



**ARMY PUBLIC SCHOOL CLEMENTTOWN, DEHRADUN**  
**CLASS -12 MONTHLY SYLLABUS PLANNING 2024-2025**

S.NO	MONTH	CONTENT
		SUBJECT: INFORMATICS PRACTICES (065)
1.	April	PROJECT SETU: Review Of Class XI ( Python Programming Concepts Revisited Unit 1 Data Handling using Pandas -I Unit1..Introduction to Python libraries- Pandas, Matplotlib. Data structures in Pandas - Series and Data Frames. Series: Creation of Series from – ndarray, dictionary, scalar value; mathematical operations; Head and Tail functions; Selection, Indexing and Slicing. Data Frames: creation - from dictionary of Series, list of dictionaries, Text/CSV files;
2.	May & June	<b>Working with DataFrame contd...display; iteration; Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Attributes associated with Pandas Series and DataFrame. Max(), Min(), Count() &amp; Mean() functions and their application on DataFrame and Series. Indexing using Labels, Boolean Indexing; Importing/Exporting Data between CSV files and Data Frames.</b>
3.	July	<b>Unit 1 contd... Data Visualization: Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, bar graph, histogram, Customizing plots: adding label, title, and legend in plots.            Revision &amp; PT1</b>
4.	August	<b>Unit 3: Introduction to Computer Networks</b> <b>Introduction to networks, Types of network: LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway, Network Topologies: Star, Bus, Tree, Mesh., Introduction to Internet, URL, WWW, and its applications- Web, email, Chat, VoIP.</b> <b>Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website., Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.</b>
5.	September	<b>PROJECT SETU: Review Of Class XI (SQL Concepts Revisited) Unit 2: Database Query using SQL</b>

		Math functions: POWER (), ROUND (), MOD (). Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM ().Revision & Mid Term Exam
6.	October	Unit 2: Database Query using SQL contd.. Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME (). Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order by. Unit 4: Societal Impacts Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright,
7.	November	Unit 4: Societal Impacts contd.. free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act., E-waste: hazards and management. Awareness about health concerns related to the usage of technology. Revision & PB1
8.	December	Revision, discussion of PB-1 Q Paper & PB-2
9.	January	Revision
		<b>SUBJECT: ENGLISH CORE</b>
1.	April	The Last Lesson, My Mother at Sixty-Six, The Third Level, Notice Writing; *Lost Spring, Keeping Quiet
2.	May & June	Deep Water ,The Rattrap, A Thing of Beauty; Letter to the Editor( giving suggestions or opinion on issues of public interest) *Syllabus Carry Over
3.	July	The Tiger King; Journey to the End of the Earth,Invitation Writing; Article Writing
4.	August	Indigo; Poets and Pancakes,A Roadside Stand, *The Enemy, On the Face of It, Letter for Job Application
5.	September	The Interview, Aunt Jennifer's Tigers
6.	October	Going Places, Memories of Childhood, **The Enemy, On the Face of It
7.	November	Report writing, PB1
8.	December	ASL, Revision , PB2
9.	January	Revision
		<b>SUBJECT: MATHS</b>
1.	April	1. Relations and Functions : Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions. 2. Inverse Trigonometric Functions : Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions.

2.	May & June	<p><b>3. Matrices :</b> Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Noncommutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restrict to square matrices of order 2). Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries)</p> <p><b>4. Determinants :</b> Determinant of a square matrix (up to 3 x 3 matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.</p> <p><b>5. Continuity and Differentiability :</b> Continuity and differentiability, chain rule, derivative of inverse trigonometric functions, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives.</p>
3.	July	<p><b>6. Applications of Derivatives :</b> Applications of derivatives: rate of change of bodies, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real life situations).</p>
4.	August	<p><b>7. Integrals :</b> Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them. Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.</p> <p><b>8. Applications of the Integrals :</b> Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only).</p>
5.	September	<p><b>9. Differential Equations :</b> Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation. (Both types)</p>

6.	October	<p><b>10. Vectors :</b> Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties</p> <p><b>11 THREE DIMENSIONAL COORDINATE GEOMETRY :</b>Direction ratios and Direction cosines of a line.Vector and cartesian Equation of a line,Shortest distance between two skew lines.Angle between two lines</p>
7.	November	<p><b>12. Linear Programming :</b> Introduction, related terminology such as constraints, objective function, optimization, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints)</p> <p><b>13. Probability :</b> Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.PB-1</p>
8.	December	<b>Revision &amp; PB-2</b>
9.	January	<b>Revision</b>
		<b>SUBJECT: COMP SC</b>
1.	April	<p><b>Unit I - Programming and Computation Thinking - 2</b></p> <p>Revision of Python topics covered in class XI - Self Study</p> <p><b>Functions:</b> types of function (built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope)</p> <p>Questions on parameters</p> <p>Concept of arguments and usage</p> <p>Questions on both arguments and parameters concept</p> <p>Concept of function calling</p> <p>Concept of return statement</p> <p>Questions on functions output</p>
2.	May & June	<p><b>Exception Handling:</b> Introduction, handling exceptions using try-except-finally blocks</p> <ul style="list-style-type: none"> <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> <p><b>Binary file:</b> basic operations on a binary file: open using file open modes (rb, rb+, wb, wb+, ab,</p>

