



Indian School Wadi Kabir

Class: XII

ISWK SHARING KNOWLEDGE
(Monthly Plan - August 2022)

SUBJECTS	Week - 1	Week - 2	Week - 3	Week - 4	Week - 5	Learning Outcomes
ENGLISH	THE RATTRAP (FLAMINGO) NOTICE – LOST AND FOUND	THE RATTRAP continued. ARTICLE WRITING COMPREHENSION KEEPING QUIET (FLAMINGO - POEM) THE TIGER KING	JOURNEY TO THE END OF THE WORLD (VISTAS) LETTER TO EDITOR	INDIGO (FLAMINGO) INVITATION - FORMAL	INDIGO (FLAMINGO)- CNTD INVITATION - INFORMAL	STUDENTS WILL BE - ABLE TO WRITE THE VARIOUS WRITING TASKS USING CORRECT FORMAT, LAYOUT AND LANGUAGE. ABLE TO ANSWER SHORT AND LONG ANSWER TYPE QUESTIONS BASED ON LOCAL AND GLOBAL COMPREHENSION OF THE CHAPTERS

<p>MATHEMATICS</p>	<p>Application of derivatives:</p> <p>*Rate of change, increasing decreasing functions.</p>	<p>Application of derivatives</p> <p>Increasing decreasing functions, Maxima and minima , second derivative test</p>	<p>Application of derivatives:</p> <p>*Maxima, minima, word problems</p>	<p>Linear Programming:</p> <p>Graphs, solving LPP</p> <p>Integrals:</p> <p>Integration as an inverse process of differentiation. Integration of a variety of functions by substitution and formula</p>	<p>Integrals:</p> <p>Integration of a variety of Trigonometry functions and special formula</p> <p>Integration by partial fraction , by parts</p>	<p>Students will be able to apply the concept of derivatives and integrals in relevant situations.</p> <p>will be able to apply the concept of linear programming to solve diet/maximise/transportation related sums.</p>
<p>PHYSICS</p>	<p>CHAPTER-5-MAGNETISM AND MATTER- Bar magnet, bar magnet as a solenoid (qualitative treatment only). Magnetic field intensity due to a magnetic dipole along its axial and equatorial line. (qualitative treatment only). Torque on a magnetic dipole in a uniform magnetic field. (qualitative treatment only). Magnetic field lines.</p>	<p>CHAPTER-5-MAGNETISM AND MATTER-</p> <p>Magnetic properties of materials. Dia, para and ferro magnetic materials with examples. Magnetization of materials. Effect of temperature on magnetic properties.</p> <p>Exercises and worksheet.</p>	<p><u>CH-6-Electromagnetic induction;</u> Faraday's laws, induced EMF and current; Lenz's Law, Eddy currents. Self and mutual induction.</p> <p>Exercises and worksheet.</p>	<p><u>Ch-7-Alternating currents,</u> 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</p>	<p><u>CH-8-Electromagnetic waves.</u> Need for displacement current, Electromagnetic waves and their characteristics</p> <p>Transverse nature of electromagnetic waves (qualitative</p>	<p>Students will be able to apply the acquired knowledge and skill in deriving expressions, solving numerical, stating the laws.</p> <p>Students will learn about the different methods to induce an emf in a given conductor which is useful to understand the concept of Mutual and self</p>

				generator and transformer. Exercises and worksheet.	ideas only). Electromagnetic spectrum including elementary facts about their uses. Exercises and worksheet.	induction. Students acquire the basic knowledge about the Principle construction working and application of Transformer and Dynamo
CHEMISTRY	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. Unit VIII: d and f Block Elements	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 and Actinoids – Electronic configuration, oxidation states, chemical reactivity and lanthanoid contraction and its consequences. - comparison with lanthanoids.	Coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT	structure and stereoisomerism, the importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).	Students will be able to <ul style="list-style-type: none"> • learn the positions of the d- and f-block elements in the periodic table; • know the electronic configurations of the transition (d-block) and the inner transition (f-block) elements; • appreciate the relative stability of various oxidation states in terms of

	General introduction, electronic configuration		<p>Unit IX: Coordination Compounds</p> <p>Coordination compounds - Introduction, ligands.</p>			electrode potential values.
BIOLOGY	Molecular basis of inheritance –Transcription - Translation	Molecular basis of inheritance –HGP and Fingerprinting	Human health and diseases - Diseases, Life cycle of Plasmodium, Cancer	<p>Human health and diseases - AIDS, Drug and alcohol abuse</p> <p>Microbes in human welfare – Household, industrial and agricultural roles</p>	<p>Microbes in human welfare – Sewage treatment, biocontrol agents, biofertilisers</p>	<p>Students are able to explain the importance of transcription and translation</p> <p>Describe the steps involved in transcription and translation</p> <p>Explain the symptoms, causative organism and mode of infection of different diseases</p> <p>Appreciate the beneficial roles of different microbes</p>

