

**VISHWA BHARATI PUBLIC SCHOOL, GREATER NOIDA**  
**SYLLABUS CLASS :XII (2023-24)**

**SUBJECT- ENGLISH**

**Textbook Prescribed-**

1. English Reader- Flamingo
2. Supplementary Reader- Vistas

<b>MONTH</b>	<b>Chapter /BOOK /MAIN SKILL</b>	<b>UNIT/TOPIC</b>
<b>APRIL</b>	FLAMINGO  VISTAS  WRITING SKILL	<ul style="list-style-type: none"><li>● The Last Lesson By Alphonse Daudet</li><li>● My mother at sixty six(poem)</li> <li>● The Third Level</li> <li>● Letter to editor</li></ul>
<b>MAY</b>	FLAMINGO  VISTAS  WRITING SKILLS	<ul style="list-style-type: none"><li>● Lost Spring</li><li>● Deep Water</li> <li>● Journey to the End of the Earth.</li> <li>● Notice writing</li></ul>
<b>JULY</b>	FLAMINGO  VISTAS  WRITING SKILLS	<ul style="list-style-type: none"><li>● Keeping Quiet(poem)</li><li>● The Rattrap</li> <li>● The Enemy</li> <li>● Invitation writing/Replies Formal invitation, informal invitation</li></ul>

<b>AUGUST</b>	<p>FLAMINGO VISTAS</p> <p>VISTAS</p> <p>WRITING SKILLS</p>	<ul style="list-style-type: none"> <li>● A Thing of Beauty(poem)</li> <li>● Indigo</li> <li>● Poets and Pancakes</li>   <li>● On the Face of it</li>   <li>● Job Application</li>   <li>● Article writing</li> </ul>
<b>SEP</b>	<p>WRITING SKILLS</p>	<ul style="list-style-type: none"> <li>● Report Writing</li> <li>● School magazine and Newspaper</li> </ul> <p><b>Revision for First Term Exams</b></p>
<b>OCT</b>	<p>FLAMINGO</p> <p>VISTAS WRITING SKILLS</p>	<ul style="list-style-type: none"> <li>● The Roadside stand(poem)</li>   <li>● Memories of Childhood</li>   <li>● Revision writing tasks</li> </ul>
<b>NOV</b>	<p>FLAMINGO</p> <p>WRITING SKILLS</p>	<ul style="list-style-type: none"> <li>● The interview</li> <li>● Aunt Jennifer's Tigers(poem)</li> <li>● Going places</li>   <li>● Revision tasks- Notice, letter, article, report and invitation writing.</li> </ul>

**SUBJECT: PHYSICS**

Textbook Prescribed- NCERT

Month	Unit	Chapter	Topics
April 2023	Unit-1 Electrostatics	<b>Chapter-1:</b> Electric Charges and Fields	Electric charges, Conservation of charge, Coulomb's law-force between two- point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).
		<b>Chapter -2:</b> Electrostatic Potential and Capacitance	Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor (no derivation, formulae only).
May 2023	Unit-II Current Electricity	<b>Chapter-3:</b> Current Electricity	Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, temperature dependence of resistance, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge
	Unit -III Magnetic Effects of Current and	<b>Chapter-4:</b> Moving Charges and Magnetism	Concept of magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight solenoid (only qualitative treatment), force on a moving charge in uniform magnetic and electric

	Magnetism		fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; Current loop as a magnetic dipole and its magnetic dipole moment, moving coil galvanometer- its current sensitivity and conversion to ammeter and voltmeter
<b>July 2023</b>	<b>Unit -III</b> Magnetic Effects of Current and Magnetism	<b>Chapter-5:</b> Magnetism and Matter	Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines. Magnetic properties of materials- Para-, dia- and ferro -magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.
	<b>Unit-IV</b> Electromagnetic Induction and Alternating Currents	<b>Chapter-6:</b> Electromagnetic Induction	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.
		<b>Chapter-7:</b> Alternating Current	Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer
	<b>Unit – V</b> Electromagnetic waves	<b>Chapter-8:</b> Electromagnetic Waves	Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.
<b>Aug. 2023</b>	<b>Unit – VI</b> Optics	<b>Chapter-9:</b> Ray Optics and Optical Instruments	Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibers, refraction at spherical surfaces, lenses, thin lens formula, lens maker's formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism. Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.

Sept. 2023	<b>Revision for First Term Exam.</b>		
<b>Oct. 2023</b>	<b>Unit – VI</b> Optics	<b>Chapter–10:</b> Wave Optics	Wave front and Huygen’s principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen’s principle. Interference, Young's double slit experiment and expression for fringe width (No derivation final expression only), coherent sources and sustained interference of light, diffraction due to a single slit, width of central maxima (qualitative treatment only)
	<b>Unit – VII</b> Dual Nature of Radiation and Matter	<b>Chapter–11:</b> Dual Nature of Radiation and Matter	Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation.
<b>Nov. 2023</b>	<b>Unit VIII</b> Atoms and Nuclei	<b>Chapter–12:</b> Atoms	Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model of hydrogen atom, Expression for radius of nth possible orbit, velocity and energy of electron in nth orbit, hydrogen line spectra (qualitative treatment only).
		<b>Chapter–13:</b> Nuclei	Composition and size of nucleus, nuclear force Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion.
	<b>Unit-IX</b> Electronic Devices	<b>Chapter–14:</b> Semiconductor Electronics: Materials, Devices and Simple Circuits	Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier

**SUBJECT : MATHS****TEXT BOOK PRESCRIBED: NCERT**

<b>MONT H</b>	<b>CHAPTER</b>	<b>SUB TOPIC</b>
<b>APRIL</b>	<b>Chapter- 3 Matrices</b>  <b>Chapter- 4 Determinants</b>  <b>Chapter – 1 Relations and Functions</b>	<p>Concept ,order equality ,types of matrices, transpose, symmetric and skew symmetric matrices,operation on matrices, non commutativity of multiplication of matrices.</p> <p>Determinant of a square matrix (upto order 3). , minors , cofactors and applications of determinants in finding the area of triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of equations in two or three variables (having unique solution) using inverse of a matrix.</p> <p>Types of relations, reflexive ,symmetric , transitive and equivalence relations. One to One and onto functions, composite functions .</p>
<b>MAY</b>	<b>Chapter -2 Inverse Trigonometric functions</b>  <b>Chapter- 5 Continuity and Differentiability</b>	<p>Definition, range , domain, principal value branches. Graphs of inverse trigonometric functions.</p> <p>Continuity and differentiability , derivative of composite functions, chain rule, derivatives of inverse trigonometric functions, derivative of implicit function, derivative of exponential and logarithmic functions, logarithmic differentiation. Derivative of functions expressed in parametric forms. Second order derivative. Rolles and Lagranges theorems (without proof).</p>
<b>JULY</b>	<b>Chapter – 6 Applications of Derivatives</b>	<p>Applications of derivatives ; rate of change , increasing / decreasing functions, maxima and minima (first derivative and second derivative test). Simple problems of maxima and minima</p>

