



School Syllabus

Session 2024-25



DAV PUBLIC SCHOOLS

Jharkhand Zone - G

*Managed by : DAV College Managing Committee, New Delhi-
110055*

**CLASS
XII**

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G
Session - 2024-25 ENGLISH

Month	Topics to be Covered
April	Prose(Flamingo) – The last lesson Prose(Vistas)- The Third Level Poetry- My Mother at Sixty Six Writing – Notice Writing
May-June	Prose (Flamingo)– Lost Spring : stories of stolen childhood Prose(Vistas)- The Tiger King Poetry- Keeping Quiet Writing – Formal /Informal Invitation
July	Prose (Flamingo)– Deep Water Prose(Vistas)- Journey to the End of the Earth Poetry- A thing of Beauty Writing – Letter Writing (Application for job ,letter to the Editor)
August	Prose – (Flamingo) – The Rattrap , Indigo Prose(Vistas)- The Enemy Poetry- Revision Writing – Article Writing
September	HALF YEARLY EXAM
October	Prose – (Flamingo) Poets And Pancakes Prose(Vistas)- On the Face of it Poetry- A Roadside Stand Writing –Report writing
November	Prose – (Flamingo) The Interview ,Going Places Prose(Vistas)-Memories of childhood Poetry- Aunt Jennifer’s Tigers Writing – sample paper practice
December	PRE BOARD 1
January	PRE BOARD 2
February	BOARD EXAM

<i>MONTHS</i>	<i>UNITS AND TOPICS</i>
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APRIL	<p><i>Unit I: Electrostatics</i> <i>Chapter 1: Electric Charges and Fields</i> <i>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).</i> <i>Chapter-2: Electrostatic Potential and Capacitance</i> <i>Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges, equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor (no derivation, formulae only)</i></p>
MAY	<p><i>Unit II -Current Electricity Chapter 3: Current Electricity</i> <i>Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current, Ohm's law, electrical resistance, combination of resistances, 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. Kirchoff's laws and simple applications. Wheatstone bridge.</i></p>
JUNE	<p><i>Unit III-Magnetic Effects of Current and Magnetism</i> <i>Chapter 4: Moving Charges and Magnetism</i> <i>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 infinity long straight wire. Straight solenoids (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields. Force on a current carrying conductor in a uniform magnetic field, force between two parallel current- carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field, moving coil galvanometer - its current sensitivity and conversion to ammeter and voltmeter. Current Loop as magnetic dipole moment and its magnetic dipole moment</i></p>
JULY	<p><i>.Chapter 5-Magnetism and Matter</i> <i>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 ferromagnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.</i> <i>Unit IV-Electromagnetic Induction and Alternating Currents</i> <i>Chapter 6-Electromagnetic Induction</i> <i>Electromagnetic induction, Faraday's laws, induced EMF and current, Lenz's law, self and mutual induction.</i></p>
AUGUST	<p><i>Chapter-7: Alternating Current</i> <i>Alternating, currents, peak and RMS value of alternating current / voltage, reactance and impedance, LCR series circuit, resonance, power in AC circuits, power factor, watt less current, AC generator and transformer.</i> <i>Chapter 8: Electromagnetic Waves</i> <i>Basic idea of displacement, current, Electromagnetic waves, their characteristics, their Transverse nature (qualitative ideas only).</i> <i>Electromagnetic spectrum (radio waves, microwaves, infrared visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.</i> <i>Unit VI-Optics Chapter 9-Ray Optics and Optical Instruments</i> <i>Ray Optics: Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lensmaker's formula, magnification, power of a lens, combination of thin lenses in contact, combination of a lens in contact, refraction and dispersion of light through a prism.</i> <i>Optical Instruments: Microscopes and astronomical telescope (reflecting and refracting and their magnifying powers</i></p>
SEPTEMBER	HALF YEARLY EXAM

