentiate between tropical and extra tropical cyclones
NOV	Water in the Atmosphere	Introduction – Evaporation and condensation, Dew, Frost &Fog and Mist Cloud and its types, Precipitation Types of rainfall. World distribution of rainfall
	World Climate and Climate Change (To be tested through internal assessments in the form of project and presentation)	Classify climate based on various schemes by Koeppen with the help of a mind map. Causes and effects of global warming. Climate changes.
	Water (Oceans)	Hydrological cycle, Relief of ocean floor, features (Midocean ridges, seamounts, submarine canyons, guyots, and atolls) horizontal and vertical distribution of oceanic temperature. Factors affecting the salinity of ocean waters.
	Practical - 4	Map projection- Latitude, longitude and time, typology, construction and properties of projection: Conical with one standard parallel and Mercator's projection. (Only two projections)
DEC	Movements of Ocean	Differentiate between tides and currents. Formation of sea waves Importance of tide Major Ocean currents and its effects.
	Natural Vegetation	Introduction- Types of forests Tropical evergreen forest, Tropical deciduous forest, Tropical thorn forest Montana forest, Littoral and swamp forest
	Practical-5	Topographical Maps
	Practical -6	Introduction to Remote Sensing
JAN	Biodiversity and Conservation (To be tested through internal assessments in the form of project and presentation) REVISION AND TERM2	

FEB	Maps and Project works as per CBSE guidelines.	

SUBJECT – PSYCHOLOGY
Reference book – Introduction to Psychology part I

MONTH	UNIT	TOPICS
APRIL	What is psychology?	What is psychology Popular notions about discipline of psychology Understanding mind & behaviour Evolution of psychology Branches of psychology Themes of research & application Psychology and other discipline Psychology at work Psychology in everyday life Development of psychology in India
MAY	Methods of enquiry in Psychology	Goals of psychological enquiry Nature of psychological data Some important methods –observational, experimental and correlation Survey, psychological testing Case study Analysis of data Limitations of psychological enquiry Project 1
JULY	Human development	Meaning of development Factors influencing development Context of development Overview of development stages – Infancy, childhood, challenges of adolescence, adulthood & old age
AUG	Sensory, attentional and perceptual processes	Knowing the world Nature and varieties of stimulus Sense modalities Adaptation Attentional processes Selective and sustained attention Perceptual processes The perceiver Principles of perceptual organization After images, Perceptions of space, depth, and distance Perceptual constancies Illusions, Socio cultural influences on perception
OCT	Learning	Nature of learning Paradigms of learning Classical and operant conditioning, observational, cognitive , verbal, concept, and skill learning Factors facilitating learning Transfer of learning The learner – learning styles Learning disabilities Applications of learning principles PROJECT-2

NOV	Human memory	Nature of memory, Information processing approach Levels of processing Memory systems –sensory, short term and long-term memory Knowledge representation and organization in memory as a constructive process Nature and causes of forgetting Enhancing memory
DEC	Language and thought	Building blocks of thinking Nature and Inter relationship Stages of Cognitive Development Language and Language use Nature of thinking Thought and language Development of language & language use Reasoning Problem solving Decision making Nature and process of creative thinking Developing creative thinking
JAN	Motivation & emotions	Nature of motivation biological motives Social and psychological motives – achievements, affiliation and power Maslow's hierarchy of needs, Nature of emotions Physiological, cognitive, and cultural bases of emotions Expression of emotions Enhancing positive emotions e.g., happiness optimism Managing negative emotions e.g., anger fear

SUBJECT: ECONOMICS

Books Prescribed: **1. Introduction to statistics N**.C.E.R.T
2. Introductory Microeconomics-N.C.E.R. T
3. Elementary statistics- V. K. Ohri & T. R. Jain
4. Introductory Microeconomics- V. K. Ohri & T. R. Jain