<p><b>JULY</b></p>	<p><b>Chapter-7 Integrals</b></p>	<p>Integration as inverse process of differentiation. Integration of variety of functions by substitution , by partial fractions and by parts, only simple integrals of the type</p> $\int \frac{dx}{\sqrt{ax^2+bx+c}}, \int \frac{dx}{ax^2+bx+c}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2-x^2}}$ $\int \frac{dx}{x^2 \pm a^2}, \int \frac{(px+q) dx}{ax^2+bx+c}$ $\int (px+q) dx, \int \sqrt{a^2 \pm x^2} dx \text{ and } \int \sqrt{x^2 - a^2} dx$ $\int \frac{dx}{\sqrt{ax^2+bx+c}}$ <p>to be evaluated. Definite integrals as limit of sum. Fundamental theorem of calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals</p>
<p><b>AUG</b></p>	<p><b>Chapter- 8 Applications of Integrals</b></p> <p><b>Chapter- 9 Differential Equations</b></p>	<p>Applications in finding the area under simple curves, especially lines, arcs of circles/ellipses (in standard forms only), area between the two above said curves.</p> <p>Definition , order and degree, general and particular solutions of a differential equation. Formation of a differential equation whose general solution is given. Solution of differential equations by method of separation of variables, homogeneous differential equations of first order and first degree. solutions of linear differential equation of the type: <math>\frac{dy}{dx} + p(x)y = q(x)</math>, where <math>p(x)</math> and <math>q(x)</math>, <math>dx</math> are functions of <math>x</math> .</p>
<p><b>SEP FIRST TERM TEST</b></p>		
<p><b>OCT</b></p>	<p><b>Chapter 10 Vectors :</b></p> <p><b>Chapter- 11 Three -dimensional Geometry :</b></p>	<p>Vectors and scalars , magnitude and direction of a vector. Direction cosines /ratios of vectors. Types of vectors ( equal , unit , zero , parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors , multiplication of a vector by a scalar, p.v of a point dividing a line segment in a given ratio. Scalar (dot) product of vectors, projection of a vector on a line . Vector (cross) product of vectors.</p> <p>Direction cosines /ratios of a line joining two points. Cartesian and vector equation of a line . Coplanar and skew lines , shortest distance between two lines.</p>



**SUBJECT : APPLIED MATHEMATICS**

**Prescribed Book:**

**Applied Maths XII ( M L AGGARWAL and NEERAJ RAJ JAIN)**

<b>MONTH</b>	<b>CHAPTER</b>	<b>SUB TOPIC</b>
<b>APRIL</b>	<b>Unit II Algebra</b>  <b>Matrices and Determinants</b>	<ul style="list-style-type: none"><li>• Concept , order, equality ,types of matrices, transpose, Symmetric and Skew symmetric matrices , Algebra of</li><li>• Matrices (Operation on matrices) , Addition , Subtraction and Multiplication of Matrices.</li><li>• Determinant of a square matrix (up to order 3). Properties of Determinants, Applications of determinants in finding the area of triangle , Minors, Cofactors Adjoint and Inverse of a Matrix , Invertible matrices. and Adjoint and inverse of a square matrix. Consistency, Inconsistency and Solutions of system of linear equations by Determinants (Homogeneous and Non – Homogeneous), Solving system of equations in two or three variables (having unique solution) using Cramer’s Rule and Matrix Method with their Applications.</li></ul>
<b>MAY</b>	<b>Unit I</b>  <b>Numbers, Quantification and Numerical Applications</b>  <b>Unit IV Probability :</b>	<ul style="list-style-type: none"><li>• Modulo Arithmetic</li><li>• Congruence Modulo</li><li>• Alligation and Mixture</li><li>• Numerical problems on Boats &amp; Streams (upstream and downstream) , Pipes &amp; cistern, Races and Games</li><li>• Numerical inequalities</li><li>• Random variable and its probability distribution Mathematical Expectation (mean)</li><li>• Variance and Standard deviation of random variable.</li><li>• Binomial Distribution.</li><li>• Poisson Distribution</li><li>• Normal Distribution</li></ul>
<b>JULY</b>	<b>Unit III Calculus Applications of</b>	<ul style="list-style-type: none"><li>• Introduction and recall of Derivative of Functions.</li><li>• Higher Order Derivatives</li></ul>

	<p><b>Derivatives</b></p> <p><b>Integrals</b></p>	<ul style="list-style-type: none"> <li>• Differentiation of parametric functions and implicit functions</li> <li>• Application of Derivatives</li> <li>• Marginal cost and Marginal Revenue using derivatives.</li> <li>• Increasing and Decreasing functions</li> <li>• Maxima and minima</li> <li>• Integration as inverse process of differentiation.</li> <li>• Integration of variety of functions by Substitution , Partial fraction and Integration by Parts .</li> <li>• Definite Integrals as area under the curve</li> <li>• Application of Integration ( Consumer Surplus and Producer Surplus )</li> </ul>
<b>AUGUST</b>	<b>Unit III (Contd.) Differential Equations</b>	<ul style="list-style-type: none"> <li>• Differential equation (definition, order, degree)</li> <li>• Formulating &amp; Solving linear differential equation</li> <li>• Application of Differential equation (Growth and Decay Model)</li> </ul>
<b>SEP</b>	<b>FIRST TERM TEST</b>	
<b>OCT</b>	<p><b>Unit V Inferential Statistics</b></p> <p><b>Unit VI Time based data</b></p>	<ul style="list-style-type: none"> <li>• Population &amp; Sample</li> <li>• Parameter, Statistic and Statistical Inferences</li> <li>• t - Test (one sample t-test and two independent group t test)</li> <li>• Time Series</li> <li>• Components of Time Series</li> <li>• Time series analysis for univariate data</li> <li>• Secular Trend</li> <li>• Methods of Measuring trend (Average and Least Square Method)</li> </ul>



## **SUBJECT - CHEMISTRY**

### **Text books prescribed:**

1. NCERT Text Book Part I & II
2. NCERT Lab manual of Chemistry Class: XII

<b>MONTH</b>	<b>CHAPTER</b>	<b>TOPICS</b>
April	Unit 6: Haloalkanes & Haloarenes  Practical	Haloalkanes: nomenclature, nature of C-X bond, physical and chemical properties, optical rotation mechanism of substitution reactions. Haloarenes: nature of C-X bond, directive influence of halogens for monosubstituted compounds only, uses and environmental effects of di, tri, tetrachloromethane, iodoform and DDT  Redox Titrations
May	Unit 7: Alcohols, Phenols and Ethers  Unit 8: Aldehydes, Ketones & Carboxylic Acids  Practical	Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophillic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses Aldehydes & ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, reactivity of alpha hydrogen in aldehydes, uses Carboxylic acids: Nomenclature, Acidic nature, methods of preparation, physical and chemical properties, uses.  Chromatography, Preparation of sols ,Crystallization
July	Unit 9: Organic Compounds Containing Nitrogen  Unit 10: Biomolecules  Practical	Amines and diazonium salts: Nomenclature, basic nature, methods of preparation, physical and chemical properties, uses. Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates. Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary, tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes. Hormones - Elementary idea excluding structure. Vitamins - Classification and functions. Nucleic Acids: DNA and RNA.  Salt Analysis
Aug	Unit 1: Solutions	Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions,