<p>INFORMATICS PRACTICES</p>	<p>Revision on Data Frame methods.</p>	<p>Purpose of plotting; drawing and saving following types of plots using Matplotlib – line plot, bar graph, histogram</p>	<p>Customising plots: adding label, title, and legend in plots.</p>	<p>Math functions: POWER (), ROUND (), MOD (). Text functions: UCASE ()/UPPER (), LCASE ()/LOWER (), MID ()/SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM ().</p>	<p>Students will understand the various types of charts in matplotlib. Students will understand the use of Math functions and Text Functions in MySQL.</p>	
<p>COMPUTER SCIENCE</p>	<p>File Handling CSV File: Import csv module, functions – Open / Close a csv file, Read from a csv file and Write into a csv file using csv.reader () and csv.writerow().</p>	<p>Stack and Queue: Implementation of Push() and Pop() in stack – Enqueue() and Dequeue() operations in Queue</p>	<p>Database concepts – terms - keys Introduction to database concepts and its need - Relational data model: relation, attribute, tuple, domain, degree, cardinality, keys (candidate key, primary key,</p>	<p>Structured Query Language – Data type - Constraints Introduction, Data Definition Language and Data Manipulation Language, data type (char(n), varchar(n), int,</p>	<p>DDL Commands – Create / Alter / Drop / Desc / use create database, database, show databases, drop describe table, a (drop table, ins delete, select, c where clause, in, between, order by,</p>	<p>Students will be able to understand the concept of csv files. how to do operations on csv files through a python program. Students will be introduced to database management system. different SQL commands will be made to practice for better understanding</p>

			alternate key, foreign key)	float, date), constraints (not null, unique, primary key	meaning of null, is null, is not null, like	
ACCOUNTANCY	RATIO ANALYSIS:Solvency Ratios: Debt to Equity Ratio, Total Asset to Debt Ratio, Proprietary Ratio and Interest Coverage Ratio.	Profitability Ratios: Gross Profit Ratio, Operating Ratio, Operating Profit Ratio, Net Profit Ratio and Return on Investment.	Activity Ratios: Inventory Turnover Ratio, Trade Receivables Turnover Ratio, Trade Payables Turnover Ratio , Fixed Asset Turnover Ratio , Net asset Turnover Ratio Turnover Ratio and Working Capital Turnover Ratio.	CASH FLOW STATEMENT:Meaning and objectives. Types of activity & flow of cash. Preparation of Cash Flow Statement using indirect method with adjustments.	Preparation of Cash Flow Statement using indirect method with adjustments.(Contd.) RETIREMENT & DEATH OF A PARTNER:Meaning and effect of retirement / death of a partner on change in profit sharing ratio. Accounting treatment of goodwill and	Develop the skill of computation of debt equity ratio, total asset to debt ratio, proprietary ratio and interest coverage ratio. develop the skill of computation of inventory turnover ratio, trade receivables and trade payables ratio and working capital turnover ratio and others. Develop the skill of computation of gross profit ratio, operating ratio, operating profit ratio, net profit ratio and return on investment. State the meaning and objectives of

					<p>revaluation of assets and reassessment of liabilities.</p>	<p>cash flow statement. develop the understanding of preparation of Cash Flow Statement using indirect method as per AS 3 with given adjustments.</p> <p>Explain the effect of retirement / death of a partner on change in profit sharing ratio. develop the understanding of accounting treatment of goodwill, revaluation of assets and re-assessment of liabilities .</p>
BUSINESS STUDIES	<p>Marketing – Concept, functions and philosophies</p>	<p>Marketing Mix – Concept and elements</p> <p>Product - branding, labelling and packaging – Concept</p>	<p>Price - Concept, Factors determining price</p> <p>Physical Distribution – concept, components and channels of distribution</p>	<p>Promotion – Concept and elements; Advertising, Personal Selling, Sales Promotion and Public Relations</p>	<p>Concept and importance of staffing</p> <p>Staffing as a part of Human Resource Management concept</p> <p>Staffing process</p>	<p>explain the meaning of ‘marketing’; distinguish between ‘marketing’ and ‘selling’; list out important functions of marketing; examine the role of marketing in the development of an economy in a firm, to the society and to</p>


						consumers; explain the elements of marketing-mix; classify products into different categories n define staffing; establish its relationship with Human Resource Management; state the need and importance of staffing; describe the steps in the staffing process;
ECONOMICS	Economic reforms 1991-Revision	Balance of Payments Account: Meaning and Components Current a/c and Capital a/c	Balance of Trade, BOP: Surplus and Deficit - Meaning, Types	Autonomous and Accommodating items - Meaning Exchange rates: Fixed and Flexible-Merits n Demerits	Managed floating rate Human Capital Formation: Meaning , Role of HCF in Eco development	Students will be able to differntiaite b/w BOP n BOT Understands the role of HCF in development of the country
REPRENEURSHIP	ENTERPRISE GROWTH STRATEGIES: Meaning and types of business expansion.	Franchising- Concept and types. Advantages and limitations to franchisor and franchisee.	Franchise Agreement.	Mergers and Acquisition:	Reasons for mergers and acquisitions.	Understand the concept of growth & development of an enterprise Discuss

			Mergers and Acquisition: Concept, reasons and types.	Concept, reasons and types. Reasons for mergers and acquisitions.		the concept, types, advantages and limitations of franchising Appreciate growth of business through mergers and acquisitions Discuss the different types of mergers and acquisitions Discuss the reasons for mergers and acquisitions
MARKETING	Unit III : Place and Distribution Revision Meaning and importance of Place. Functions of Place. Types of Distribution. Functions of intermediates. Factors affecting the choice of Channels of Distribution.	UNIT IV : PROMOTION Concept of Promotion Describe the concept of promotion	The importance of Promotion Elements of Promotional Mix	Describe the elements of Promotional Mix Factors affecting the selection of Promotional Mix	Discussing the selection factors of Promotional Mix Notes completion of the chapter,Class test and revision of the chapter.	Students will be able to understand the concept of promotion. The importance of promotion will be thoroughly understood. Elements of promotional mix in detail.
ENGINEERING GRAPHICS	Submission and checking of holiday assignments.	Bushed bearing:	Open bearing:	Disassembling of open bearing	Revision on assembly and disassembly of both bushed	Students will get an idea about assembly drawings and they will start learning to