MONTH	CHAPTER\UNIT	SUBUNIT\TOPIC
APRIL	**1**	**Introduction. (Statistics)** What is Economics? Meaning and importance, functions and importance of statistics in Economics.
	2a	**Collection Organization and Presentation of data Collection of data –** Sources of data- Primary and Secondary; how basic data is collected with concepts of sampling; methods of collecting data; some important sources of secondary data: Census of India and National Sample Survey Organization
MAY	**2b**	**Organization of Data** – Meaning and types of variables; Frequency Distribution. **Presentation of Data**. Tabular Presentation and diagrammatic Presentation of Data: **i.** **Geometric Form** (bar diagrams and pie diagrams) **ii.** **Frequency diagram** (histogram, polygon and Ogive) **iii.** **Arithmetic line graphs** (time series graph)
	4	**Introductory (Microeconomics)** Meaning of microeconomics and macroeconomics; positive and normative economics. Definition of an economy. Central problems of an economy: what, how and for whom to produce; concepts of production possibility frontier and opportunity cost.
JULY	**3.a**	**Measures of Central Tendency** Arithmetic Mean, Median and Mode

AUGUST	**5**	**Consumer's Equilibrium and Demand** Consumer's equilibrium - meaning of utility, marginal utility, law of diminishing marginal utility, conditions of consumer's equilibrium using marginal utility analysis Indifference curve analysis of consumer's equilibrium-the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve. Price elasticity of demand - factors affecting price elasticity of demand; measurement of price elasticity of demand – percentage-change method and total expenditure Method.
SEP	**Revision for terminal examination**	
OCT	**6**	**Producer Behavior and Supply** Meaning of Production Function – Short-Run and Long-Run. Total Product, Average Product and Marginal Product. Returns to a Factor: Law of Variable Proportions Cost: Short run costs - total cost, total fixed cost, total variable cost; average cost; average fixed cost, average variable cost and marginal cost-meaning and their relationships. Revenue - total, average and marginal revenue - meaning and their relationship. Producer's equilibrium - meaning and its conditions in terms of marginal revenue - marginal cost. Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price elasticity of supply; measurement of price elasticity of supply - percentage-change method.

NOV	**7**	**Perfect Competition – Price Determination with simple applications.** Perfect competition - Features; Determination of market equilibrium and effects of shifts in demand and supply. (Short Run Only) Simple Applications of Demand and Supply: Price ceiling, Price floor.
DEC	**3.b**	**Correlation** – meaning and properties, scatter diagram; Measures of correlation - Karl Pearson's method (two variables ungrouped data), Spearman's rank correlation (Non-Repeated and Repeated Ranks).
JAN	**3.c**	**Introduction to Index Numbers** - meaning, types - Wholesale price index, Consumer price index and Index of Industrial production, uses of index numbers; Inflation and Index numbers.
FEB	**Revision for Annual Exam**	

Subject: History

Textbook: Themes in Indian History -Part 1

Themes in Indian History -Part 2

Themes in Indian History –Part3

Month	Unit No/Chapter No	Topic & Subheadings
April	1.Writing & City life	• Mesopotamia & its geography • The significance of Urbanism • Movement of goods into cities • The development of writing • The system of writing • Literacy. the uses of Writing • Urbanisation in Southern Mesopotamia -Temples & Kings • Life in the city • Trading town in a Pastoral zone • Cities in Mesopotamian culture • The Legacy of Writing
May	3.An Empire across three continents	• The Early Empire • The third century crisis • Gender, Literacy, Culture • Economic expansion • Controlling Workers • Social Hierarchies • The late Antiquity
July	5.Nomadic Empires	• Introduction • Social & Political background • The career of Genghis Khan • The Mongols after Genghis Khan • Social & Political and Military Organisation • Conclusions
Aug	6.The three orders	• An introduction to Feudalism • France & England • The Three Orders • The Second Order • The Manorial Estates • The Knights • The First Order • Monks • The Church & the Society. • The Third Order • England • Factors affecting Social & Economic relations • The Environment