OCTOBER	<p><i>Chapter 10-Wave Optics</i> <i>Wave optics: Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts, Proof of laws of reflection and refraction using Huygen's principle, Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light, Diffraction due to a single slit, width of central maximum (qualitative treatment only).</i></p> <p><i>Unit VII-Dual Nature of Radiation and Matter</i> <i>Chapter 11-Dual Nature of Radiation and Matter</i> <i>Dual Nature of Radiation, Photoelectric effect, Hertz and Lenard's observations, Einstein's photoelectric equation-particle nature of light. Matter waves-wave nature of particles, de Broglie relation. Experimental study of photoelectric effect. Matter waves-wave nature of particles, de-Broglie relation</i></p> <p><i>Unit VIII-Atoms and Nuclei Chapter 12-Atoms</i> <i>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, of hydrogen line spectra (qualitative treatment only).</i></p> <p><i>Chapter 13-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.</i></p>
NOVEMBER	<p><i>Unit IX-Electronic Devices</i> <i>Chapter 14-Semiconductor Electronics Materials Devices and Simple Circuits</i></p> <p><i>Energy bands in conductors, semiconductors and insulators (qualitative ideas only)</i> <i>Semiconductor diode -I-V characteristics in forward and reverse bias, diode as a rectifier, Intrinsic and extrinsic semi conductor P and n type, p-njunction</i></p>
DECEMBER	PRE BOARD EXAMINATION 1
JANUARY	PRE BOARD EXAMINATION 2
FEBRUARY	BOARD EXAM

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G**Session - 2024-25****CHEMISTRY**

Month	Chapter/Unit
APRIL	1.Solution Types of solution, expression of concentration of solutions of solid in liquids, solubility of gases in liquids, solid solutions, Colligative properties, relative lowering of vapour pressure, Henry's law, Raoult's law, Elevation of boiling point, depression of freezing point, Osmotic pressure, determination of molecular masses using colligative properties, Abnormal molecular mass, Van't Hoff factor
MAY & JUNE	2.Electrochemistry- Redox reactions, 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 cell and Galvanic cells, lead accumulator, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs free energy change and EMF of a cell, fuel cells, corrosion, 3.Chemical Kinetics Rate of 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 order and first reactions) concept of collision theory (elementary idea), Activation energy, Arrhenius equation.
JULY	4. d and f Block Elements General introduction, electronic configuration, occurrence and characteristic 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 $K_2Cr_2O_7$ (Potassium Dichromate), $KMnO_4$ (Potassium permanganate), Lanthanoids- Electronic configuration, Oxidation states, chemical reactivity and lanthanoid contraction and its consequences, Actinoids-Electronic configuration, oxidation states and comparison with lanthanoids, 5.Co-ordination 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, structural and stereoisomerism, importance of coordination compounds (in qualitative inclusion, extraction of metals and biological system)
AUGUST	6.Haloalkanes and Haloarenes— Haloalkanes: Nomenclature, nature of C—X bond, physical and chemical properties, mechanisms of Substitution reactions, optical rotation, Haloarenes: Nature of C—X bond, substitution reactions(Directive influence of halogen in monosubstituted compounds only). Uses and environmental effects of—dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT
SEPTEMBER	HALF YEARLY EXAM
OCTOBER	7. Alcohols, Phenols and Ethers : Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, used with special reference to methanol and ethanol. Phenols:Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses 8. Aldehydes, Ketones and Carboxylic Acids: Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses. Carboxylic acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties, uses.
NOVEMBER	9.Organic compounds containing Nitrogen: Amines:Nomenclature, classification, structure, methods of preparation,physical and chemical properties, uses, identification of primary, secondary and tertiary amines.

	<p>Diazonium salts:Preparation, chemical reactions and importance in synthetic organic chemistry.</p> <p>10.Biomolecules: Carbohydrates:Classification (aldoses and ketoses), Monosaccharides(glucose and fructose), D-L configuration, oligosaccharides, (sucrose, maltose etc.) Polysaccharides:(starch, cellulose), importance of carbohydrates. Proteins:Elementary idea of-amino acids, peptide bond, poly peptides, proteins, structure of proteins-primary, secondary, tertiary structure and quaternary structure (qualitative idea only), denaturation of proteins, enzymes. Hormones:Elementary idea only. Vitamins—Classification and functions. Nucleic Acids:DNA and RNA.</p>
DECEMBER	Pre-Board Examination. 1
JANUARY	Pre Board Examination 2
FEBRUARY	BOARD EXAM