		ab+), close a binary file, import pickle module, dump() and load() method, read, write/create, search, append and update operations in a binary file
3.	July	CSV file: import csv module, open / close csv file, write into a csv file using csv.writer() and read from a csv file using csv.reader( ) Data Structure: Stack, operations on stack (push & pop), implementation of stack using list.
4.	August	<b>Unit II: Computer Networks</b> Evolution of networking: introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET) Data communication terminologies: concept of communication, components of data communication (sender, receiver, message, communication media, protocols), measuring capacity of communication media (bandwidth, data transfer rate), IP address, switching techniques (Circuit switching, Packet switching) <b>Unit II: Computer Networks</b> Network protocol: HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting Transmission media: Wired communication media (Twisted pair cable, Co-axial cable, Fiber-optic cable), Wireless media (Radio waves, Micro waves, Infrared waves) Network devices (Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card), Network topologies and Network types: types of networks (PAN, LAN, MAN, WAN), networking topologies (Bus, Star, Tree)
5.	September	<b>Unit III: Database Management System</b> Database concepts: introduction to database concepts and its need Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key, alternate key, foreign key) Structured Query Language: introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int, float, date), constraints (not null, unique, primary key), create database, use database, show databases, drop database, show tables, create table, describe table, alter table (add and remove an attribute, add and remove primary key), drop table, insert, delete, select, operators (mathematical, relational and logical), aliasing, distinct clause, where clause, in, between, order by, meaning of null, is null, is not null, like, update command, delete command
6.	October	<b>Unit III: Database Management System</b> aggregate functions (max, min, avg, sum, count), group by, having clause, joins: cartesian product on two tables, equi-join and natural join

		Interface of python with an SQL database: connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using connect(), cursor(), execute(), commit() fetchone(), fetchall(), rowcount, creating database connectivity applications, use of %s format specifier or format() to perform queries
7.	November	Revision of ENTIRE SYLLABUS
8.	December	Discussion of prebd-I AND discussing the common errors made by students
9.	January	Discussion of prebd-II AND discussing the common errors made by students and making sure the students do not make same errors
		<b>SUBJECT: BIOLOGY</b>
1.	April	<b>BRIDGE COURSE(CH1 REPRODUCTION IN ORGANISMS), CH2- SEXUAL REPRODUCTION IN FLOWERING PLANTS</b>
2.	May & June	<b>CH-3 Human reproduction, CH- 4 Reproductive health CH5- Principles of Inheritance and Variation(½ chapter)</b>
3.	July	<b>CH5- Principles of Inheritance and Variation( remaining portion). CH6-Molecular Basis of Inheritance CH7-Evolution</b>
4.	August	<b>CH8- Human Health and Diseases CH10-Microbes in Human Welfare</b>
5.	September	<b>CH11- Principle and processes, Revision</b>
6.	October	<b>CH-12 Biotechnology and its Application Biotechnology; CH-13 Organisms and Populations CH-14 Ecosystem , CH-15 Biodiversity and its conservation</b>
7.	November	<b>CH-16 Environmental Issues and PB1</b>
8.	December	<b>Revision, discussion of PB-1 Q Paper &amp; PB-2</b>
9.	January	<b>Revision</b>
		<b>SUBJECT: PHYSICS</b>
1.	April	<b>Ch 1- Electric charges and Fields</b>  <b>Ch 2- Electrostatic Potential and Capacitance</b> <b>Experiments:</b> <b>To determine resistance of galvanometer by half deflection method and find its figure of merit.</b> <b>To convert the given galvanometer (of known resistance and</b>