		• Factors affecting Social & Economic relations • The Environment • Land use • New Agricultural Technology • A fourth Order • Cathedral Towns • The crisis of 14th century • Social Unrest • Political changes
Sep	Revision & Term 1	
Oct	7.Changing cultural traditions	• The revival of Italian cities • Universities & Humanism • The Humanist view of History • Science & Philosophy • Artists & Realism • Architecture • The First Printed books • A new concept of Human beings • The Aspirations of Women.
Nov	10.Displacing Indigenous people	• European Imperialism • The North America • Australia
Dec	11.Paths to Modernisation	• Introduction • Japan • China • The story of Taiwan • The story of Korea • Two roads to modernisation
Jan	Paths to Modernisation {Cont.}	including Map work of the related themes
Feb	REVISION & Annual Exam	

SUBJECT: COMPUTER SCIENCE

BOOKS PRESCRIBED: N.C.E.R.T

Month	**Unit No/Chapter No**	**Topic & Subheadings**
April	Unit II: Computational Thinking and Programming - I	• Introduction to problem solving: Steps for problem solving (analysing the problem, developing an algorithm, coding, testing and debugging). representation of algorithms using flow chart and pseudo code, decomposition • Familiarization with the basics of Python programming: Introduction to Python, features of Python, executing a simple "hello world" program, execution modes: interactive mode and script mode, Python character set, Python tokens (keyword, identifier, literal, operator, punctuator), variables, concept of l-value and R-value, use of comments • Knowledge of data types: number (integer, floating point, complex), Boolean, sequence (string, list, tuple), none, mapping (dictionary), mutable and immutable data types Operators: arithmetic operators, relational operators, logical operators, assignment operator, augmented assignment operators, identity operators (is, is not), membership operators (in, not in) • Expressions, statement, type conversion & input/output: precedence of operators, expression, evaluation of expression, python statement, type conversion (explicit & implicit conversion), accepting data as input from the console and displaying output Errors: syntax errors, logical errors, runtime errors
May	Unit II: Computational Thinking and Programming - I	• Flow of control: introduction, use of indentation, sequential flow, conditional and iterative flow control • Conditional statements: if, if-else, if-elf-else; simple programs: e.g.: absolute value, sort 3 numbers, divisibility. • Iterative statements: for loop, range function, while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number etc.

July	Unit II: Computational Thinking and Programming - I	• Strings: introduction, indexing, string operations (concatenation, repetition, membership & slicing), traversing a string using loops, built-in functions: Len(), capitalize(), title(), lower(), upper(), count(), find(), index(), ends with(), starts with(), isalnum(), is alpha(), is digit(), is lower(), is upper(), is space(), strip(), strip(), strip(), replace(), join(), partition(), split(). • Lists: introduction, indexing, list operations (concatenation, repetition, membership & slicing), traversing a list using loops, built-in functions: Len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list
Aug	Unit II: Computational Thinking and Programming - I	• 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. • 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(), from keys(), copy(), pop(), pop item(), set default(), 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.
Sept	TERM-1	
Oct	Unit II: Computational Thinking and Programming - I	• Introduction to Python modules: Importing module using ‘import ’ and using from statement, importing math module (pi, e, sqrt(), ceil(), floor(), pow(), fabs(), sin(), cos(), tan()); random module (random(), ran dint(), Rand range()), statistics module (mean(),