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G
Session - 2024-25
BIOLOGY

Months	Name of chapter
April	Ch-1: Sexual reproduction in flowering plant
May-June	Ch-2: Human reproduction
July	Ch-3: Reproductive health Ch-4: Principles of inheritance and variation
August	Ch-5: Molecular basis of inheritance Ch-6: Evolution
September	Ch-7: Human health and disease Ch-8:Microbes in human welfare
	Half Yearly Exam(Ch-1,2,3,4,5,6,7,8)
October	Ch-9: Biotechnology: Principles and processes
November	Ch-10: Biotechnology and its applications Ch-11: Organisms and populations Ch-12: Ecosystem Ch-13: Biodiversity and conservation
December	PRE BOARD 1
January	PRE BOARD 2
February	BOARD EXAM

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G

Session - 2024-25

ACCOUNTANCY

UNIT		TOPICS
<p>Unit 1: Accounting for Partnership Firms</p>	<p>APRIL- JULY</p>	<ul style="list-style-type: none"> • Partnership: features, Partnership Deed. • Provisions of the Indian Partnership Act 1932 in the absence of partnership deed. • Fixed v/s fluctuating capital accounts. Preparation of Profit and Loss Appropriation account- division of profit among partners, guarantee of profits. • Past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio). • Goodwill: meaning, nature, factors affecting and methods of valuation - average profit, super profit and capitalization. Note: Interest on partner's loan is to be treated as a charge against profits. Goodwill: meaning, factors affecting, need for valuation, methods for calculation (average profits, super profits and capitalization), adjusted through partners capital/ current account. Accounting for Partnership firms - Reconstitution and Dissolution. • 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, accumulated profits and losses. Preparation of revaluation account and balance sheet. • 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, accumulated profits and losses, adjustment of capital accounts and preparation of capital, current account and balance sheet. • 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, losses and reserves, adjustment of capital accounts and preparation of capital, current account and 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)) Note: (i) If the realized value of tangible assets is not given it should be considered as realized at book value itself. (ii) If the realized value of intangible assets is not given it should be considered as nil (zero value). (ii) In case, the realization expenses are borne by a partner, clear indication should be given regarding the payment thereof.

Unit-3 Accounting for Companies	AUGUST	Accounting for Share Capital • Features and types of companies. • Share and share capital: nature and types. Accounting for share capital: 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), Sweat Equity. • Accounting treatment of forfeiture and reissue of shares. • Disclosure of share capital in the Balance Sheet of a company
	SEPTEMBER	HALF YEARLY EXAM
	OCTOBER	Accounting for Debentures • Debentures: Meaning, types, 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 (concept of TDS is excluded). Writing off discount / loss on issue of debentures. Note: Discount or loss on issue of debentures to be written off in the year debentures are allotted from Security Premium Reserve (if it exists) and then from Statement of Profit and Loss as Financial Cost (AS 16)
Unit 4: Analysis of Financial Statements		Financial statements of a Company: Meaning, Nature, Uses and importance of financial Statement. 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) • Financial Statement Analysis: Meaning, Significance Objectives, importance and limitations. • Tools for Financial Statement Analysis: Comparative statements, common size statements, Ratio analysis, Cash flow analysis. • Accounting Ratios: Meaning, Objectives, Advantages, classification and computation. • Liquidity Ratios: Current ratio and Quick ratio. • Solvency Ratios: Debt to Equity Ratio, Total Asset to Debt Ratio, Proprietary Ratio and Interest Coverage Ratio. Debt to Capital Employed Ratio. • Activity Ratios: Inventory Turnover Ratio, Trade Receivables Turnover Ratio, Trade Payables Turnover Ratio, Fixed Asset Turnover Ratio, Net Asset Turnover Ratio and Working Capital Turnover Ratio. • Profitability Ratios: Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, Net Profit Ratio and Return on Investment. Note: Net Profit Ratio is to be calculated on the basis of profit before and after tax.
Unit 5: Cash Flow Statement	NOVEMBER	Meaning, objectives Benefits, Cash and Cash Equivalents, Classification of Activities and preparation (as per AS 3 (Revised) (Indirect Method only) Note: (i) Adjustments relating to depreciation and amortization, profit or loss on sale of assets including investments, dividend (both final and interim) and tax. (ii) Bank overdraft and cash credit to be treated as short term borrowings. (iii) Current Investments to be taken as Marketable securities unless otherwise specified. Note: Previous years' Proposed Dividend to be given effect, as prescribed in AS-4, Events occurring after the Balance Sheet date. Current years' Proposed Dividend will be accounted for in the next year after it is declared by the shareholders. Project Work As per CBSE guidelines.
DECEMBER		PRE BOARD 1
JANUARY		PRE BOARD 2
FEBRUARY		BOARD EXAM