	Unit 2: Electrochemistry	Raoult's law, colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor. Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion
	Practical	Detection of functional groups To test the presence of carbohydrates, fats and proteins in the given samples. Investigatory Project
<b>Sept</b>		<b>REVISION &amp; TERM-1 EXAMS</b>
Oct	Unit 3: Chemical Kinetics  Unit 4: d & f – Block Elements	Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation. General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$ . Lanthanoids - Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences. Actinoids - Electronic configuration, oxidation states and comparison with lanthanoids.
	Practical	Effect of Concentration on rate of reaction. Effect of Concentration on EMF of the Cell
Nov	Unit 5: Coordination Compounds	Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).

**INVESTIGATORY PROJECT: One investigatory project has to be done by each student independently.**

**SUBJECT : BIOLOGY**

TEXT BOOK PRESCRIBED: NCERT

MONTH	CHAPTER	TOPIC-SUB UNIT
April	<p><b>Chapter 2</b> <b>Sexual reproduction in flowering plants</b></p> <p><b>Chapter 3</b> <b>Human reproduction</b></p>	<p>Flower –a fascinating organ, reproductive structures, double fertilization, embryo and endosperm formation, apomixis and parthenogenesis.</p> <p>Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle; fertilization, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation ; parturition; lactation</p> <p><b><u>PRACTICALS –</u></b></p> <ol style="list-style-type: none"> <li>1. Study of pollen germination</li> <li>2. Flowers adapted to pollination by different agencies.</li> <li>3. Controlled pollination-emasculation, tagging and bagging</li> <li>4. T.S of testis and T.S of ovary through permanent slides</li> <li>5. T.S.. Blastula through permanent slide</li> <li>6. Prepare a temporary mount of onion root tip to study mitosis</li> <li>7. Study of meiosis through permanent slides</li> <li>8. Study of mendelian inheritance using seeds of different colour/sizes</li> </ol>
MAY	<p>Chapter-4: Reproductive Health</p> <p>Chapter-5: Principles of Inheritance and Variation</p>	<p>Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).</p> <p>Heredity and variation: Mendelian inheritance; deviations from Mendelism – incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination - in humans, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.</p>
July	Chapter-6: Molecular Basis of Inheritance	Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Genome, Human and rice genome projects; DNA

	Chapter-7: Evolution	fingerprinting.  Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; adaptive radiation; human evolution.
AUG	Chapter-8: Human and Health Diseases  Chapter-10: Microbes in Human Welfare	Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.  Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.  Revision for Term I
SEP		<b>Term I Examination</b>
OCT	Chapter-11: Biotechnology - Principles and Processes  Chapter-12: Biotechnology and its Applications	Genetic Engineering (Recombinant DNA Technology).  Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.
NOV	Chapter-13: Organisms and Populations  Chapter-14: Ecosystem  Chapter-15: Biodiversity and its Conservation	Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution. (Topics excluded: Organism and its Environment, Major Abiotic Factors, Responses to Abiotic Factors, Adaptations) Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy (Topics excluded: Ecological Succession and Nutrient Cycles).  Biodiversity-Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.

**SUBJECT : COMPUTER SCIENCE****TEXT BOOK PRESCRIBED: NCERT****Reference Book : Introduction to computer science by Preeti Arora**

<b>MONTH</b>	<b>TOPIC</b>	<b>UNIT/SUBUNITS</b>
<b>APRIL</b>	<b>Unit 1: Programming and Computational Thinking (PCT-2)</b>	<ul style="list-style-type: none"><li>• Revision of the basics of Python</li><li>• Functions: scope, parameter passing, default parameters, positional parameters , mutable/immutable properties of data objects, pass arrays to functions, return values,</li><li>• flow of execution, scope of a variable (global scope, local scope)</li><li>• Functions Modules: Math, Random, Statistics, String and other general built-in functions.</li></ul>
<b>MAY</b>	Unit 1: Programming and Computational Thinking (PCT-2)	<ul style="list-style-type: none"><li>• Exception Handling: Introduction, handling exceptions using try-except-finally blocks</li><li>• Data Structure: Stack, operations on stack (push &amp; pop), implementation of stack using list.</li><li>• Introduction to files, types of files (Text file, Binary file, CSV file), relative and absolute paths</li><li>• Text file: opening a text file, text file open modes (r, r+, w, w+, a, a+), closing a text file, opening a file using with clause, writing/appending data to a text file using write() and writelines(), reading from a text file using read(), readline() and readlines(), seek and tell methods, manipulation of data in a text file</li></ul>
<b>JULY</b>	Unit 1: Programming and Computational Thinking (PCT-2)	<ul style="list-style-type: none"><li>• Binary file: basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab, ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file</li><li>• CSV file: import csv module, open / close csv file, write into a csv file using writer(),writerow(),writerows() and read from a csv file using reader()</li></ul>
<b>AUG</b>	Unit III: Database Management	<ul style="list-style-type: none"><li>• Database concepts: introduction to database concepts and its need</li><li>• Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key)</li><li>• Structured Query Language: introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create database, use database, show</li></ul>

		<p>databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical), aliasing,</p> <ul style="list-style-type: none"> <li>• Distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command, aggregate functions (max, min, avg, sum, count), group by, having clause, joins: Cartesian product on two tables, equi-join and natural join</li> <li>• Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using connect(), cursor(), execute(), commit(), fetchone(), fetchall(), rowcount, creating database connectivity applications, use of %s format specifier or format() to perform queries</li> </ul>
<b>SEP</b>	<b>FIRST TERM EXAM</b>	
<b>OCT</b>	Unit II: Computer Networks	<ul style="list-style-type: none"> <li>• Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)</li> <li>• Data communication terminologies: concept of communication, components of data communication (sender, receiver, message, communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching)</li> <li>• Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves)</li> <li>• Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card)</li> <li>• Network topologies and Network types: types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)</li> <li>• Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP</li> <li>• Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting.</li> </ul>
<b>Project Submission and Revision Of Entire syllabus</b>		

## **SUBJECT : GEOGRAPHY**

- Books:**
- 1) **India People and Economy**
  - 2) **Fundamentals of Human Geography**
  - 3) **Practical Work in Geography – Part 2**