		median(), mode()).
Nov	Unit 1: Introduction of Computer System	• Basic Computer Organisation: Introduction to computer system, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (Bit, Byte, KB, MB, GB, TB, PB) • Types of software: system software (operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler & interpreter), application software. Operating system (OS): functions of operating system, OS user interface • Boolean logic: NOT, AND, OR, NAND, NOR XOR, truth table, De Morgan's laws and logic circuits • Number system: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems. • Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32).
Dec	Unit III: Society, Law and Ethics	• Digital Footprints • Digital society and Netizen: net etiquettes, communication etiquettes, social media etiquettes • Data protection: Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache) • Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, preventing cyber crime • Cyber safety: safely browsing the web, identity protection, confidentiality, cyber trolls and bullying. • Safely accessing web sites: malware, viruses, trojans, adware • E-waste management: proper disposal of used electronic gadgets • Indian Information Technology Act (IT Act) • Technology & Society: Gender and disability issues while teaching and using computers
Jan	Project	Project in Computer science(submission) Revision of the syllabus and lab practice
Feb	TERM 2	

SUBJECT: PAINTING (049) SYLLABUS
BOOK - FULLMARKS HISTORY OF INDIAN ART

MONTH & UNITS	THEORY (ALL TOPICS)	PRACTICAL
APRIL - Unit – I	Six Limbs of Indian Painting & Fundamentals of Visual Arts (Elements and Principles)	Composition (national, religious, cultural, historical and social events)
MAY - Unit – I	Introduction & Prehistori Rock Paintings c and Art of Indus Valley	Composition (national, religious, cultural, historical and social events)
JULY - UNIT I	Prehistoric Rock Paintings - Introduction Study of the Prehistoric Rock-Paintings	Still life, Drawings from Nature
AUGUST – UNIT I	Introduction & Prehistoric Rock Paintings and Art of Indus Valley: 2. Art of Indus Valley - Introduction 3. Study of the Artefacts of this period	Elements and Principles of composition
SEP-UNIT II	Buddhist, Jain and Hindu Art: 1. The Art during Mauryan, Shunga, Kushana and Gupta Periods. 2. The Art of Ajanta Caves	Object and drawing composition and drawing
OCT – UNIT III	Temple Sculptures, Bronzes and Artistic Aspects of Indo-Islamic Architecture: 1. Artistic Aspects of Indian Temple Sculptures - Introduction 2. Study of Temple-Sculptures	Illustration, still life

NOVEMBER - UNIT III	Temple Sculptures, Bronzes and Artistic Aspects of Indo-Islamic Architecture: 1. Indian Bronze Sculptures - Introduction 2. The Lost-Wax Process (Method of Casting Metal: Solid and Hollow)	Nature and objects study
DEC - UNIT III	Temple Sculptures, Bronzes and Artistic Aspects of Indo-Islamic Architecture: 1. Study of South Indian Bronze 2. Some Artistic Aspects of Indo-Islamic Architecture	Nature study (outdoor), Portfolio Assessment
JAN	Revision of entire syllabus	Portfolio Submission

Syllabus Class-XI

Subject: Applied Mathematics (code-241)

Month	Unit No./Chapter. No	Topic & Subtopic
April	Unit- 1 Numbers & Quantification	**1. Numbers & Quantification** • Binary Numbers • Indices, Logarithm and Antilogarithm • Laws and properties of logarithms • Simple applications of logarithm and antilogarithm
May	Numerical Applications Unit-2 Algebra	2 **Numerical Applications** • Averages • Clock • Calendar • Time, Work and Distance • Mensuration • Seating arrangement **1. Sets** • Introduction to sets – definition • Representation of sets • Types of sets and their notations • Subsets • Intervals • Venn diagram • Operations on sets **2. Relations** • Ordered pairs Cartesian product of two sets • Relations
July	Unit-2 Algebra(cont.)	**3. Sequences and Series** • Sequences, Series • Arithmetic progression • Geometric progression • Applications of AP and GP **4. Permutations and Combinations** • Factorial • Fundamental Principle of Counting • Permutations • Combinations
August	Unit -3 Mathematical and Reasoning Unit -4 Calculus	**1. Logical reasoning** • Functions • Domain and Range of a function • Types of functions • Graphical representation of functions