DAV PUBLIC SCHOOLS, JHARKHAND
ZONE-G

Session - 2024-25

SUBJECT: BUSINESS STUDIES

UNIT		TOPICS
Unit 1: Nature and Significance of Management	APRIL- JUNE	Management - concept, objectives, and importance. Management as Science, Art and Profession Levels of Management Management functions-planning, organizing, staffing, directing and controlling Coordination- concept and importance
Unit-2- Principles of Management		Principles of Management - concept and significance Fayol's principles of management Taylor's Scientific management - principles and techniques
Unit 3: Business Environment		Business Environment- concept and importance Dimensions of Business Environment - Economic, Social, Technological, Political and Legal Demonetization - concept and features
Unit 4: Planning		Planning: Concept, importance and limitation Planning process.Single use and Standing Plans. Objectives, Strategy, Policy, Procedure, Method, Rule, Budget and Programme
Unit 5: Organising	JULY- AUGUST	Organising: Concept and importance Organising Process.Structure of organisation- functional and divisional concept. Formal and informal organization – concept Delegation: concept, elements and importance Decentralization: concept and importance
Unit 6: Staffing		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
Unit 7: Directing		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?
		SEPTEMBER
	OCTOBER	.
Unit 8: Controlling		Controlling - Concept and importance Relationship between planning and controlling Steps in process of control
Unit 9: Financial Management		Financial Management: Concept, role and objectives.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.

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	NOVEMBER	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		Consumer Protection: Concept and importance.The Consumer Protection Act, 2019: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)
Unit 13: Project Work, as per CBSE Curriculum		
	DECEMBER	PRE BOARD EXAM 1
	JANUARY	PRE BOARD EXAM 2
	FEBRUARY	BOARD EXAM

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G

Session - 2024-25

SUBJECT: Economics

		UNIT/TOPICS
Unit-1:	April-may	<p><u>National Income and Related Aggregates</u> What is Macroeconomics? Basic concepts in macroeconomics: consumption goods, capital goods, final goods, intermediate goods; stocks and flows; gross investment and depreciation. Circular flow of income (two sector model); Methods of calculating National Income - Value Added or Product method, Expenditure method, Income method. Aggregates related to National Income: Gross National Product (GNP), Net National Product (NNP), Gross Domestic Product (GDP) and Net Domestic Product (NDP) - at market price, at factor cost; Real and Nominal GDP GDP Deflator, GDP and Welfare.</p> <p><u>Money and Banking</u> Money – meaning and functions, supply of money - Currency held by the public and net demand deposits held by commercial banks. Money creation by the commercial banking system.</p>
Unite-2		<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, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Repo Rate and Reverse Repo Rate, Open Market Operations, Margin requirement.</p>
Unite-6		<p><u>Development Experience (1947-90) and Economic Reforms since 1991</u> A brief introduction of the state of Indian economy on the eve of independence. Indian economic system and common goals of Five Year Plans. Main features, problems and policies of agriculture (institutional aspects and new agricultural strategy), industry (IPR 1956; SSI – role & importance) and foreign trade. Economic Reforms since 1991: Features and appraisals of liberalisation, globalisation and privatisation (LPG policy); Concepts of demonetization and GST.</p>
Unit-3	July-Aug.	<p><u>Determination of Income and Employment</u> Aggregate demand and its components. Propensity to consume and propensity to save (average and marginal). Short-run equilibrium output; investment multiplier and its mechanism. Meaning of full employment and involuntary unemployment. Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply.</p>
Unit-7		<p><u>Current challenges facing Indian Economy</u> Human Capital Formation: How people become resource; Role of human capital in economic development; Growth of Education Sector in India Rural development: Key issues - credit and marketing - role of cooperatives; agricultural diversification; alternative farming - organic farming Employment: Growth and changes in work force participation rate in formal and informal sectors; problems and policies Sustainable Economic Development: Meaning, Effects of Economic Development on Resources and Environment, including global warming</p>