		figure of merit) into voltmeter of desired range.
2.	May & June	<p><b>Ch 3- Current Electricity</b></p> <p><b>Ch 4 - Magnetic Effects of current</b></p> <p><b>Ch 5- Magnetism and matter</b></p> <p><b>Experiments:</b></p> <p><b>Using a Meter Bridge, to calculate the resistance of the given wire.</b></p> <p><b>To determine the resistivity of a given wire by plotting a graph for potential difference versus current.</b></p>
3.	July	<p><b>Ch 5- Magnetism and matter(continued)</b></p> <p><b>Ch 6- Electromagnetic Induction</b></p> <p><b>Ch 7-Alternating Current.</b></p> <p><b>Experiment:</b></p> <p><b>To determine the angle of minimum deviation for a given prism.</b></p> <p><b>Revision of the syllabus for PT1</b></p> <p><b>(PT 1)</b></p>
4.	August	<p><b>Ch 8- EM waves</b></p> <p><b>Ch 9 Ray Optics and Optical Instruments</b></p> <p><b>Ch 10 Wave Optics</b></p> <p><b>Experiments:</b></p> <p><b>To find the focal length of a convex lens.</b></p> <p><b>To find the focal length of a convex mirror, using a convex lens.</b></p>
5.	September	<p><b>Ch 11 Dual Nature of Radiation and Matter</b></p> <p><b>Experiments:</b></p> <p><b>I-V characteristic curve for a p-n junction diode</b></p> <p><b>Revision for midterm exams</b></p> <p><b>(Half – Yearly)</b></p>
6.	October	<p><b>Ch 12- Atom</b></p> <p><b>Ch 13- Nuclei</b></p>
7.	November	<b>Ch 14- Semiconductor</b>

		<b>Revision of difficult Topics from the syllabus Pre-Board -1</b>
8.	December	<b>Pre-Board- 2</b>
9.	January	<b>Discussion of Pre-board papers and Sample Papers</b>
		<b>SUBJECT: CHEMISTRY</b>
1.	April	<b>CH -1 Solutions CH-2 Electrochemistry Titration 1 and 2 -Practical</b>
2.	May & June	<b>CH-2 Electrochemistry (contd...) CH-3 Chemical Kinetics Organic Functional groups-Practical</b>
3.	July	<b>CH-4 d- and f-block elements CH-5 Coordination Compounds (UT-1) Salt analysis-Practical</b>
4.	August	<b>CH-6 Haloalkanes and Haloarenes CH-7 Alcohols, phenols and ethers Salt analysis-Practical</b>
5.	September	<b>CH-7 Alcohols, phenols and ethers (contd...) CH-8 Aldehydes , ketones and carboxylic acids (HALF YEARLY)</b>
6.	October	<b>CH-9 Amines CH-10 Biomolecules</b>
7.	November	<b>REVISION and PB1</b>
8.	December	<b>REVISION and PB2</b>
9.	January	<b>REVISION</b>
		<b>SUBJECT: PHYSICAL EDUCATION</b>
1.	April	<b>UNIT 1:- MANAGEMENT OF SPORTING EVENTS</b> <b>Sports Events Management (Planning, Organising, Staffing, Directing and Controlling)</b> <b>2. Various Committees and its Responsibilities (Pre, During and Post) 3.Fixture and its Procedures - Knock-out (Bye and Seeding) and League (Staircase and Cyclic)</b> <b>1. Functions of</b>



		<p>4. Intramural and Extramural - Meaning, Objectives and its Significance 5. Community Sports - Purpose and Benefits</p> <p><b>UNIT 2:- CHILDREN AND WOMEN IN SPORTS</b></p> <p>1. Exercise Guidelines of WHO for Different Age Groups 2. Common Postural Deformities (Knock-knee, Flat foot, Round shoulders, Bow legs, Kyphosis, Lordosis and Scoliosis ) and their Corrective Measures 3. Women Participation in Sports - Physical, Psychological and Social Benefit</p> <p>4. Special Consideration (Menarche and Menstrual Dysfunction) 5. Female Athlete Traid ( Osteoporosis, Amenorrhea and Eating Disorders)</p>
2.	May & June	<p><b>UNIT 3:- YOGA AS PREVENTIVE MEASURE FOR LIFESTYLE DISEASE</b> <span style="float: right;"><b>1. Obesity:</b></span></p> <p>Procedure, Benefits &amp; Contraindications for Tadasana, Katichakrasana, Pavanmuktasana, Matsayasana, Halasana, Pachimottansana, Ardha – Matsyendrasana, Dhanurasana, Ushtrasana, Suryabedhan</p> <p><b>2. Diabetes:</b> Procedure, Benefits &amp; Contraindications for Katichakrasana, Pavanmuktasana, Bhujangasana, Shalabhasana, Dhanurasana, Supta-vajarasana, Paschimottanasana, Ardha-Mastendrasana, Mandukasana, Gomukasana, Yogmudra, Ushtrasana,</p> <p><b>3. Asthma:</b> Procedure, Benefits &amp; Contraindications for Tadasana, Urdhwahastottansana, UttanMandukasana, Bhujangasana, Dhanurasana, Ushtrasana, Vakrasana, Kapalbhathi, Gomukhasana Matsyaasana, Anuloma-Viloma.</p> <p><b>4. Hypertension:</b> Procedure, Benefits &amp; Contraindications for Tadasana, Katichakransan, Uttanpadasana, Ardha Halasana, Sarala Matyasana, Gomukhasana, UttanMandukasana, Vakrasana, Bhujangasana, Makarasana, Shavasana, Nadi- shodhanapranayam, Sitlipranayam</p> <p><b>5. Back Pain and Arthritis:</b> Procedure, Benefits &amp; Contraindications for Tadasana, Urdhwahastottansana, Ardha-Chakrasana, Ushtrasana, Vakrasana, Sarala-Matsyendrasana, Bhujangasana, Gomukhasana, Bhadrasana, Makarasana, Nadi- shodhanapranayam</p>
3.	July	<p><b>Unit 4:- Physical Education &amp; Sports for CWSN (Children with Special Needs - Divyang)</b></p> <p>1. Organizations promoting Disability Sports (Special Olympics; Paralympics; Deaflympics)</p> <p>2. Concept of Classification and Divisioning in Sports 3. Concept of Inclusion in Sports, its need and</p> <p>4. Advantages of Physical Activities for children with special needs 5. Strategies to make physical activities assessable for children with special needs</p>
4.	August	<p><b>Unit 5:- Sports &amp; Nutrition</b> 1. Concept of balanced diet and nutrition</p> <p>2. Macro and Micro Nutrients: Food sources &amp; functions 3. Nutritive &amp; Non-Nutritive Components of Diet 4. Eating For Weight Control- A Healthy Weight, The Pit falls of Dieting, Food Intolerance &amp; Food Myths 5. Importance of Diet in Sports and Pre, During and Post requirement</p>