<b>Month</b>	<b>Chapter</b>	<b>Unit/Subunits</b>
April	Population: Distribution, Density, Growth and Composition <i>(India People and Economy)</i> Human Geography- Nature and Scope <i>(Fundamentals of Human Geography)</i>	Population: distribution, density and growth; composition of population - linguistic, religious groups, gender, rural-urban and occupational-regional variations in growth of population  Nature, Environmental determinism, possibilism  Fields and sub-fields of Human Geography
May	Human Settlements <i>((India People and Economy)</i>  The World Population : Distribution, Density and Growth <i>(Fundamentals of Human Geography)</i>  Practical – 1 Human Development <i>(Fundamentals of Human Geography)</i>	Settlement types - rural and urban; morphology of cities (case study); distribution of mega cities; problems of human settlements in developing countries.  The World Population : Distribution, Density and Growth <i>(Fundamentals of Human Geography )</i>  Data its source and compilation Human development - concept; selected indicators,( Growth and Development, The four pillars of Human developments, Approaches of Human Developments, Measuring Human Developments ) international comparisons
July	Primary Activities <i>(Fundamentals of Human Geography)</i>	Primary activities - concept and changing trends; gathering, pastoral, mining, subsistence agriculture, modern agriculture; people engaged in agricultural and allied activities - some examples from selected countries.  Land resources- general land use; agricultural land

	<p>Land Resources and Agriculture <i>(India People and Economy)</i></p> <p>Practical – 2</p> <p>Secondary Activities <i>(Fundamentals of Human Geography)</i></p>	<p>use, Geographical conditions and distribution of major crops (Wheat, Rice, Tea, Coffee, Cotton, Jute, Sugarcane and Rubber) agricultural development and problems.</p> <p><b>Data processing( calculate Mean ,Median and Mode )</b>calculate measures of central tendency</p> <p>Secondary activities-concept; manufacturing: types - household, small scale, large scale; agro based and mineral based industries; people engaged in secondary activities - some examples from selected countries.</p>
August	<p>Water Resources <i>(India People and Economy)</i></p> <p>Mineral and Energy Resources <i>(India People and Economy)</i></p> <p>Practical -3</p> <p>Planning and Sustainable Development in Indian Context <i>(India People and Economy)</i></p>	<p>Water resources-availability and utilization- irrigation, domestic, industrial and other uses; scarcity of water and conservation methods-rain water harvesting and watershed management.</p> <p>Mineral and energy resources- distribution of metallic (Iron ore, Copper, Bauxite, Manganese); non-metallic (Mica, Salt) minerals; conventional (Coal, Petroleum, Natural gas and Hydroelectricity) and non-conventional energy sources (solar, wind, biogas) and conservation.</p> <p>Representation of data.(To represent data Graphically using different techniques ).Construction of line graph ,bar graph, poly graph, line and bar graph ,multiple bar diagram ,pie diagram. Thematic maps- DOT MAP,CHOROPLETH MAP AND ISOPLETH MAP.</p> <p>Planning in India- target group area planning (case study); idea of sustainable development (case study).</p>
SEP	<p>Transport and Communication <i>(India People and Economy)</i></p>	<p>Transport and communication-roads, railways, waterways and airways: oil and gas pipelines; Geographical information and communication networks.</p>

OCT	<p>International Trade <i>(India People and Economy)</i></p> <p>Practical-4</p> <p>Tertiary and Quaternary Activities <i>(Fundamentals of Human Geography)</i></p> <p>Transport and Communication <i>(India People and Economy)</i></p>	<p>International trade- changing pattern of India's foreign trade; sea ports and their hinterland and airports.</p> <p>Spatial information technology(GIS, advantages of GIS over manual, components of GIS, spatial data formats ,roster data format vactor data format, spatial analysis, overlay and buffer analysis.</p> <p>Tertiary activities-concept; trade, transport and tourism; services; people engaged in tertiary activities - some examples from selected countries.</p> <p>Quaternary activities-concept; people engaged in quaternary activities - case study from selected countries.</p> <p>Transport and communication-roads, railways, waterways and airways: oil and gas pipelines; Geographical information and communication networks.</p> <p>International trade- changing pattern of India's foreign trade; sea ports and their hinterland and airports.</p>
November	<p>Transport and Communication <i>(Fundamentals of Human Geography)</i></p> <p>International Trade <i>(Fundamentals of Human Geography)</i></p> <p>Geographical Perspective on Selected Issues and Problems <i>(India People and Economy)</i></p>	<p>Land transport - roads, railways; trans-continental railways. Water transport- inland waterways; major ocean routes. Air transport- Intercontinental air routes. Oil and gas pipelines. Satellite communication and cyber space- Importance and usage for geographical information; use of GPS.</p> <p>International trade-Bases and changing patterns; ports as gateways of international trade, role of WTO in International trade. Ocean: National rights and international treaties</p> <p>Environmental pollution ,urban waste disposal. Urbanisation ,rural urban migration ,Problems of slums, Land degradation</p> <p><b>(Maps and Project works as per CBSE guidelines)</b></p>

**SUBJECT – ACCOUNTANCY****Text Books Prescribed: NCERT ; T.S. Grewal by Sultan Chand Publication**

<b>MONT H</b>	<b>Topic</b>	<b>Sub Topic</b>
APRIL	Unit 1: Accounting for Partnership Firms	<ul style="list-style-type: none"><li>• Partnership: features, Partnership Deed</li><li>• Provisions of the Indian Partnership Act 1932 in the absence of partnership deed</li><li>• Fixed v/s fluctuating capital accounts</li><li>• Preparation of Profit and Loss Appropriation Account- division of profit among partners</li><li>• Guarantee of profits</li><li>• Past adjustments (relating to interest on Capital, interest on drawing, salary and profit sharing ratio)</li><li>• Goodwill: nature, factors affecting and Methods of valuation - average profit, super profit and capitalization</li><li>• Note: Interest on partner's loan is to be treated as a charge against profits.</li><li>• Goodwill to be adjusted through partners' capital/ current account or by raising and writing off goodwill (AS 26)</li></ul>
MAY	Unit 1: Accounting for Partnership Firms	<ul style="list-style-type: none"><li>• Accounting for Partnership firms - Reconstitution and Dissolution.</li><li>• Change in the Profit Sharing Ratio among the existing partners - sacrificing ratio, gaining ratio, accounting for revaluation of assets and reassessment of liabilities and treatment of reserves and accumulated profits. Preparation of revaluation account and balance sheet.</li><li>• Admission of a partner - effect of admission of a partner on change in the profit sharing ratio, treatment of goodwill (as per AS 26), treatment for revaluation of assets and re- assessment of liabilities, treatment of reserves and accumulated profits, adjustment of capital accounts and preparation of balance sheet.</li><li>• Retirement and death of a partner: effect of retirement / death of a partner on change in profit sharing ratio, treatment of goodwill (as per AS 26), treatment for revaluation of assets and reassessment of liabilities, adjustment of accumulated profits and reserves, adjustment of capital accounts and preparation of balance sheet. Preparation of loan account of the retiring partner.</li><li>• Calculation of deceased partner's share of profit till the date of death. Preparation of deceased partner's capital account and</li></ul>
JULY		