	<p>Introduction to unit 3: Bearings</p> <p>Definition of bearings</p> <p>Types of bearings</p> <p>Uses of bearings</p> <p>Introduction to Assembly Drawings.</p>	<p>Assembling of bushed bearing</p> <p>Disassembling of bushed bearing</p>	<p>Assembling of open bearing</p>		<p>and open bearing and doing extra problems</p>	<p>draw different assembly and disassembly drawings.</p>
PSYCHOLOGY	<p>Unit II: Self and Personality</p> <p>Introduction Self and Personality</p> <p>Concept of Self</p> <p>Cognitive and Behavioural aspects of Self</p>	<p>Culture and Self</p> <p>Concept of Personality</p> <p>Major Approaches to the Study of Personality</p>	<p>Type Approaches</p> <p>Trait Approaches</p>	<p>Psychodynamic Approach and Post Freudian Approaches</p>	<p>Behavioural Approach</p> <p>Cultural Approach</p> <p>Humanistic Approach</p>	<p>describe the concept of self and learn some ways for self-regulation of behaviour, explain the concept of personality, differentiate between various approaches to the study of personality, develop insight into the development of a healthy personality, and describe some</p>

						techniques for personality assessment.
PHYSICAL EDUCATION	Physical Education & Sports for CWSN (Children with Special Needs - Divyang) Organizations promoting Disability Sports Advantages of Physical Activities for children with special needs.	Strategies to make Physical Activities assessable for children with special needs.	Sports & Nutrition Concept of balance diet and nutrition	<ul style="list-style-type: none"> • Macro and Micro Nutrients: Food sources & functions 	<ul style="list-style-type: none"> • Nutritive & Non-Nutritive Components of Diet 	<ul style="list-style-type: none"> *describe the concept of Disability and Disorder. list advantage of physical activities for children with special needs explain Strategies to make physical activities accessible for children with special needs *understand the concept of balanced diet and nutrition classify Nutritive and Non-Nutritive components of Diet
Applied Maths	Integration <ul style="list-style-type: none"> • Evaluation of definite integrals using properties 	Application of integration Problems based on finding <ul style="list-style-type: none"> • Total cost when Marginal Cost is given • Total Revenue when Marginal Revenue is given • Equilibrium price and 	Differential Equations <ul style="list-style-type: none"> • Formation of differential equation by eliminating arbitrary constants • Solution of simple differential equations (direct integration only) 	Differential Equations <ul style="list-style-type: none"> • Growth and Decay Model in Biological sciences, Economics and business, etc 	Numbers, Quantification and Numerical Applications <ul style="list-style-type: none"> • Modulo Arithmetic • Congruence Modulo • Alligation and Mixture 	

		equilibrium quantity and hence consumer and producer surplus				
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 Indian School Wadi Kabir Class: XII ISWK SHARING KNOWLEDGE (Monthly Plan - September 2022)						
SUBJECTS	Week - 1	Week - 2	Week - 3	Week - 4	Week - 5	Learning Outcomes
ENGLISH	THE ENEMY (VISTAS) COMPREHENSION	THE ENEMY -Continued FORMAL AND INFORMAL INVITATION REPLIES	A THING OF BEAUTY (FLAMINGO - POEM) REPORT WRITING - SCHOOL MAGAZINE	ASSESSMENT 1	ASSESSMENT 1	STUDENTS WILL BE - ABLE TO WRITE THE VARIOUS WRITING TASKS USING CORRECT FORMAT, LAYOUT AND LANGUAGE. ABLE TO ANSWER SHORT AND LONG ANSWER TYPE QUESTIONS BASED ON LOCAL AND GLOBAL COMPREHENSION OF THE CHAPTERS
MATHEMATICS	Definite integrals Definite integrals, properties	*Application of Integrals To find area using definite integrals	Revision	Assessemnt 1	Assessment 1	Students will be able to find area under the curve using integrals

<p>PHYSICS</p>	<p>CH-9-RAY OPTICS- <u>Introduction</u></p>	<p>CH-9-RAY OPTICS- <u>Ray optics</u></p> <p>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, lens maker's formula. Magnification, power of a lens.</p> <p>Combination of thin lenses in contact.</p>	<p>Refraction through Prism. <u>Optical instruments.</u></p> <p>Microscopes & astronomical telescopes (reflecting and refracting) and their magnifying powers.</p> <p>Exercises and worksheet.</p> <p>REVISION FOR ASSESSMENT-1 EXAM.</p>	<p>ASSESSMENT-1 EXAMS</p>	<p>ASSESSMENT-1 EXAMS</p>	<p>Students will be able to</p> <ul style="list-style-type: none"> *explain the basic concepts like reflection refraction and its laws. * Derive the mirror formula, lens formula and lens makers formula * Illustrate the principle and working of different optical instruments.
<p>CHEMISTRY</p>	<p>Unit III: Electrochemistry</p>	<p>specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law</p>	<p>Unit IV: Chemical Kinetics</p>	<p>ASSESSMENT 1</p>	<p>ASSESSMENT 1</p>	<p>Students will be able to</p> <ul style="list-style-type: none"> • define the average and instantaneous rate of a reaction;