5.	September	<p><b>Unit 6:- Test &amp; Measurement in Sports</b></p> <p>1. Fitness Test – SAI Khelo India Fitness Test in school:  o Age group 5-8 yrs/ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test  o Age group 9-18yrs/ class 4-12: BMI, 50mt Speed test, 600mt Run/Walk, Sit &amp; Reach flexibility test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls)</p> <p>2. Measurement of Cardio-Vascular Fitness - Harvard Step Test- Duration of the Exercise in seconds x100/5.5 X Pluse count of 1-1.5 Min after Exercise</p> <p>3. Computing Basal Metabolic Rate (BMR)</p> <p>4. Rikli &amp; Jones - Senior Citizen Fitness Test</p> <p>I. Chair Stand Test for lower body strength  II. Arm Curl Test for upper body strength  III. Chair Sit &amp; Reach Test for lower body flexibility  IV. Back Scratch Test for upper body flexibility  V. Eight Foot Up &amp; Go Test for agility  VI. Six Minute Walk Test for Aerobic Endurance</p> <p>5. Johnsen - Methney Test of Motor Educability ( Front Roll, Roll, Jumping Half-Turn, Jumping full- turn )</p> <p><b>Unit 7:- Physiology &amp; Injuries in Sports</b></p> <p>1. Physiological factors determining components of physical fitness  2. Effect of exercise on Muscular System  3. Effect of exercise on Cardio-Respiratory System  4. Physiological changes due to aging</p> <p>7.5. Sports injuries: Classification (Soft Tissue Injuries -Abrasion, Contusion, Laceration, Incision, Sprain &amp; Strain; Bone &amp; Joint Injuries - Dislocation, Fractures - Green Stick, Comminuted, Transverse Oblique &amp; Impacted)</p>
6.	October	<p><b>Unit 8:- Biomechanics &amp; Sports</b></p> <p>1. Newton’s Law of Motion &amp; its application  2. Types of Lever and its application in Sports  3. Equilibrium – Dynamic &amp; Static and Centre of Gravity and its application in sports  4. Friction &amp; Sports  5. Projectile in Sports</p> <p><b>Unit 9:- Psychology &amp; Sports</b></p> <p>1. Personality; its definition &amp; types (Jung Classification &amp; Big Five Theory)  2. Motivation; its type &amp; techniques  3. Exercise Adherence: Reasons, Benefits &amp; Strategies for Enhancing it  4. Meaning, Concept &amp; Types of Aggressions in Sports  5. Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting</p>
7.	November	<p><b>Unit 10:- Training in Sports</b></p> <p>1. Concept of Talent Identification and Talent Development in Sports  2. Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle  3. Types &amp; Method to Develop</p>