	Unit 1: Accounting for Partnership Firms	<p>his executor's account.</p> <ul style="list-style-type: none"> <li>Dissolution of a partnership firm: meaning of dissolution of partnership and partnership firm, types of dissolution of a firm. Settlement of accounts - preparation of realization account, and other related accounts: capital accounts of partners and cash/bank a/c (excluding piecemeal distribution, sale to a company and insolvency of partner(s)).</li> </ul> <p><b>Note:</b></p> <p>(i) The realized value of each asset must be given at the time of dissolution.</p> <p>(ii) In case, the realization expenses are borne by a partner, clear indication should be given regarding the payment thereof</p>
AUG	Unit-2 Accounting for Companies	<ul style="list-style-type: none"> <li>Accounting for Share Capital</li> <li>Share and share capital: nature and types.</li> <li>Accounting for share capital: issue and allotment of equity and references shares . Public subscription of shares - over subscription and under subscription of shares; issue at par and at premium, calls in advance and arrears (excluding interest), issue of shares for consideration other than cash.</li> <li>Concept of Private Placement and Employee Stock Option Plan (ESOP).</li> <li>Accounting treatment of forfeiture and re issue of shares. Disclosure of share capital in the Balance Sheet of a company. Accounting for</li> </ul> <p>Debentures</p> <ul style="list-style-type: none"> <li>Debentures: Issue of debentures at par, at a premium and at a discount. Issue of debentures for consideration other than cash; Issue of debentures with terms of redemption; debentures as collateral security concept, interest on debentures. Writing off discount / loss on issue of debentures.</li> </ul> <p><b>Note:</b> Discount or loss on issue of debentures to be written off in the year debentures are allotted from Security Premium Reserve/Capital Reserve/Statement of Profit and Loss as Financial Cost (AS 16) in that order.</p>
SEP		
OCT	Part B: Financial Statement Analysis Unit 3: Analysis of Financial Statements	<ul style="list-style-type: none"> <li>Financial statements of a Company:</li> <li>Statement of Profit and Loss and Balance Sheet in prescribed form with major headings and sub headings (as per Schedule III to the Companies Act, 2013)</li> </ul> <p>Note: Exceptional items, extraordinary items and profit (loss) from discontinued operations are excluded.</p> <ul style="list-style-type: none"> <li>Financial Statement Analysis: Objectives, importance and limitations.</li> <li>Tools for Financial Statement Analysis: Comparative statements, common size</li> </ul>

		statements, cash flow analysis, ratio analysis
OCT	Unit 3: Analysis of Financial Statements Ratio Analysis	<ul style="list-style-type: none"> <li>Accounting Ratios: Meaning, Objectives, classification and computation.</li> <li>Liquidity Ratios: Current ratio and Quick ratio.</li> <li>Solvency Ratios: Debt to Equity Ratio, Total Asset to Debt Ratio, Proprietary Ratio and Interest Coverage Ratio.</li> <li>Activity Ratios: Inventory Turnover Ratio, Trade Receivables Turnover Ratio, Trade Payables Turnover Ratio and Working Capital Turnover Ratio.</li> <li>Profitability Ratios: Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, Net Profit Ratio and Return on Investment</li> </ul> <p>Note: N.P. ratio is to be calculated on the profit before and after tax.</p>
NOV	Unit 4: Cash Flow Statement	<ul style="list-style-type: none"> <li>Meaning, objectives and preparation (as per AS 3 (Revised) (Indirect Method only)</li> </ul> <p>Note:</p> <ul style="list-style-type: none"> <li>(i) Adjustments relating to depreciation and amortization, profit or loss on sale of assets including investments, dividend (both final and interim) and tax.</li> <li>(ii) Bank overdraft and cash credit to be treated as short term borrowings.</li> <li>(iii) Current Investments to be taken as Marketable securities unless otherwise specified.</li> </ul> <p>Note: Previous years' Proposed Dividend to be given effect, as prescribed in AS-4, Events occurring after the Balance Sheet date. Current years' Proposed Dividend will be accounted for in the next year after it is declared to the shareholders.</p>
OCTOBER	Specific Project (Any one)	<ul style="list-style-type: none"> <li>Ratio Analysis</li> <li>Cash Flow Statement</li> <li>Comparative and Common Size Statements</li> </ul>

**SUBJECT: BUSINESS STUDIES****Text Book Prescribed: NCERT**

Month	Chapter	Sub Topics
April	Part A: Principles and Functions of Management  Unit 1: Nature and Significance of Management  Unit 2: Principles of Management	<ul style="list-style-type: none"><li>• Management - concept, objectives, and importance</li><li>• Management as Science, Art and Profession Levels of Management</li><li>• Management functions-planning, organizing, staffing, directing and controlling</li><li>• Coordination- concept and importance</li><li>• Principles of Management- concept and significance</li><li>• Fayol's principles of management</li><li>• Taylor's Scientific management- principles and techniques</li><li>• Compare the contribution of Fayol and Taylor</li></ul>
May	Unit 3: Business Environment  Unit 4: Planning  Unit 5: Organizing	<ul style="list-style-type: none"><li>• Business Environment- concept and importance</li><li>• Dimensions of Business Environment- Economic, Social, Technological, Political and Legal</li><li>• Demonetization - concept and features</li><li>• Impact of Government policy changes on business with special reference to liberalization, privatization and globalization in India</li><li>• Managerial response to changes in Business Environment</li><li>• Concept, importance and limitation</li><li>• Planning process, Single use and standing plans. Objectives, Strategy, Policy, Procedure, method Rule, budget and programme , Concept and Importance</li><li>• Organizing Process, Structure of organization- functional and divisional concept.</li><li>• Formal and informal organization- concept Delegation: concept, elements and importance</li><li>• Decentralization: concept and importance Difference between delegation &amp; decentralisation As per CBSE guidelines</li><li>• Concept and importance of staffing Staffing as a part of Human Resource Management</li><li>• Staffing process, Recruitment process, Selection – process</li><li>• Training and Development - Concept and importance, Methods of training - on the job and off the job -</li></ul>