		• Concept of limits and continuity of a function • Instantaneous rates of change • Differentiation as a process of finding derivative • Derivatives of algebraic functions using Chain rule
Sept.	Unit -5 Probability	• Introduction • Random experiment and sample space • Event • Conditional Probability • Total Probability • Bayes' Theorem
	First Term Exam.	Revision
Oct.	Unit -6 Descriptive Statistics	• Data interpretation Measure of Dispersion, Skewness and Kurtosis • Percentile rank and quartile rank • Correlation
Nov.	Unit -7 Basics of Financial Mathematics	• Interest and interest rate • Accumulation with simple and compound interest • Simple and compound interest rates with equivalency • Effective rate of interest • Present value, net present value and future value • Annuities, calculating value of regular annuity • Simple applications of regular annuities (up to 3 period) • Tax, calculation of tax and simple applications of tax calculation in Goods and service tax, Income Tax • Bills, tariff rates, fixed charge, surcharge, service charge • Calculation and interpretation of electricity bill, water supply bill and other supply bills
Dec.	Unit -8 Coordinate Geometry	• Straight Line • Circles • Parabola
Jan.	Practical: Use of spread sheet	Calculating average, interest (simple and compound), creating pictographs, drawing pie chart, bar graphs, calculating central tendency; visualizing graphs (straight line, circles and parabola using real-time data)
Feb.	Final Examination	Revision & Practical

PHYSICAL EDUCATION

MONTH	UNIT	TOPICS
APRIL	**UNIT I : CHANGING TRENDS & CAREER IN PHYSICAL EDUCATION**	l Meaning & Definition of Physical Education l Aims & Objectives of Physical Education l Career Options in Physical Education Changing trends in sports- Playing surface, wearable gears and sports equipments, technological advancement l Khelo-India & Fit India Program
	UNIT II : OLYMPIC VALUE EDUCATION	l Ancient & Modren Olympics l Olympic concept & Olympic values (Excellence,Friendship & Respect) Olympics Symbols, Motto, Flag, Oath & Anthem Symbols, Ideals, Objectives & Values of Olympism l International Olympic Committee l Indian Olympic Association
MAY	**UNIT III : YOGA**	l Meaning & Importance of Yoga l Elements of Yoga l Introduction – to Ashtanga Yoga Introduction to Yogic Kriyas (Shat Karma) Pranayam & its types l Active Lifestyle and stress management through Yoga

JULY	**UNIT IV : PHYSICAL EDUCATION & SPORTS FOR CWSN (CHILDREN WITH** **SPECIAL NEEDS- DIVYANG)**	l Aims & Objectives of Adaptive Physical Education l concept of Disability and Disorder l Types of Disability, its cause and nature (Intellectual disabilities, Physical disabilities & Learning Disabilities l Role of Various Professionals for Children With Special Needs (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & Special Educator Disability Etiquette
AUGUST	**UNIT V : PHYSICAL FITNESS HEALTH & WELLNESS**	l Meaning & Importance of Physical Fitness, Health &Wellness l Components & Dimensions of Physical Fitness, Health & Wellness l Traditional Sports and Regional Games for promoting wellness Leadership through Physical Activities & sports Inroduction to first Aid-Price
OCTOBER	**UNIT VI: TEST, MEASUREMENT & EVALUATION**	l Concept of Test, Measurement & Evaluation in Physical Education l Classification of Test in Physical Education & Sports Test administration guidelines in Physical Education l Calculation of BMI & Waist - Hip Ratio, Skin Fold Ratio l Somato Types (Endomorphy, Mesomorphy & Ectomorphy)

		l Measurement of Health Related Fitness
NOVEMBER	**UNIT VII: FUNDAMENTALS OF ANATOMY, PHYSIOLOGY & KINESIOLOGY IN SPORTS** **UNIT VIII: FUNDSMENTALS OF KINESLOGY AND BIOMECHANICS IN SPORT**	l Definition and Importance of Anatomy, Physiology in exercises & sports l Functions of Skeleton System, Classification of Bones & Types of Joints l Functions & Structure of Circulatory System & HEART Functions & Structure of Respiratary System. Properties & Functions of Muscles *Definition Importance of Kinesiology & Biomechanics in Sports * Principles of Biomechanics * Types of Body movement – Flexion, Extension, Abduction, Adduction, Rotation, Circumduction, Supination & Pronation * Kinetic Kinematic in Sports * Axis and Planes – Concept & its Application in body movements