	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	of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion.	Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst;			<ul style="list-style-type: none"> • express the rate of a reaction in terms of change in concentration of either of the reactants or products with time; • distinguish between elementary and complex reactions;
BIOLOGY	Biotechnology – principles and processes - Introduction, tools	Biotechnology – principles - Process - steps	Biotechnology – application : Application in agriculture, medicine and transgenic organisms Revision for Assessment 1	Assessment 1	Assessment 1	<p>Students are able to explain the different tools and steps involved in recombinant DNA technology</p> <p>Describe the different applications of biotechnology in agriculture, medicine etc.</p>
INFORMATICS PRACTICES	Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (),	Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and	Revision for Assessment 1	Assessment 1	Assessment 1	Students will understand the use of Date Functions and aggregate functions.

	YEAR (), DAY (), DAYNAME ().	manipulating data using Group by, Having, Order by.				
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**COMPUTER
SCIENCE**

DML – Update and Delete Commands
– Aggregate Functions Update command delete command, aggregate functions (max, min, avg, sum, count), group by, having clause

Type of Joins

Python – MySQL connector classes cursors and methods

joins: cartesian product on two tables, equi-join and natural join connecting SQL with Python, performing insert, update, delete queries using cursor, display data by using fetchone(), fetchall(), rowcount - creating database connectivity applications

		Demo with sample project and Explanation of Project documentation				
ACCOUNTANCY	RETIREMENT & DEATH OF A PARTNER:Treatment of accumulated profits and reserves.Adjustment of capital accounts and balance sheet.Loan account of the retiring partner.	Deceased partner's share of profit till the date of death. Treatment of Goodwill, revaluation and reserves. Deceased partner's capital account and his executor's account.				Adjustment of accumulated profits, losses and reserves on retirement / death of a partner and capital adjustment. develop the skill of calculation of deceased partner's share till the time of his death and prepare deceased partner's and executor's account. discuss the preparation of the capital accounts of the remaining partners and the balance sheet of the firm after retirement / death of a partner.
BUSINESS STUDIES	Recruitment process Selection – process	Training and Development - Concept and	REVISION	ASSESSMENT I	ASSESSMENT I	State the meaning of recruitment and selection; identify

		importance, Methods of training - on the job and off the job - vestibule training, apprenticeship training and internship training				important sources of recruitment; describe the steps in the selection process; appreciate the need of training and development; and explain various on the job and off the job methods of training.
ECONOMICS	HCF-(Conti) Problems of HCF. Measures taken by the govt to promote the development of HCF	Rural Development: Key issues-Credit n Marketing. Role of Cooperatives				Will be able to get knowledge about the various measures and Programmes taken by the govt to promote the welfare of the people
ENTREPRENEURSHIP	BUSINESS ARITHMETIC: Unit of Sale, Unit Cost for multiple products or services.	Fixed cost Variable cost Gross Profit.				Understand the concept of Unit Cost and Unit Price.
MARKETING	UNIT IV : Employability Skills Entrepreneurship and Entrepreneur	Entrepreneurial Competencies Chapter Notes Worksheets				

	<p>Type of entrepreneurs</p> <p>Roles and functions of an entrepreneur</p> <p>Identifying opportunities and risk taking</p> <p>Startups</p> <p>Barriers to Entrepreneurship</p> <p>Entrepreneurial Attitudes</p>	Revision of the chapter				
ENGINEERING GRAPHICS	<p>Unit 4: Rod Joints</p> <p>Introduction:</p> <p>Assembling of Sleeve and cotter Joint.</p>	Disassembling of Sleeve and Cotter joint.	<p>Gib and Cotter joint assembling</p> <p>Gib and cotter joint disassembling</p> <p>Revision for Assessment 1</p>	Assessment 1	Assessment 1	Students will get a clear idea about different types of Rod joints and how to draw the assembly drawings of different rod joints.

<p>PSYCHOLOGY</p>	<p>Unit IV Psychological Disorders</p> <p>Introduction Concepts of Abnormality and Psychological Disorders Historical Background</p>	<p>Classification of Psychological Disorders Factors Underlying Abnormal Behaviour</p>	<p>Anxiety Disorders Obsessive-Compulsive and Related Disorders Trauma-and Stressor-Related Disorders Somatic Symptom and Related Disorders</p>	<p>Dissociative Disorders Depressive Disorder Bipolar and Related Disorders Schizophrenia Spectrum and Other Psychotic Disorders</p>	<p>Neurodevelopmental Disorders Disruptive, Impulse-Control and Conduct Disorders Feeding and Eating Disorders Substance Related and Addictive Disorders</p>	<p>understand the basic issues in abnormal behaviour and the criteria used to identify such behaviours, appreciate the factors which cause abnormal behaviour, explain the different models of abnormal behaviour, and describe the major psychological disorders.</p>
<p>PHYSICAL EDUCATION</p>	<p>Test & Measurement in Sports</p> <p>Fitness Test – SAI Khelo India Fitness Test in school Computing Basal Metabolic Rate (BMR) Rikli & Jones - Senior Citizen Fitness Test</p>	<p>Rikli & Jones - Senior Citizen Fitness Test</p>	<p>Physiology & Injuries in Sports</p> <p>Physiological factors determining components of physical fitness</p>	<ul style="list-style-type: none"> ● Effect of exercise on Muscular System ● Effect of exercise on Cardio-Respiratory System 	<ul style="list-style-type: none"> ● Sports injuries: Classification 	<p>After completing this chapter, you will be able to: perform BMI, 50mt Speed test, 600mt Run/Walk, Sit & Reach flexibility test, Strength Test (Abdominal Partial Curl Up, Push-Ups for boys, Modified Push-Ups for girls). *recognize the physiological factors determining the components of physical fitness identify and classify sports injuries</p>
<p>Applied Maths</p>	<p>Numbers, Quantification and</p>	<p>Index Numbers and Time-based data</p>	<p>Index Numbers and Time-based data</p>			