July	Project Work Unit 6: Staffing	vestibule training, apprenticeship training and internship training
July	Unit 7: Directing	<ul style="list-style-type: none"> <li>• Concept and importance, Elements of Directing</li> <li>• Motivation - concept, Maslow's hierarchy of needs, Financial and non-financial incentives</li> <li>• Leadership - concept, styles - authoritative, democratic and laissez faire</li> <li>• Communication - concept, formal and informal communication; barriers to effective communication, how to overcome the barriers</li> </ul>
August	Unit 8: Controlling	<ul style="list-style-type: none"> <li>• Controlling - Concept and importance Relationship between planning and controlling Steps in process of control</li> </ul>
August	Part B: Business Finance and Marketing Unit 9: Financial Management	<ul style="list-style-type: none"> <li>• Concept, role and objectives of Financial Management</li> <li>• Financial decisions: investment, financing and dividend-Meaning and factors</li> <li>• Financial Planning - concept and importance</li> <li>• Capital Structure – concept and factors affecting capital structure</li> <li>• Fixed and Working Capital - Concept and factors affecting their requirements</li> </ul>
SEP	Unit 10: Financial Markets	<ul style="list-style-type: none"> <li>• Financial Markets: Concept, Functions and types Money market and its instruments</li> <li>• Capital market and its types (primary and secondary), methods of floatation in the primary market</li> <li>• Stock Exchange - Functions and trading procedure Securities and Exchange Board of India (SEBI) - objectives and functions</li> <li>• Marketing – Concept, features, functions and</li> </ul>

OCT	Unit 11: Marketing	<p>philosophies</p> <ul style="list-style-type: none"> <li>○ Marketing Mix – Concept and elements</li> <li>• Product - branding, labelling and packaging – Concept</li> <li>• Price - Concept, Factors determining price</li> <li>• Physical Distribution – concept, components and channels of distribution</li> <li>• Promotion – Concept and elements; Advertising, Sales Promotion and Public Relations</li> </ul>
NOV	Unit 12: Consumer Protection	<ul style="list-style-type: none"> <li>• Understand the concept of a consumer according to the Consumer Protection Act, 2019.</li> <li>• Explain the consumer rights</li> <li>• Understand the responsibilities of consumers</li> <li>• Understand who can file a complaint and against whom?</li> <li>• Discuss the legal redressal machinery under Consumer Protection Act, 2019.</li> <li>• Examine the remedies available to the consumer under Consumer Protection Act, 2019</li> </ul> <p>Consumer awareness - Role of consumer organizations and Non-Governmental Organizations (NGOs)</p> <p>Describe the role of consumer organizations and NGOs in protecting consumers' interests.</p>

**SUBJECT : PSYCHOLOGY**

Reference book – Psychology Textbook for Class XII NCERT

<b>MONTH</b>	<b>UNIT</b>	<b>TOPICS</b>
<b>APRIL</b>	Variations in psychological attributes	Individual differences in the human functioning ,theories of the intelligence ,individual differences in the intelligence ,culture and intelligence, emotional intelligence, and creativity Practical on intelligence
<b>MAY</b>	Personality & Self	Self and personality , concept of self, culture and self , concept of personality ,type trait theory and freud’s theory , major approaches to the study of personality and assessment of personality Practical on introvert & extrovert
<b>JULY</b>	Meeting life challenges	PRAC 1,2 and 3  Introduction Nature and types of stress Sources of the stress , effect of stress on psychological functioning and health , coping with stress ,promoting health and wellbeing, Life skills
<b>AUG</b>	Psychological disorders	Introduction, Concepts of abnormality & psychological disorders Factors underlying abnormal behavior Classification of psychological disorders Commonly abused substances Practical 4
<b>OCT</b>	Therapeutic approaches	Nature and process of psychotherapy Types of therapies – psychodynamic, behaviour, relaxation, cognitive , humanistic , biomedical, and alternative Rehabilitation of the mentally ill  CASE STUDY
<b>NOV</b>	Attitude and Social cognition  Social influence & group process	Introduction, Explaining social behaviour nature and components of attitude , attitude formation & change , prejudice & discrimination, strategies for handling prejudice ,social cognition, schemas and stereotype , impression formation, behaviour in the presence of others ,pro social behaviour  Nature & formation of groups , types of groups , influence of group on individual behaviour , conformity , compliance & obedience , cooperation & competition , social identity ,inter group conflict  Practical 5

## **SUBJECT: ECONOMICS**

Books Prescribed:

- 1. Introductory Macroeconomics-NCERT**
- 2. Indian Economic Development- NCERT**
- 3. Introductory Macroeconomics- V.K Ohri & T. R Jain**
- 4. Indian Economic Development- V. K Ohri & T. R Jain**

<b>MONTH</b>	<b>CHAPTER\UNIT</b>	<b>SUBUNIT\TOPIC</b>
<b>April</b>	<b>1 National Income and Related Aggregates</b>	<p>What is Macroeconomics?</p> <p>Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation.</p>
<b>May</b>	<b>1 National Income and Related Aggregates</b>  <b>2 Money and Banking</b>	<p>Circular flow of income (two sector model); Methods of calculating National Income-Value Added or Product method, Expenditure method, Income method.</p> <p>Aggregates related to National Income: Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost; Real and Nominal GDP.</p> <p>GDP Deflator, GDP and Welfare</p> <p>Money -meaning and functions, supply of money -Currency held by the public and net demand deposits held by commercial banks.</p> <p>Money creation by the commercial banking system.</p> <p>Central bank and its functions (example of the Reserve Bank of India): Bank of issue, Govt. Bank, Banker's Bank, Control of Credit through Bank Rate, CRR, SLR, Repo Rate and Reverse Repo Rate, Open Market Operations, Margin Requirement.</p>

<p><b>July</b></p>	<p><b>3</b>  <b>Determination of Income and Employment</b></p> <p><b>4</b>  <b>Government Budget and the Economy</b></p> <p><b>6</b>  <b>Development Experience (1947-90) and Economic Reforms since 1991:</b></p>	<p>Aggregate demand and its components.</p> <p>Propensity to consume and propensity to save (average and marginal).</p> <p>Short-run equilibrium output; investment multiplier and its mechanism.</p> <p>Meaning of full employment and involuntary unemployment.</p> <p>Problems of excess demand and deficient demand; measures to correct them – changes in government spending, taxes and money supply.</p> <p>Government budget-meaning, objectives and components. Classification of receipts -revenue receipts and capital receipts; classification of expenditure –revenue expenditure and capital expenditure.</p> <p>Balance, surplus and deficit Budget - Measures of government deficit.</p> <p>A brief introduction of the state of Indian economy on the eve of independence. Common goals of Five Year Plans.</p> <p>Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy, etc.), industry (IPR 1956; SSI – role &amp; importance) and foreign trade.</p> <p><b>Economic Reforms since 1991:</b></p> <p>Features and appraisals of liberalization, globalization and privatization (LPG policy); Concepts of demonetization and GST.</p>
<p><b>Aug</b></p>	<p><b>7</b>  <b>Current challenges facing Indian Economy</b></p>	<p><b>Human Capital Formation:</b> How people become resource; Role of human capital in economic development, Growth of Education Sector in India.</p> <p><b>Rural development:</b> Key issues -credit and marketing -role</p>