		– Strength, Endurance and Speed    4. Types & Method to Develop – Flexibility and Coordinative Ability    5. Circuit Training - Introduction & its importance
8.	December	Revision
9.	January	Revision
		<b>SUBJECT: ACCOUNTANCY</b>
1.	April	Partnership: features, Partnership Deed.Provisions of the Indian Partnership Act 1932 in the absence of partnership deed. Fixed v/s fluctuating capital accounts. Preparation of Profit and Loss Appropriation account division of profit among partners Guarantee of profits. Past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio
2.	May & June	Unit II: Reconstitution of Partnership Changes in profit sharing ratio among the existing partners – Sacrificing ratio and Gaining ratio. • Accounting for Revaluation of Assets and Liabilities and Distribution of reserves and accumulated profits. • Goodwill: Nature, Factors affecting and Methods of valuation: Average profit, Super profit, and Capitalisation methods. • Admission of a Partner: Effect of admission of partner, Change in profit sharing ratio, Accounting treatment for goodwill, Revaluation of assets and liabilities, Reserves (accumulated profits) and Adjustment of capitals.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 reassessment of liabilities, treatment of reserves and accumulated profits REVALUATION ACCOUNT: Preparation of capital accounts Preparation of balance sheet Adjustment of capital
3.	July	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. Calculation of deceased partner's share of profit till the date of death. Preparation of deceased partner's capital account and his executor's account.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)).
4.	August	Share and share capital: nature and types. Accounting for share capital:

		<p>issue and allotment of equity and preferences 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. Concept of Private Placement and Employee Stock Option Plan (ESOP).  Disclosure of share capital in the Balance Sheet of a company. Accounting treatment of forfeiture and re-issue of shares.  Disclosure of share capital in the Balance Sheet of a company.  Forfeiture of shares when shares issued at par and at premium  Reissue of forfeited share Forfeiture and reissue of shares when issued on ProRata basis.</p>
5.	September	<b>Issue of debentures</b>
6.	October	<p>Financial Statement Sheet in statements of Profit and the prescribed of a Loss form company: and Balance with major headings and sub headings (as per Schedule III to the Companies Act, 2013).  Financial Statement Analysis: Objectives, importance and limitations.  Tools for Financial Statement Analysis:  Comparative statements,  common size statements</p>
7.	November	<p>cash flow analysis, ratio analysis. Accounting Ratios: Meaning, Objectives, classification and computation. Solvency ratio Liquidity Ratios Activity Ratios Profitability Ratios , Meaning, objectives and preparation (as per AS 3 (Revised) (Indirect Method only) Note:  (i) Adjustments relating to depreciation and amortization, profit or loss on sale of assets including investments, dividend (both final and interim) and tax.(ii) Bank overdraft and cashcredit to be treated as short term borrowings. (iii)Current Investments to be taken as Marketablesecurities unless otherwise specified.Revision and PB-1</p>
8.	December	<b>Revision &amp; PB-2</b>
9.	January	<b>Revision</b>
		<b>SUBJECT: BUSINESS STUDIES</b>
1.	April	<b>Unit 1: Nature and Significance of Management Concept , Management,- concept, objectives, and importance, Management as Science, Art and Profession Levels of Management , Management</b>

		functions- planning, organizing, staffing, directing and controlling , Coordination-concept and importance
2.	May & June	Unit 2 : Principles of Management Principles of Management- concept and significance, Taylor's Scientific management- principles and techniques. Unit 3:Business Environment,Business Environment- concept and importance Dimensions of Business Environment Economic, Social, Technological, Political and Legal Demonetization - concept and features
3.	July	Unit 4: Planning Concept, importance and limitation Planning process Single use and standing plans. Objectives, Strategy, Policy, Procedure, method Rule, budget and Programme
4.	August	Unit 5: Organising Concept and importance Organising Process Structure of organisation- functional and divisional concept. Formal and informal organisation- concept Delegation: concept, elements and importance Decentralization: concept and importance. Unit 6: Staffing Concept and importance of staffing Staffing as a part of Human Resource Management concept Staffing process Recruitment process Selection – process Training and Development - Concept and importance, Methods of training - on the job and off the job - vestibule training, apprenticeship training and internship training
5.	September	Unit 7: Directing Concept and importance Elements of Directing Motivation - concept, Maslow's hierarchy of needs, Financial and non-financial incentives Leadership - concept, styles - authoritative, democratic and laissez faire Communication - concept, formal and informal communication; barriers to effective communication, how to overcome the barriers
6.	October	Unit 8: Controlling Controlling - Concept and importance Relationship between planning and controlling Steps in process of control Part B: Business Finance and Marketing Unit 9: Financial Management Concept, role and objectives of Financial Management Financial decisions: investment, financing and dividend- Meaning and factors affecting Financial Planning - concept and importance Capital Structure – concept and factors affecting capital structure Fixed and Working Capital - Concept and factors affecting their requirements
7.	November	Unit 10: Financial Markets Financial Markets: Concept Money Market: Concept Capital market and its types (primary and secondary) Stock Exchange - Functions and trading procedure Securities and Exchange Board of India (SEBI) - objectives and functions Unit 11: Marketing Marketing – Concept, functions and philosophies Marketing Mix – Concept and elements Product - branding, labelling and packaging – Concept Price - Concept, Factors determining price Physical Distribution – concept, components and channels of distribution Promotion – Concept and elements; Advertising, Personal Selling, Sales Promotion and Public Relations , Unit 12: Consumer Protection Concept and importance of consumer protection The Consumer Protection Act, 2019