	Numerical Applications <ul style="list-style-type: none">• Various numerical• Problems Numerical Inequalities	<ul style="list-style-type: none">• Components of Time Series• Time Series analysis for univariate data	<ul style="list-style-type: none">• Secular Trend• Methods of Measuring trend			
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Class: XII

Indian School Wadi Kabir

ISWK SHARING KNOWLEDGE

(Monthly Plan - October 2022)

SUBJECTS	Week - 1	Week - 2	Week - 3	Week - 4	Week - 5	Learning Outcomes
ENGLISH	POETS AND PANCAKES (FLAMINGO) REPORT WRITING - NEWS PAPER REPORT	THE INTERVIEW (FLAMINGO) JOB APPLICATION	A ROADSIDE STAND (FLAMINGO - POEM) NOTICE - SCHOOL FUNCTIONS	ON THE FACE OF IT (VISTAS) INVITATION PRACTICE	GOING PLACES (FLAMINGO)	STUDENTS WILL BE - ABLE TO WRITE THE VARIOUS WRITING TASKS USING CORRECT FORMAT, LAYOUT AND LANGUAGE. ABLE TO ANSWER SHORT AND LONG ANSWER TYPE QUESTIONS BASED ON LOCAL AND GLOBAL COMPREHENSION OF THE CHAPTERS
MATHEMATICS	*Differential Equations Definition, order and degree, general and particular solutions of a	*DE: Solution of differential equations by method of separation of variables, solutions of homogeneous	*Vectors: Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors	Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors.	*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	Students will be able to solve diff equations by using appropriate methods. Identifies vectors and 3D and their properties.

	differential equation.	differential equations of first order and first degree.			lines. Angle between two lines.	
PHYSICS	<p><u>CH-10-Wave optics</u></p> <p>Wavefront and Huygen's principle, reflection & refraction of plane wave at a plane surface using wave fronts.Proof of laws of reflection and refraction using Huygens principle</p>	<p>CH-10-WAVE OPTICS-Interference, Young's double slit experiment and expression for fringe width(no derivation only final expression), coherent sources and sustained interference of light. Diffraction due to a single slit, width of central maximum.</p>	<p><u>CH-11-Dual Nature of Matter and Radiation</u></p> <p>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.</p>	<p><u>CH-12-Atoms</u></p> <p>Alpha-particle scattering experiment; Rutherford's model of atom;</p> <p>Bohr model of hydrogen atom, Expression for radius of nth possible orbit, velocity and energy of electron in its orbit. Energy levels, hydrogen spectrum.</p>	<p>CH-13-NUCLEI</p> <p>ion and size of Mass-energy relation, defect; binding energy per nucleon and its variation with mass number; nuclear fusion</p>	<p>Students will be able to</p> <p>*state Huygen's principle. Illustrate about reflection & refraction of plane wave at a plane surface using wave fronts.</p> <p>Students will be able to understand the dual nature of light (Wave andParticle) along with experimental and mathematical verification.</p> <p>Students will be able to understand the Concept of atoms and nuclei with the help of</p>

						different models developed by different scientists (Rutherford's Model, Bohr's model etc.)
CHEMISTRY	<p>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).</p> <p>Concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation.</p>	<p>Aldehydes, Ketones and Carboxylic Acids</p> <p>Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties</p>	<p>mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses.</p>	<p>Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.</p>	<p>Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.</p>	<p>Students will be able to</p> <ul style="list-style-type: none"> • write the common and IUPAC names of aldehydes, ketones and carboxylic acids; • write the structures of the compounds containing functional groups namely carbonyl and carboxyl groups; • describe the important methods of preparation and reactions of these classes of compounds
BIOLOGY	<p>Biotechnology – application</p> <p>Medicine and transgenic organisms</p>	<p>Organisms and Populations – population growth, population interactions</p>	<p>Biodiversity and conservation –Levels, patterns, importance, loss of biodiversity, conservation</p>	<p>Biodiversity and conservation –loss of biodiversity</p>	<p>Biodiversity and conservation –conservation</p>	<p>Appreciate the roles of transgenic organisms</p> <p>Describe the population interactions and growth models</p>

						Explain the reasons for loss of biodiversity and the methods of conservation of Biodiversity
INFORMATICS PRACTICES	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.	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.	Revision on Computer Networks	Students will understand the types of networks, network devices, network topology, website and web browsers.
COMPUTER SCIENCE	Computer Networks Evolution of networking Introduction to computer networks, evolution of networking (ARPANET, NSFNET, INTERNET)	Data communication terminologies concept of communication, components of data communication, measuring capacity of communication media (bandwidth, data transfer rate)	Switching technique and Wired Media Wireless Media IP address, Circuit Switching - Packet switching. Types of Transmission	Network devices Network topologies and Network types Modem, Ethernet card, RJ45, Repeater, Hub, Switch, Router, Gateway, WIFI card . Types of	Network protocol HTTP, FTP, PPP, SMTP, TCP/IP, POP3, HTTPS, TELNET, VoIP, wireless/mobile communication protocol such as GSM, GPRS and WLL WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), Domain names, URL, website, web	Students will understand the concept of networking. different devices of networking, communication channels. etc. Students will be able to identify different protocols, and other terminologies