DECEMBER	**UNIT IX : PSYCHOLOGY & SPORTS**	l Definition & Importance of Psychology in Physical Education & Sports l Team Cohesion and sports l Developmental Characteristics at Different Stages of Development l Adolescent Problems & their Management Introduction to Psychological Attributes, Attention, Resilience, Mental toughness
JANUARY	**UNIT X : TRAINING AND DOPING IN SPORTS**	l Concept AND Principles of Sports Training l Training Load : Over Load, Adaptation And Recovery l Warming up & Limbering down l Skill, Technique & Style l Concept of Doping and its disadvantage l Concept of Skill, Technique, Tactics & Strategies

POLITICAL SCIENCE

BOOK-1: - INDIAN CONSTITUTION AT WORK

BOOK-2: - POLITICAL THEORY

MONTH	Chapter No: & Name	Subtopics
APRIL	Chapter 5 – 5 Legislature (BOOK-1- - INDIAN CONSTITUTION AT WORK)	Topics to be focused on: Why do we need a parliament? b) Why do we need two houses of parliament? · Rajya Sabha · Lok Sabha c) What does the parliament do? · Powers of Rajya Sabha· Special Powers of Rajya Sabha d) How does the parliament make laws? e) How does the parliament control the executive? f) What do the committees of parliament do? g) How does the parliament regulate itself?
MAY	Chapter 1 - Political Theory: An Introduction (BOOK-2- POLITICAL THEORY)	Topics to be focused on: a) What is politics? b) What do we study in political theory? c) Putting Political theory into practice d) Why should we study political theory?
MAY	Chapter-1- Constitution: Why and How? (BOOK-1- - INDIAN CONSTITUTION AT WORK)	Topics to be Focused: Why do we need a constitution? ● Constitution allows coordination and assurance ● Specification of decision-making powers ● Limitations on the powers of government ● Aspirations and goals of a society ● Fundamental identity of a people The authority of a constitution ● Mode of promulgation ● The substantive provisions of a constitution ● Balanced institutional design

MAY	Chapter 2 – Freedom (BOOK-2- POLITICAL THEORY)	● The Ideal of Freedom ● The sources of Constraints-Why do we need constraints? ● The Harm Principle ● Negative and Positive Liberty
JULY	Chapter 3- Election and Representation (BOOK-1- - INDIAN CONSTITUTION AT WORK)	(i) Topics to be focused: a) Elections and democracy b) Election system in India · First Past the Post System · Proportional Representation c) Why did India adopt the FPTP system? d) Reservation of constituencies e) Free and fair elections · Universal franchise and right to contest · Independent Election Commission f) Electoral Reforms.
JULY	Chapter-3- Equality (BOOK-2- POLITICAL THEORY)	Topics to be focused on: a) Why does equality matter? ● Equality of opportunities ● Natural and Social Inequalities b) Three dimensions of equality c) Feminism, Socialism d) How can we promote equality?
JULY	Chapter-4- Executive (BOOK-1-INDIAN CONSTITUTION AT WORK)	a) What is an executive? b) What are the different types of executives? c) Parliamentary executive in India · Power and position of President · Discretionary Powers of the President d) Prime Minister and Council of Ministers e) Permanent Executive: Bureaucracy
AUGUST	Chapter 2 - Rights in the Indian Constitution	The importance of rights · Bill of Rights b) Fundamental rights in the Indian Constitution · Right to Equality · Right to Freedom · Right against Exploitation · Right