		<p>of cooperatives; agricultural diversification; alternative farming -organic farming</p> <p><b>Employment:</b> Growth and changes in work force participation rate in formal and informal growth; problems and policies.</p>
<b>Sep</b>		<b>REVISION For Ist Term</b>
<b>Oct</b>	<b>7 Sustainable Economic Development:</b>	Meaning, Effects of Economic Development on Resources and Environment, including global warming.
		A comparison with neighbours India and Pakistan
	<b>8 Development Experience of India China and Pakistan</b>	
		India and China
		Issues: economic growth, population, sectoral development and other Human Development Indicators.
	<b>5 Balance of Payments</b>	Balance of payments account -meaning and components; balance of payments – Surplus & Deficit
		Foreign exchange rate -meaning of fixed and flexible rates and managed floating.
		Determination of exchange rate in a free market, Merits and demerits of flexible and fixed exchange rate
Managed floating exchange rate system.		
		<b>REVISION OF SYLLABUS/ Pre- Board</b>

**SUBJECT : HISTORY**

**Books Prescribed :**      **Themes in Indian History -Part 1**  
**Themes in Indian History -Part -II**  
**Themes in Indian History -Part -III**

Month	UNIT/Chapter	Sub Topics
April	1.Bricks ,Beads & Bones  2.Kings ,Farmers & Towns	*Beginnings *Subsistence Strategies *Mohenjodaro-A planned Urban centre *Tracking Social differences *Finding out about craft production *Seals,Scripts & Weights *Ancient Authority *The end of civilisation *Discovering the Harappan Civilisation *Problems of Piecing together the Past <b>VISIT TO NATIONAL MUSEUM</b>  *Towns & Trade *Back to Basics *The limitations of Inscriptional evidences
MAY	<b>3.Kinship,Caste &amp; Class</b>	*The critical edition of Mahabharata *Kinship & Marriage *Social differences *Beyond birth Resources & Status *Explaining social differences *Handling texts *A Dynamic texts
JULY	4.Thinkers,Beliefs & Buildings  5.Through the eyes of Travellers	*A Glimpse of Sanchi *The Background *Beyond Worldly pleasures *The Buddha & the Quest for Enlightenment *The teachings of Buddha *Followers of Buddha *Stupas *Discovering Stupas *Sculpture *New Religious Traditions *Can we "See" everything  *Al-Biruni & the Kitab -ul-Hind *Ibn Battuta's RIHLA *Francois Bernier-A doctor with a difference *Making sense of an Alien World

		<ul style="list-style-type: none"> <li>*Ibn Battuta &amp; the excitement of the Unfamiliar</li> <li>*Bernier &amp; the " Degenerate" East</li> <li>*Women-Slaves,Sati &amp; Labourers</li> </ul>					
AUG	6.Bhakti-Sufi Traditions	<ul style="list-style-type: none"> <li>*A Mosaic of religious beliefs &amp; Practices &amp; practices</li> <li>*Poems of prayers</li> <li>*The Virashaiva tradition in Karnataka</li> <li>*Religious ferment in North India</li> <li>*New strands in the fabric Islamic traditions</li> <li>*The growth of Sufism</li> <li>*The Chistis in the Subcontinent</li> <li>*New Devotional paths Dialogue &amp; Dissent in Northern India</li> </ul>					
	7.An Imperial Capital-Vijaynagar	<ul style="list-style-type: none"> <li>*Reconstructing histories of Religious traditions</li> <li>*The discovery of Hampi</li> <li>*Rayas,Nayakas&amp; Sultans</li> <li>*Vijaynagar The Capital &amp; Environs</li> <li>*The Royal Centre</li> <li>*The Sacred Centre</li> <li>*Plotting,Palaces ,Temples &amp; Bazaars</li> <li>*Questions in search of answers</li> </ul>					
<b>SEP</b>		<b>FIRST TERM EXAM</b>					
OCT	8.Peasants ,Zamindars & the State	<ul style="list-style-type: none"> <li>*Peasants &amp; agricultural production</li> <li>*The village community</li> <li>*Women in Agrarian society</li> <li>*Forests &amp; Tribes</li> <li>*The Zamindars</li> <li>*The Land revenue system</li> <li>*The flow of silver</li> <li>*The Ain -i-Akbari of Abu'l Fazl Allami</li> </ul>					
	10..Colonialism & the Countryside	<ul style="list-style-type: none"> <li>*Bengal &amp;the Zamindars</li> <li>*The Hoe &amp; the Plough</li> <li>*A revolt in the countrysideThe Bombay Deccan</li> <li>*The Deccan Riots Commission</li> </ul>					
NOV	11.Rebels & the Raj	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>*Pattern of the rebellion</td></tr> <tr><td>*Awadh in revolt</td></tr> <tr><td>*What the rebels wanted</td></tr> <tr><td>*Repression</td></tr> <tr><td>*Images of the revolt</td></tr> </table>	*Pattern of the rebellion	*Awadh in revolt	*What the rebels wanted	*Repression	*Images of the revolt
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*Repression							
*Images of the revolt							
	13.Mahatma Gandhi & the Nationalist	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>*A leader announces himself</td></tr> <tr><td>*The making &amp; unmaking of Non cooperation</td></tr> <tr><td>*The Salt satyagraha A case study</td></tr> </table>	*A leader announces himself	*The making & unmaking of Non cooperation	*The Salt satyagraha A case study		
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	movement	*Quit India *The last heroic days *Knowing Gandhi
	15.Framing the Constitution	*A tumultuous time *The vision of the Constitution *Defining rights *The Powers of the State *The Language of the Nation

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

<b>MONTH</b>	<b>THEORY (ALL TOPICS)</b>	<b>PRACTICAL</b>
<b>APRIL</b>	<b>Unit - I</b> The Rajasthani School of Miniature Painting : 1. Origin and development. 2. Study of Rajasthani Paintings	Composition (national,religious ,cultural, historical and social events )
<b>MAY</b>	<b>Unit - I</b> Pahari Schools of Miniature Painting: 1. Origin and development. 2. Study of Pahari Paintings	Composition (national,religious ,cultural, historical and social events )
<b>JULY</b>	<b>Unit - II</b> The Mughal School of Miniature paintings : 1. Origin and development. 2. Study of Mughal paintings and main features	Nature and objects study
<b>AUG</b>	<b>UNIT -- II</b> Deccan School of Miniature paintings : 1. Origin and development 2. Phases of Deccani art 3. Specialities of the style of Deccani art. 4. Study of Deccan paintings and main features	Nature study (outdoor )
<b>SEP</b>	<b>Unit -III</b> The Bengal School of Painting and the Modern Trends in Indian Art: 1. Introduction to the Bengal School of Painting 2. Study of the Paintings of the Bengal School. 3. Contribution of Indian Artists in the Struggle for National Freedom Movement 4. Evolution of the Indian National Flag	Composition Fantasy
<b>OCT-</b>	<b>Unit - IV</b> The Modern Trends in Indian Art: 1. Modern Trends in Indian Art 2. Paintings of the Contemporary (Modern) Indian Artists 3. Graphic Prints of the Contemporary (Modern) Indian Artists	Object drawing and composition.
<b>NOV</b>	<b>Unit -IV</b> The Modern Trends in Indian Art: 1. Sculptures of the Contemporary (Modern) Indian Artists  Revision of entire syllabus	Object drawing and composition . Portfolio Submission