			<p>media - Twisted pair cable, Co-axial cable, Fiber-optic cable , Radio waves, Micro waves, Infrared waves</p>	<p>networks (PAN, LAN, MAN, WAN), networking topologies (Bus, S Tree)tar,</p>	<p>browser, web servers, web hosting</p>	
ACCOUNTANCY	<p>DISSOLUTION OF A PARTNERSHIP FIRM: Meaning of dissolution of partnership and partnership firm, types of dissolution of a firm. Entries for realisation of assets, settlement of liabilities, realisation expenses.</p>	<p>Realization account, Partner's loan A/c, capital accounts of partners and cash or bank a/c.</p> <p>ACCOUNTING FOR SHARE CAPITAL: Share and share capital: nature and types.</p>	<p>Public subscription of shares - over subscription and under subscription of shares; issue at par and at premium, calls in advance and arrears. Issue of shares for consideration other than cash. Accounting treatment of forfeiture and reissue of shares.</p>	<p>Comprehensive problems: Issue, calls in arrear, advance, forfeiture and reissue. Disclosure of share capital in the Balance Sheet of a company. Private Placement and Employee Stock Option Plan.</p>	<p>ACCOUNTING FOR ISSUE OF 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.</p>	<p>Understand the situations under which a partnership firm can be dissolved. develop the understanding of preparation of realisation account and other related accounts.</p> <p>State the meaning of share and share capital and differentiate between equity shares and preference shares</p>

						<p>and different types of share capital.</p> <p>Explain the accounting treatment of share capital transactions regarding issue of shares. develop the understanding of accounting treatment of forfeiture and re-issue of forfeited shares. describe the presentation of share capital in the balance sheet of the company as per schedule III part I of the Companies Act 2013.</p> <p>Understand the meaning of private placement of shares and Employee Stock Option Plan.</p> <p>Explain the accounting treatment of different categories of transactions related to issue of debentures.</p>
BUSINESS STUDIES	Concept and importance of Directing	Leadership - concept, styles - authoritative,	Steps in process of control	Capital Structure – concept and	Capital market and its types (primary and secondary)	Students will be able to Explain the concept of

	<p>Elements of Directing Motivation - concept, Maslow's hierarchy of needs, Financial and non-financial incentives</p>	<p>democratic and laissez faire Communication - concept, formal and informal communication; barriers to effective communication, how to overcome the barriers Controlling - Concept and importance Relationship between planning and controlling</p>	<p>Concept, role and objectives of Financial Management Financial decisions: investment, financing and dividend- Meaning and factors affecting Financial Planning - concept and importance</p>	<p>factors affecting capital structure Fixed and Working Capital - Concept and factors affecting their requirements Financial Markets: Concept Money Market: Concept</p>	<p>Stock Exchange - Functions and trading procedure Securities and Exchange Board of India (SEBI) - objectives and functions</p>	<p>directing and its importance in business organisations; the principles guiding directing process; the meaning of supervision and its importance; the meaning of motivation and its importance in business management; Maslow's theory of hierarchy of needs and its application to motivation of employees in an organisation; the financial and non financial incentives through which managers motivate their employees; the concept of leadership and its importance in management; the qualities of a good leader; Formal and informal communications in the organisations; and Identify various barriers to effective communications and measures to overcome these barriers in the</p>
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						<p>organisations. the meaning of controlling; the importance of controlling; the relationship between planning and controlling; the steps in the process of controlling; and Des the techniques of controlling the meaning of business finance; describe financial management; the role of financial management in our enterprise; objectives of financial management the meaning and importance of financial planning; the meaning of capital structure; the factors affecting the choice of an appropriate capital structure; meaning of fixed capital and working capital; and analyse the factors affecting the requirement of fixed and working capital.</p> <p>the meaning of Financial Market; the meaning of Money Market and its major Instruments; the nature and types of</p>
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						Capital Market; distinguish between Money Market and Capital Market; the meaning and functions of Stock Exchange; the role of SEBI in investor protection.
ECONOMICS	Rural Devl (cont): Agricultural Diversification, Alternative farming, Organic farming - Merits n Demerits	National Income and Related Aggregates: Basic Concepts- Methods of Measuring National income: Product method Income Method	Expenditure Method GDP and Welfare Numericals and Precautions	Employment: Growth and changes in work force participation Formal n Informal-Problems and Policies.	Determination of Income and Employment: AD 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.	Students will be able to understand how to measure the national income through various methods and Precautions taken in measuring National income Understands AD working of investment multiplier