		<b>Meaning of consumer Rights and responsibilities of consumers Who can file a complaint? Redressal machinery Remedies available Consumer awareness - Role of consumer organizations and Non-Governmental Organizations (NGOs) and PB1</b>
8.	December	<b>Revision and PB2</b>
9.	January	<b>Revision</b>
		<b>SUBJECT: ECONOMICS</b>
1.	April	<b>Unit 1:Introduction of Macro Economics, Classification of goods, C Real and Nominal Income, GDP Deflator , Stock and Flow, Injection and leakage, Investment, Depreciation National income and its aggregates. Methods of calculating National income, Product method, Expenditure method and Income method.</b>
2.	May & June	<b>Unit 2 :- Money and banking :- Function of money and supply of money, Credit creation function of commercial bank, Function of RBI and Monetary measure of RBI for inflation and deflation. Unit 3: Determination of income and employment :- Concept of consumption and saving, Relation of APC and MPC with APS and MPS, Short run equilibrium output,</b>
3.	July	<b>Unit 3 contd.... Excess and deficient demand with Fiscal and Monetary measure for correcting them. Unit 4 :- Government budget and Economy:- Meaning, Objective and components of budget. Unit 5:- Balance of Payments :- Meaning and components of BOP with Foreign exchange rate and its determination</b>
4.	August	<b>Unit 6 :- Development experience with Economic Reforms since 1991 :- Indian Economy on the eve of independence, Five years plan, Agriculture , Industry and Foreign trade since 1990. Economic reforms. Unit 7:- Current Challenges facing Indian Economy:- Human Capital formation.</b>
5.	September	<b>Unit 7:- Current Challenges facing Indian Economy:- Human Capital formation, Rural development, Employment, and Sustainable Development.</b>
6.	October	<b>Unit 8 :- Development Experience of India with neighbouring country :- India with Pakistan and India with China.</b>
7.	November	<b>Revision and PB1</b>
8.	December	<b>Revision and PB2</b>
9	January	<b>Revision</b>
		<b>SUBJECT: POLITICAL SCIENCE</b>
1.	April	<b>CH 2 End of Bipolarity</b>
2.	May & June	<b>ch 5 contemporary south asia CH 6 International organisation CH 9 Globalisation</b>
3.	July	<b>Ch 1 Challenges og nation building</b>

4.	August	<b>Chapter 2 Era of one party Dominance 3 CH 7</b>
5.	September	<b>Chapter 4 India external relations CH 8 Environmeny</b>
6.	October	<b>Chapter 5 Challenges to and Restoration of congress system Chapter 6 Crisis of democractic order</b>
7.	November	<b>Chapter 6 Restoration of congress system Chapter 9 Recent developments</b>
8.	December	<b>Revision</b>
9	January	<b>Revision</b>
		<b>SUBJECT: HISTORY</b>
1.	April	<b>Unit 1: Bricks, Beads and Bones, Kings, Farmers and Towns.</b>
2.	May & June	<b>Unit 2: Kinship, Caste and Class, Thinkers, Beliefs and Buildings, India Through the Eyes of the Travellers.</b>
3.	July	<b>Revision &amp; PT1</b>
4.	August	<b>Unit 3: Bhakti and Sufi Traditions,Vijayanagara the Imperial City, Peasants , Zamindars and the State</b>
5.	September	<b>Colonialism and the Countryside,REVISION for HY</b>
6.	October	<b>Unit 4:Rebels and the Raj, Mahatma Gandhi and the Indian National Movement</b>
7.	November	<b>Unit 4: Framing the Constitution of India and PB 1</b>
8.	December	<b>Revision &amp; PB-2</b>
9	January	<b>Revision</b>
		<b>SUBJECT: GEOGRAPHY</b>
1.	April	<b>Unit 1: Human Geography</b> <b>Ch 1. Human Geography: Nature and Scope: Dualism in geography, metaphors, Men and nature interaction, Geography through the corridor of time, approaches in the study of geography.</b> <b>Unit 2: People:</b> <b>Ch-2. The World Population- distribution, density and growth</b> <b>Ch-3. Population change – Components of population change, Demographic Transition".</b> <b>Ch-4. Human development – concept; selected indicators, international comparisons</b>
2.	May & June	<b>Unit 6: People</b> <b>Ch-1. Population: distribution, density and growth; composition of population – linguistic, religious; sex, rural-urban and occupational-regional variations in growth of population</b> <b>Unit 7: Human Settlements:</b> <b>Ch-4. Human Settlements</b> <b>Rural settlements – types and distribution, Urban settlements – types, distribution and functional classification</b>