	SEPTEMBER	HALF YEARLY EXAM
UNIT 4 Unit-5 Unit:8	Oct-Nov.	<p><u>Government Budget and the Economy</u> Government budget - meaning, objectives and components. Classification of receipts - revenue receipts and capital receipts; Classification of expenditure – revenue expenditure and capital expenditure. Balanced, Surplus and Deficit Budget – measures of government deficit.</p> <p><u>Balance of Payments</u> Balance of payments account - meaning and components; Balance of payments – Surplus and 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.</p> <p><u>Development Experience of India: A comparison with neighbours India and Pakistan India and China Issues: economic growth, population, sectoral development and other Human Development Indicators</u></p>
	DECEMBER	<u>PRE BOARD EXAM -1</u>
	JANUARY	<u>PRE BOARD EXAM 2</u>
	FEBRUARY	<u>BOARD EXAM</u>

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G

Session - 2024-25

MATHEMATICS XII

MONTH	UNIT	TOPIC
APRIL	Unit-I: Relations and Functions	Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions Inverse Trigonometric Functions Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions.
MAY	UNIT II Algebra	1. Matrices Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operations on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non-commutativity 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
JUNE	UNIT II Algebra	2. Determinants 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.
JULY	Unit-III: Calculus	1. Continuity and Differentiability Continuity and differentiability, chain rule, derivative of inverse trigonometric functions, like \sin^{-1} , $\cos^{-1} x$ and $\tan^{-1} x$, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. 2. Applications of Derivatives Applications of derivatives: rate of change of quantities, 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).
AUGUST	Unit-III: Calculus	3. Integrals Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts. Evaluation of simple integrals of the following types and problems based on them, $\int \frac{px+q}{dx}$, $\int \frac{px+q}{\sqrt{x^2+a^2}} dx$, $\int \frac{px+q}{\sqrt{x^2-a^2}} dx$, $\int \frac{px+q}{\sqrt{a^2-x^2}} dx$, $\int \frac{px+q}{\sqrt{ax^2+bx+c}} dx$, $\int \frac{px+q}{ax^2+bx+c} dx$ and according to CBSE syllabus(2024-25)

		<p>Fundamental Theorem of Calculus(without proof).Basic properties of definite integrals and evaluation of definite integrals.</p> <p>4. Applications of the Integrals Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only)</p> <p>5. Differential Equations Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type $dy/dx+py=q$, where p and q are functions of x or constants. $dx/dy+px=q$, where p and q are functions of y or constants</p>
SEPTEMBER	HALF YEARLY EXAM	
OCTOBER	<p>Unit-IV: Vectors and Three- Dimensional Geometry</p>	<p>1. Vectors Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors</p> <p>2. Three - dimensional Geometry Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. Angle between two lines.</p>
NOVEMBER	<p>Unit-V: Linear Programming</p> <p>Unit-VI: Probability</p>	<p>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>Probability Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable.</p>
DECEMBER	PRE BOARD EXAM 1	
JANUARY	PRE BOARD EXAM 2	
FEBRUARY	BOARD EXAM	

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G**Session - 2024-25****PHYSICAL EDUCATION XII**

UNIT NO.	UNIT NAME
	TERM 1 (APRIL-AUGUST)
UNIT 1	Management of Sporting Events
UNIT 2	Children and Women in Sports
UNIT 3	Yoga as Preventive measure for Lifestyle Disease
UNIT 4	Physical Education & Sports for (CWSN)
UNIT 5	Sports & Nutrition
UNIT 6	Test and Measurement in Sports
	HALF YEARLY EXAM
UNIT 7	Physiology & Injuries in Sport
UNIT 8	Biomechanics and Sports
UNIT 9	Psychology and Sports
UNIT 10	Training in Sports
DECEMBER	PRE BOARD EXAM 1
JANUARY	PRE BOARD EXAM 2
FEBRUAR Y	BOARD EXAM

DAV PUBLIC SCHOOLS, JHARKHAND ZONE-G**Session - 2024-25****PAINTING**

MONTH	UNIT	TOPICS
APRIL	Unit-1;The Rajasthani school	1. origin and Development 2. Sub-school -Mewar,Bundi, Jodhpur, Bikaner, Kishangarh,Jaipur 3. Main features of Rajasthani schools 4. Study and appreciation of the following Rajasthani (b) Chaugan players (c) Krishna on swing (d)Radha (Bani-Thani) (e)Bharat meets Rama at citrakut
MAY- JUNE	Unit-1 :The Pahari school	1. origin and development 2. Sub-school -Mewar,Bundi, Jodhpur,