<p>ENTREPRENEURS HIP</p>	<p>Break even Analysis for multiple products or services.</p>	<p>Computation of Working Capital. Inventory Control and EOQ.</p>	<p>Return on Investment (ROI) and Return on Equity (ROE)</p>	<p>RESOURCE MOBILISATION: Capital Market: Concept. Primary market: Concept, methods of issue</p>	<p>Primary market: Concept, methods of issue. Angel Investor: Features</p>	<p>Calculate Break-even point for Multiple products and services. Understand the concept of Inventory Control Compute the working capital of a business. Calculate Return on Investment; Return on Equity and Economic Order Quantity. Understand the need of finance in Business Discuss the various sources of funds required for a firm Understand the ways of raising funds in primary market.</p>
<p>MARKETING</p>	<p>UNIT V : EMERGING TRENDS IN MARKETING</p> <p>Services Marketing</p> <p>Identify the importance of services and their role in India's GDP</p> <p>Describe the meaning and importance of Service Marketing</p>	<p>Characteristics of service</p> <p>Types of services</p> <p>Specify scope Services</p> <p>Emphasis on service quality</p>	<p>Online Marketing and Social Media Marketing</p> <p>Describe the meaning and concept of Online Marketing and social media marketing.</p>	<p>The meaning and concept of Online Marketing and social media.</p> <p>Define and understand the meaning online marketing s</p> <p>Advantage of online marketing</p> <p>Describe meaning</p>	<p>Identify platforms used for social media marketing</p>	<p>Meaning and importance of Service Marketing Service Sector in India Characteristics of services and Types of services Service Quality Meaning and concept of Online Marketing and social media marketing Advantages and disadvantages of meaning and concept of Online Marketing and social media marketing</p>

				of social media marketing. Advantages of social media marketing		
ENGINEERING GRAPHICS	Unit 5 : Tie Rod & Pipe Joints Introduction : Turnbuckle and its features.	Assembling of Turn buckle	Disassembling of turn buckle with all the details.	Flanged pipe joint: Introduction and features of flanged pipe joint	Assembling of flanged pipe joint	students will get familiarised with the use of turnbuckle and flanged pipe joint also learns to draw the assembling and disassembling of turnbuckle.
PSYCHOLOGY	Unit V Therapeutic Processes Nature and Process of psychotherapy Therapeutic relationship Behaviour Therapy Cognitive Therapy	Humanistic-Existential Therapy Alternative Therapies Factors contributing to healing in Psychotherapy	Ethics in Psychotherapy Rehabilitation of the Mentally Ill	Unit VII Social Influence and Group Processes Introduction Nature and Formation of Groups Type of Groups	Influence of Group on Individual Behaviour Social Loafing Group Polarisation	familiarise yourself with the basic nature and process of psychotherapy, appreciate that there are different types of therapies for helping people, understand the use of psychological forms of intervention, and know how people with mental disorders can be rehabilitated. understand the nature and types of groups and

						know how they are formed, examine the influence of group on individual behaviour, describe the process of cooperation and competition, reflect on the importance of social identity, and understand the nature of intergroup conflict and examine conflict resolution strategies.
PHYSICAL EDUCATION	Biomechanics & Sports Newton's Law of Motion & its application in sports • Equilibrium – Dynamic & Static and Centre of Gravity and its application in sports	• Friction & Sports • Projectile in Sports	Psychology & Sports Personality; its definition & types (Jung Classification & Big Five Theory)	• Meaning, Concept & Types of Aggressions in Sports	• Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self Talk, Goal Setting	At the end of this unit students will be able to: recognize the concept of sports biomechanics know the importance of biomechanics in sports define friction and its usage in sports classify different types of personality and its relationship with sport performance. recognise concept of motivation and identify various types of motivation. differentiate types of aggression in sports
Applied Maths	Inferential Statistics	Inferential Statistics	Financial Mathematics • Perpetuity,	Financial Mathematics	Probability Distribution	

	<ul style="list-style-type: none"> ● Population and Sample - Problems based on random sampling using simple random sampling and systematic random sampling 	<ul style="list-style-type: none"> ● Parameter and Statistics and Statistical Interferences t-Test (one sample t-test and two independent groups t-test) 	<p>Sinking Funds</p> <ul style="list-style-type: none"> ● Calculation of EMI Calculation of Returns, Nominal Rate of Return 	<ul style="list-style-type: none"> ● Compound Annual Growth Rate ● Linear method of Depreciation 	<ul style="list-style-type: none"> ● Probability Distribution ● Mathematical Expectation ● Variance 	
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Class: XII

Indian School Wadi Kabir

ISWK SHARING KNOWLEDGE
(Monthly Plan - November 2022)

SUBJECTS	Week - 1	Week - 2	Week - 3	Week - 4	Week - 5	Learning Outcomes
ENGLISH	AUNT JENNIFER'S TIGERS (FLAMINGO - POEM) REPORT WRITING	MEMORIES OF CHILDHOOD (VISTAS) JOB APPLICATION	REVISION	REVISION	REVISION	STUDENTS WILL BE - ABLE TO WRITE THE VARIOUS WRITING TASKS USING CORRECT FORMAT, LAYOUT AND LANGUAGE. ABLE TO ANSWER SHORT AND LONG ANSWER TYPE QUESTIONS BASED ON LOCAL AND GLOBAL COMPREHENSION OF THE CHAPTERS
MATHEMATICS	Three Dimensional Geometry: shortest distance between two lines. Angle	*Probability Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem,	*Probability: Random variable, p.d.f and mean	Revision	Revision	Identifies probability and its application Able to apply theorems and properties to solve related sums