		5. Projectile in Sport
<b>OCT</b>	<b>UNIT- IX Psychology and Sports</b>	<ol style="list-style-type: none"> <li>1. Personality; its definition &amp; types (Jung Classification &amp; Big Five Theory)</li> <li>2. Motivation, its type &amp; techniques.</li> <li>3. Exercise Adherence: Reasons, Benefits &amp; Strategies for Enhancing it Unit IX &amp; X</li> <li>4. Meaning, Concept &amp; Types of Aggressions in Sports</li> <li>5. Psychological Attributes in Sports – Self-Esteem, Mental Imagery, Self-Talk, Goal Setting</li> </ol>
<b>NOV</b>	<b>UNIT-X Training in Sports</b>	<ol style="list-style-type: none"> <li>1. Concept of Talent Identification and Talent Development in Sports</li> <li>2. Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle. Unit X</li> <li>3. Types &amp; Methods to Develop – Strength, Endurance, and Speed.</li> <li>4. Types &amp; Methods to Develop – Flexibility and Coordinative Ability.</li> <li>5. Circuit Training - Introduction &amp; its importance</li> </ol>
<b>DEC</b>	<b>• Discussion AND REVISION</b>	ASSESSMENT • Reflective questions, Quiz, Exam, practical demonstration

**Subject : Political Science**  
**Books Prescribed : NCERT**

MONTH	Chapter No: & Name	Subtopics
APRIL	Chapter 1 – Challenges in Nation Building (Book 1: Politics in India)	<ul style="list-style-type: none"> <li>a) Challenges for the new Nation. -Three Challenges.</li> <li>b) Partition: Displacement and Rehabilitation. - Consequences of Partition.</li> <li>c) Integration of Princely States. -The problem • Government’s approach • Hyderabad • Manipur</li> <li>d) Reorganization of States.</li> </ul>
MAY	Chapter 2 -The End of Bipolarity(Book 2 : - CONTEMPORARY WORLD POLITICS)	<ul style="list-style-type: none"> <li>a) The Soviet System</li> <li>b) Gorbachev and the disintegration</li> <li>c) Causes and Consequences of the disintegration of the Soviet Union</li> <li>d) Shock Therapy and its Consequences</li> <li>e) new entities in world politics • Russia • Balkan States • Central Asian States</li> <li>f) India's relations with Russia and other post-communist countries</li> </ul>
	Chapter-2 Era of One-Party Dominance (Book 1: Politics in India)	<ul style="list-style-type: none"> <li>a) Challenge of building democracy.</li> <li>b) Emergence of opposition parties. Congress dominance in the first three general elections. · Nature of Congress dominance · Congress as a social and ideological coalition. · Tolerance and management of Factions</li> </ul>
	Chapter 4 - India's Foreign Policy (Book 1: Politics in India)	<ul style="list-style-type: none"> <li>a) International context</li> <li>b) The Policy of non-alignment</li> <li>c) Peace and conflict with China</li> <li>d) Wars and Peace with Pakistan</li> <li>e) India's nuclear policy</li> </ul>
JULY	Chapter 3- Politics of Planned Development (Book 1: Politics in India)	<ul style="list-style-type: none"> <li>a) Political contestation. • Ideas of Development. • Planning • Planning Commission</li> <li>b) The Early Initiatives • The First Five-Year Plan. • Rapid Industrialization</li> </ul>
	Chapter-3 Contemporary South Asia (Book 2: - CONTEMPORARY WORLD POLITICS)	<ul style="list-style-type: none"> <li>a) Military and Democracy in Pakistan and Bangladesh</li> <li>b) Monarchy and Democracy in Nepal</li> <li>c) Ethnic Conflict and Democracy in Sri Lanka</li> <li>d) India-Pakistan Conflicts</li> <li>e) India and its Neighbors</li> <li>f) Peace and Cooperation</li> </ul>
	Chapter-5- Challenges to and Restoration of the Congress System (Book 1: Politics in India)	<ul style="list-style-type: none"> <li>a) Challenges of political succession</li> <li>b) Fourth general elections, 1967</li> <li>c) Split in the Congress</li> <li>d) The 1971 election and restoration of congress</li> <li>e) Fourth General Election 1967 • Context of the Election. • Non Congressism • Electoral Verdict • Coalitions • Defection</li> </ul>

AUG	Chapter 6 - The Crisis of Democratic Order (Book 1: Politics in India)	(i) Background to Emergency (ii) Declaration of Emergency (iii) Controversies regarding emergency Politics after emergency
	Chapter 4- International Organizations (Book 2: - CONTEMPORARY WORLD POLITICS)	a) Meaning and importance of International Organisations b) Evolution of the UN c) Structure and function of International Organisations d) Principal Organs of UN e) Reform of the UN after the Cold War f) Reform of Structures, Processes, and Jurisdiction of the UN g) India and the UN Reforms
	Chapter 5- Security in the Contemporary World (Book 2: - CONTEMPORARY WORLD POLITICS)	a) Meaning and Type of Security. b) Traditional concept of security c) Non-tradition notions of Security. d) New Sources of Threats e) Cooperative Security f) India's Security strategy
SEP	Chapter-7 Regional Aspirations (Book 1: Politics in India)	a) Region and the Nation • Indian Approach • Areas of Tension • Jammu and Kashmir • Roots of the Problem • External and Internal disputes • Politics since 1948 • Insurgency and After • 2022 and Beyond b) Punjab • Political Context • Cycle of Violence • Road to Peace c) The Northeast • Demand for autonomy • Secessionist Movements • Movements against outsiders
	Chapter-8- Recent Developments in Indian Politics (Book 1: Politics in India)	a) Context of 1990s b) Era of Coalition • Alliance Politics c) Political rise if the Backward Classes • Mandal Implemented • Political Fallouts d) Communalism, Secularism and Democracy. • Ayodhya Dispute • Demolition and after e) Emergence of New Consensus f) Lok Sabha Elections 2004 g) Growing Consensus
OCT	Chapter-6 Environment and Natural Resources (Book 2: - CONTEMPORARY WORLD POLITICS)	a) Environmental Concerns b) Global Commons c) Common but differentiated Responsibilities d) India's Stand on Environment Issues e) Environmental Movements
	Chapter- 7 Globalisation (Book 2: - CONTEMPORARY WORLD POLITICS)	a) Concept of globalisation b) Causes and Consequences of globalisation c) India and globalization d) Resistance to globalization e) India and resistance to globalisation
NOV		Complete syllabus Revision