		<p>3. Main features of Pahari schools</p> <p>4. Study and appreciation of the following paintings</p> <p>(a) Krishna with Gopis</p> <p>(b) Nand, yashoda and Krishna with kinsmen going to Vrindavana</p>
JULY	Unit-2 The Mughal School	<p>1. origin and development</p> <p>2. Sub-school</p> <p>3. Main features of Mughal schools</p> <p>4. Study and appreciation of the following Mughal painting</p> <p>5. (a) Krishna lifting mount Govardhan Falcon</p> <p>(b) Falcon on a bird-rest</p> <p>(c) Kabir and Raidas</p> <p>(d) Marriage Procession of Dara Shikoh</p>
AUGUST	Unit-2: The Deccan school	<p>1. Origin and development</p> <p>2. Main features of Deccan schools</p> <p>3. Study and appreciation of the following Deccan Painting</p> <p>(a) Hazrat Nizamuddin Auliya and Amir Khusro</p> <p>(b) Chand Bibi playing polo (Chaugan)</p>
SEPTEMBER		
OCTOBER	Unit-3 The Bengal school of art	<p>National flag of India and symbolic significance of form and colours</p> <p>(b) (1) introduction to the Bengal school of painting</p> <p>(i) origin and development of Bengal school</p> <p>(ii) features of Bengal school of painting</p> <p>(iii) study and appreciation of the following painting of Bengal school</p> <p>(a) Journey's End</p> <p>(b) Radhika</p> <p>(c) Meghdoot</p> <p>(d) Shiva and sati</p> <p>(iv) Contribution of Indian artist in the struggle for National freedom movement</p>
NOVEMBER	Unit-4: The Modern trending Indian art	<p>1. Study and appreciation of the following work of contemporary Indian art</p> <p>(a) Painting</p> <p>(i) Rama Vanquishing the pride of the ocean</p> <p>(ii) Mother and Child</p> <p>(iii) Haldi Grinders</p> <p>(iv) Mother Teresa</p> <p>(b) Graphic</p> <p>(i) Children</p> <p>(ii) Devi</p> <p>(iii) Of Walls</p> <p>(iv) Man, Woman, and Child trees</p> <p>(c) Sculpture</p> <p>(i) Triumph of labour</p> <p>(ii) Santhal Family</p> <p>(iii) Cries Un-Heard</p> <p>(iv) Ganesha</p>
DECEMBER		PRE BOARD EXAM 1
JANUARY		PRE BOARD EXAM 2
FEBRUARY		BOARD EXAM



D.A.V PUBLIC SCHOOLS JHARKHAND ZONE -G
SYLLABUS: 2024-25

Subject–Computer Science(083)

SINo.	Month	Chapter	Topics
1	April	Revision of the basic of Python covered in Class- XI	Variables and Data Types, Keywords, Mutable and Immutable Types, Operators and Operands, Type Casting, Flow of Execution, Strings, Lists, Tuples, Dictionary
2		Functions	Types of function(built-in functions, functions defined in module, user defined functions), creating user defined function, arguments and parameters, default parameters, positional parameters, function returning value(s), flow of execution, scope of a variable (global scope, local scope).
3	May	Exception Handling	Exception Handling: Introduction, handling exceptions using try-except-finally Blocks.
4	June	Types of files	Introduction to files, types of files(Text file, Binary file, CSV file), relative and absolute paths 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.
5	July	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.
6	August	Stack , Data Structure	Stack, operations on stack (push & pop),implementation of stack Using list. Database concepts: introduction to database concepts and its need.
	September	HALF YEARLY EXAM	

7	October	Relational data mode	<p>Relation, attribute, tuple, domain, degree, cardinality, keys(candidate key, primary key, alternate key, foreignkey).</p> <p>Introduction, Data Definition Language and Data Manipulation Language, data type(char(n), var char(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),</p>
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		Structured Query Language	aliasing , distinct clause, whereclause, in ,between, orderby, meaning of null, isnull, isnotnull, 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.
8	November	Interface of python with and 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
9		Communication and Network Concepts	Types of Networks, Evolution of Networking, Switching Techniques, Data Communication Terminologies, Transmission Media, Network Topologies, Network Devices, Network Protocols, Wireless/Mobile communication, Internetworking Terms and concepts
10	December	PRE BOARD EXAM 1	
	January	PRE BOARD EXAM 2	
	February	BOARD EXAM	

Term I syllabus:- Revision of the basic of Python covered in Class- XI to Stack ,
Data Structure
Term II syllabus:-Full syllabus.





