	between two lines.					
PHYSICS	<p>Recap of CH-NUCLEI</p> <p><u>CH-14-Semiconductor electronics</u></p> <p>Energy bands in solids (Qualitative ideas only) conductor, insulator and semiconductor. Intrinsic and extrinsic semiconductors- N junction and P-N junction diode.</p>	Semiconductor diode - I-V characteristics in forward and reverse bias, diode as rectifier.	REVISION & PRELIM 1	REVISION & PRELIM 1	REVISION & PRELIM 1	<p>Students will be able to *understand the Concept of Conductors, Insulator and semiconductor with the help of Band Energy Theory.</p> <ul style="list-style-type: none"> students will be able to understand the Classification of semiconductors along with Practical applications in PN diode, Rectifiers,
CHEMISTRY	Diazonium salts: Preparation, chemical reactions and importance in	Revision	Revision & Prelim 1	Revision & Prelim 1	Revision & Prelim 1	

	synthetic organic chemistry.					
BIOLOGY	<p>Ecosystem – Components, energy flow, pyramids</p> <p>Evolution – Origin of life, evidences for evolution, Adaptive radiation</p>	<p>Evolution – Hardy-Weinberg principle, Human evolution</p> <p>Revision classes for Rehearsal 1.</p>	<p>Submission of journal and investigatory project</p> <p>SYLLABUS COMPLETION BOTH THEORY AND PRACTICAL BY 17TH NOVEMBER</p>	Revision for Rehearsal 1	REHEARSAL 1	<p>Students are able to explain the components of ecosystem</p> <p>Describe the theories of evolution and evidences for evolution</p> <p>Explain the process of adaptive radiation</p>
INFORMATICS PRACTICES	Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying,	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	Revision	Rehearsal 1	Students will understand the significance of digital footprint, IPR, data protection, cyber crime and cyber laws and various network security threats while working online. Students will understand the ways to manage E-waste and health concerns related to overuse of technology.

	overview of Indian IT Act. E-waste: hazards and management. Awareness about health concerns related to the usage of technology. protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS)					
COMPUTER SCIENCE	Revision on Computational thinking and programming	Revision on Database Management	Revision on Computer Networking			
ACCOUNTANCY	Issue of debentures as collateral security. Interest on debentures. Writing off discount / loss on issue of debentures.	REVISION	REVISION	REVISION	REVISION	Develop the understanding and skill of writing of discount / loss on issue of debentures. understand the concept of collateral security and its presentation in balance sheet. Develop

						the skill of calculating interest on debentures and its accounting treatment.
BUSINESS STUDIES	<p>Concept and importance of consumer protection</p> <p>The Consumer Protection Act, 2019: Source: http://egazette.nic.in/WriteReadData/2019/210422.pdf</p> <p>Meaning of consumer Rights and responsibilities of consumers Who can file a complaint?</p> <p>Redressal machinery</p> <p>Remedies available</p> <p>Consumer awareness -</p>	<p>Role of consumer organisations and Non-Governmental Organisations (NGOs)</p>	REVISION	REVISION	REVISION	<p>Students will be able to state the importance of consumer protection; briefly explain legal framework for consumer protection in India; describe consumer rights in India; briefly describe the ways and means of consumer protection;</p>

<p>ECONOMICS</p>	<p>Problems of excess demand and deficient demand; measures to correct them - changes in government spending, taxes and money supply. Unit</p>	<p>Sustainable Economic Development: Meaning, Effects of Economic Development on Resources and Environment, including global warming 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</p>				<p>Able to analyse what is excess n deficient demand understands the importance of environment and problems faced because of pollution taking place will be able to Compare the position of India in various aspects with its neighbours</p>
<p>ENTREPRENEURSHIP</p>	<p>Venture Capital: Features, funding.</p>	<p>REVISION</p>	<p>REVISION</p>	<p>REVISION</p>	<p>REVISION</p>	<p>Appreciate the Angel Investors and Venture Capitalists as a source of business finance.</p>

MARKETING	UNIT 5 : EMPLOYABILITY SKILLS GREEN SKILLS Green Jobs Importance of Green Jobs	Notes Worksheets Revision	Class Tests Revision Worksheets			
ENGINEERING GRAPHICS	Disassembling of flanged pipe joints	Completion of syllabus both theory & practical's. Revision classes for Rehearsal 1.	Submission of journal and collabcad project	Revision for Rehearsal 1	REHEARSAL 1	Students will have a structured revision plan for the Rehearsal exams.They will understand all the assembly and short drawing type questions including all important mcq's.
PSYCHOLOGY	Unit VI- Attitude and Social Cognition Introduction Explaining Social Behaviour Nature and Components of Attitudes	Attitude Formation and Change Attitude Formation Attitude Change Attitude-Behaviour Relationship	Prejudice and Discrimination Strategies for Handling Prejudice	Revision	Revision	understand what are attitudes, how they are formed and changed, analyse how people interpret and explain the behaviour of others, comprehend how the presence of others influences our behaviour, explain why people help or do not help others in distress, and understand the concept of pro-social

						behaviour and factors affecting it.
PHYSICAL EDUCATION	Training in Sports Concept of Talent Identification and Talent Development in Sports Introduction to Sports Training Cycle	Types & Method to Develop Types & Method to Develop	Revision	Revision	Revision	At the end of this unit students will be able to: classify Isometric, Isotonic and Isokinetic training understand different methods of endurance development differentiate different method to improve flexibility explain Coordinative Abilities describe Circuit Training
Applied Maths	Probability ● Binomial Distribution ● Poisson Distribution ● Normal Distribution	Linear Programming ● Introduction and related terminology ● Mathematical formulation of Linear Programming Problem ● Different types of Linear Programming Problems	Linear Programming ● Graphical method of solution for problems in two variables. ● Feasible and Infeasible Regions ● Feasible and infeasible solutions, optimal feasible solution			