		<p><b>Unit 8: Resources and Development.</b></p> <p><b>Ch-5. Land resources-</b> general land use; agricultural land use; geographical conditions and distribution of major crops (Wheat, Rice, Tea, Coffee, Cotton, Jute, Sugarcane and Rubber); agricultural development and problems.</p> <p><b>Ch-6. Water resources-</b> availability and utilization irrigation, domestic, industrial and other uses; scarcity of water and conservation methods-rain water harvesting and watershed management</p>
3.	July	<p><b>Ch-7. Mineral and energy resources-</b> 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>
4.	August	<p><b>Ch-9. Planning and sustainable development in Indian context :</b>Planning in India- target group area planning (case study); idea of sustainable development (case study)</p> <p><b>Unit 3: Human Activities</b></p> <p><b>Ch-5. Primary activities –</b> concept and changing trends; gathering, pastoral, mining, subsistence agriculture, modern agriculture; people engaged in agricultural and allied activities – some examples from selected countries</p> <p><b>Ch-6. Secondary activities-</b> concept; manufacturing: types – household, small scale, large scale; agro based and mineral based industries;</p> <p><b>Ch-7. Tertiary activities –</b> concept; trade, transport and tourism; services; people engaged in tertiary activities, Quaternary activities- concept; people engaged in quaternary activities</p>
5.	September	<p><b>Unit 9: Transport, Communication and International Trade</b></p> <p><b>Ch-10. Transport and communication-</b>roads, railways, waterways and airways: oil and gas pipelines; Geographical information and communication net works – case study from selected countries</p>
6.	October	<p><b>Ch-11. International trade-</b> changing pattern of India’s foreign trade; sea ports and their hinterland and airports. <b>Unit 4: Transport, Communication and Trade.</b> <b>Ch-8. Transport and communication :</b>Land transport – roads, railways; transcontinental 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><b>Ch-9. International trade-</b> bases and changing patterns; ports as gateways of international trade; role of WTO in international trade and PB1</p>
7.	November	<p><b>Unit 10: Geographical Perspective on selected issues and problems</b></p> <p><b>Ch-12. Geographical Perspective on selected issues and problems-</b> Environmental pollution; urban-waste disposal, Urbanization, rural-urban migration; problems of slums, Land degradation. PB2</p>
8.	December	<p><b>Revision and PB2</b></p>



9	January	<b>Revision</b>
		<b>SUBJECT: HINDI</b>
1.	April	आरोह भाग - 2 गद्य: भक्तिन गद्य: बाजार दर्शन, आरोह भाग - 2 पद्य: आत्म परिचय एक गीत
2.	May & June	आरोह भाग - 2  पद्य: पतंग वितान भाग - 2 सिल्वर वेडिंग अपठित गद्यांश, पद्यांश, गद्य: काले मेघा पानी दे कविता के बहाने
3.	July	आरोह भाग - 2  विभिन्न माध्यमों के लिए लेखन, आरोह भाग - 2 पद्य: बात सीधी थी पर कैमरे में बंद अपाहिज , पत्रकारी लेखन के विभिन्न रूप और लेखन प्रक्रिया, कैसे बनता है रेडियो नाटक रचनात्मक लेख- समाचार लेखन, फीचर / आलेख
4.	August	वितान भाग - 2 जूझ अप्रत्याशित लेखन विशेष लेखन स्वरूप और प्रकार, गद्य: पहलवान की ढोलक, शिरीष के फूल कैसे करें कहानी का नाट्य रूपांतरण
5.	September	आरोह भाग - 2 पद्य: उषा, बादल राग, कवितावली, लक्ष्मण मूर्च्छा और राम का विलाप, वितान भाग - 2 अतीत में दबे पाँव
6.	October	आरोह भाग - 2 गद्य: श्रम विभाजन और जाति प्रथा, मेरी कल्पना का आदर्श समाज आरोह भाग - 2 पद्य: रूबाइया, छोटा मेरा खेत , बगूलों के पंख
7.	November	<b>PB1</b>