AUGUST	(BOOK-1- INDIAN CONSTITUTION AT WORK)	to Freedom of Religion · Cultural and Educational Rights · Right to Constitutional Remedies c) Directive principles of state policy
AUGUST	Chapter 4- Social Justice (BOOK-2- POLITICAL THEORY)	Topics to be focused: What is Justice? ● Equal Treatment for Equals ● Proportionate Justice ● Recognition of Special Needs b) Just distribution c) John Rawls's Theory of Justice d) Pursuing Social Justice e) Free Markets versus State Intervention
SEPTEMBER	Chapter-6- Judiciary (BOOK-1- INDIAN CONSTITUTION AT WORK)	Topics to be focused: a) Why do we need an independent judiciary? · Independence of Judiciary · Appointment of Judges · Removal of Judges b) Structure of the Judiciary c) Jurisdiction of supreme Court · Original Jurisdiction · Writ Jurisdiction · Appellate Jurisdiction · Advisory Jurisdiction d) Judicial Activism e) Judiciary and Rights f) Judiciary and Parliament
SEPTEMBER	Chapter-5- Rights (BOOK-2- POLITICAL THEORY)	Topics to be focused on a) What are Rights? b) Where do rights come from? c) Legal rights and the state d) Kinds of rights e) Rights and responsibilities
	Chapter-7- Federalism	Topics to be focused:

OCTOBER	(BOOK-1- INDIAN CONSTITUTION AT WORK) Chapter-7- Federalism (BOOK-1- INDIAN CONSTITUTION AT WORK)	a) What is Federalism? b) Federalism in the Indian Constitution · Division of Powers c) Federalism with a strong central government d) Conflicts in India's federal system · Centre-State Relations · Demands for Autonomy · Role of Governors and President's Rule · Demands for New States · Interstate Conflicts e) Special provisions · Jammu and Kashmir
OCTOBER	Chapter- 6- Citizenship (BOOK-2- POLITICAL THEORY)	Topics to be focused: a) Introduction b) Full and equal membership c) Equal Rights d) Citizen and Nation e) Universal Citizenship f) Global Citizenship
NOVEMBER	Chapter-8- Local Governments (BOOK-1- INDIAN CONSTITUTION AT WORK)	Topics to be focused: a) Why local governments? b) Growth of Local Government in India · Local Governments in Independent India c) 73rd and 74th amendments d) Three-Tier Structure
NOVEMBER	Chapter-7- Nationalism (BOOK-2- POLITICAL THEORY)	Topics to be focused: - Introducing Nationalism b) Nations and Nationalism ● Shared Beliefs ● History ● Shared National Identity c) National self-determination

		d) Nationalism and Pluralism
DECEMBER	Chapter-9- Constitution as a Living Document (BOOK-1- INDIAN CONSTITUTION AT WORK)	Topics to be focused: - Are constitutions static? b) How to amend the constitution? c) Why have there been so many amendments? d) Contents of amendments made so far · Differing Interpretations · Amendments through Political Consensus · Controversial Amendments
DECEMBER	Chapter-8- Secularism (BOOK-2- POLITICAL THEORY)	What is Secularism? ● Inter-religious Domination ● Intra-religious Domination b) Secular State c) The Western model of secularism The Indian model of secularism Criticisms of Indian Secularism ● Western Import ● Minoritism ● Interventionist ● Vote Bank Politics
JANUARY	Chapter-10- The Philosophy of the Constitution (BOOK-1- INDIAN CONSTITUTION AT WORK)	a) What is meant by the philosophy of the Constitution? · Constitution as Means of Democratic Transformation b) Why do we need to go back to the Constituent Assembly? c) What is the political philosophy of our constitution? · Individual freedom · Social Justice · Respect for diversity and minority rights · Secularism
JANUARY	BOOKS 1 & 2	COMPLETE REVISION OF THE SYLLABUS