8.	December	<b>PB2</b>
9	January	<b>Revision</b>
		<b>SUBJECT: PAINTING</b>
1.	April	<b>UNIT-1 THE RAJASTHANI AND PAHARI SCHOOLS OF MINIATURE PAINTINGS</b> <b>A BRIEF INTRODUCTION TO INDIAN MINIATURE SCHOOLS: WESTERN INDIAN, PALA, RAJASTHANI, MUGAL, CENTRAL INDIA, DECCAN AND PAHARI</b> <b>A. 1. ORIGIN AND DEVELOPMENT</b> <b>2. SUB-SCHOOLS: MEWAR,BUNDI,JODHPUR,BIKANER,KISHANGARHAND JAIPUR</b>
2.	May & June	<b>3. MAIN FEATURES OF RAJASTHANI SCHOOL.APPRECIATION OF THE FOLLOWING PAINTINGS: MARU RAGINI, CHAUGAN PLAYER, KRISHNA ON SWING, RADHA BANI THANI, BHARAT MEETS RAMA AT CHITRAKUTA.ORIGIN AND DEVELOPMENT OF THE PAHARI SCHOOL</b> <b>2. SUB SCHOOL: BASHOLI,GULER,KANGRA,CHAMBA AND GARWAL</b> <b>3. MAIN FEATURES OF THE PAHARI SCHOOL</b> <b>APPRECIATION OF FOLLOWING PAINTINGS:</b> <b>1. KRISHNA WITH GOPIS</b> <b>2. NAND YASHODA AND KRISHNA WITH KINSMEN GOING TO VRINDAVANA REVISION OF UNIT-I RAJASTHANI AND PAHARI SCHOOL OF MINIATURE PAINTINGS,INTRODUCTION,ORIGIN AND DEVELOPMENT,MAIN FEATURES,CHARACTERSTICS,SUB-SCHOOLS AND APPRECIATION OF THE PAINTINGS.</b>
3.	July	<b>UNIT-II THE MUGAL AND DECCAN SCHOOL OF MINIATURE PAINTINGS.</b> <b>THE MUGHAL SCHOOL:</b> <b>1. ORIGIN AND DEVELOPMENT</b> <b>2. MAIN FEATURES OF THE MUGHAL SCHOOL</b> <b>3. APPRECIATION OF FOLLOWING MUGAL PAINTINGS:</b> <b>KRISHNA LIFTING MOUNT GOVERDHANA,FALCON ON A BIRD REST, KABIR AND RAIDAS, MARRIAGE PROCESSION OF DARASHIKOH DECCAN SCHOOL.</b> <b>ORIGIN AND DEVELOPMENT</b> <b>2. MAIN FEATURES OF DECCAN SCHOOL</b> <b>3.APPRECIATION OF FOLLOWING DECCAN PAINTINGS: HAZRA NIZAMUDDIN AULIYA AND AMIR KHUSRO, CHAND BIBI PLAYING POLO.</b>
4.	August	<b>UNIT-III THE BENGAL SCHOOL OF PAINTING AND THE MODERN TRENDS IN INDIAN ART</b> <b>OCTOBER</b> <b>NATIONAL FLAG OF INDIA AND THE SYMBOLIC SIGNIFICANCE OF ITS FORMS AND COLOURS.</b>

		<p><b>INTRODUCTION TO THE BENGAL SCHOOL OF PAINTINGS</b></p> <p><b>1. ORIGIN AND DEVELOPMENT OF THE BENGAL SCHOOL OF PAINTINGS.</b></p> <p><b>1. MAIN FEATURES OF THE BENGAL SCHOOL OF PAINTINGS. APPRECIATION OF THE FOLLOWING PAINTING OF BENGAL SCHOOL:</b></p> <p><b>1. JOURNEY'S END</b></p> <p><b>2. SHIVA AND SATI</b></p> <p><b>3. RADHIKA</b></p> <p><b>4. MEGHDOOT CONTRIBUTION OF INDIAN ARTISTS IN THE STRUGGLE FOR NATIONAL FREEDOM MOVEMENT.</b></p>
5.	September	<p><b>Appreciation of the following contemporary (Modern) Indian Art (1) Rama Vanquishing the Pride of the Ocean - Raja Ravi Varma</b></p> <p><b>Paintings:</b></p> <p><b>(ii) Mother and child - Jamini Roy (iii) Haldi Grinders - Amrita Sher Gill</b></p> <p><b>(iv) Mother Teresa - M.F.Husain</b></p> <p><b>Graphic-prints:</b></p> <p><b>(1) Children - Somnath Hore</b></p> <p><b>(ii) Devi-Jyoti Bhatt (ii) Of Walls - Anupam Sud</b></p> <p><b>(iv) Man, Woman and Tree - K. Laxma Goud</b></p> <p><b>Sculptures: (i) Triumph of Labour D. P. Roychowdhury</b></p> <p><b>(ii) Santhal Family - RamkinkarVaij (iii) Cries Un - heard - Amar Nath Sehgal (iv) Ganesha - P.V. Janaki Ram</b></p>
6.	October	<b>Revision</b>
7.	November	<b>Revision and PB1</b>
8.	December	<b>Revision and PB2</b>
9	January	<b>Revision</b>