TAGORE INTERNATIONAL SCHOOL
EAST OF KAILASH, NEW DELHI

Class XII
PARENT SYLLABUS 2025 -2026
SCIENCE

Month	English	Math	Physics	Chemistry	Biology	Computer science	Economics	Psychology	P.Ed.
July	1. Long Writing Skill: Job Application · format · content · expression · marking scheme Learning Outcome Ø state situations when they would draft a job application Ø supply inputs for the format, style and tone of a job application Ø use words and phrases, effective openings and closing of the letter Ø draft a job application and a curriculum vitae	Topic: Integrals Learning Outcomes: Each student will be able to *define the concept of anti derivative *learn the integral of basic functions by the method of inspection *apply the method of substitution of substitution to solve problems of integration by using trigonometric identities *derive the solution of special integrals *apply the method of by parts and partial fractions to solve problems *perceive the concept of definite integral of a function *apply the properties of	Topic: Magnetism and Matter Subtopics: Bar magnet, solenoid *Magnetic field intensity due to a magnetic dipole (bar magnet) *Torque on a magnetic dipole (bar magnet) in a uniform magnetic field.*Magnetic properties of materials- Para-, dia- and ferro -magnetic substances with examples. Topic: Electromagnetic Induction Subtopics: *Electromagnetic induction; Faraday's laws *Induced EMF and current *Lenz's Law, Self, and mutual induction. Topic: Alternating Current	Topic: Electrochemistry Sub Topics: Redox reactions, Electrochemical & electrolytic cells Electrode potential and its measurement, EMF of a cell, standard electrode potential, Electrochemical series and its applications. Nernst equation & its application to chemical cells, Relation between Gibb's energy change & emf of a cell and Numerical. Conductance in electrolytic solutions, specific & molar conductivity, Variation of	Topic: Molecular Basis of Inheritance Subtopics: - Regulation of Gene Expression - Human Genome Project -DNA fingerprinting Topic: Evolution Subtopics: - Origin of Life -Evolution of Life Forms- A Theory -What are the Evidences for Evolution? - Adaptive Radiation -	MySQL-PYTHON Connectivity/ file Project PROJECT WORK (11 days) CSVFiles- (10 days) CSV file: import csv module, open / close csv file, write into a csv file using writer(),writerow(), writerows() and read from a csv file using reader()	DETERMINATION OF INCOME AND EMPLOYMENT • Aggregate demand and its components • Propensity to consume and propensity to save (Average and Marginal) • Short -run equilibrium output; Investment multiplier and its	UNIT 4: Psychological Disorders Anxiety Disorders Obsessive-Compulsive and Related Disorders Trauma- and Stressor-Related Disorders Somatic Symptom and Related Disorders Dissociative Disorders Depressive	Unit V - Sports & Nutrition Concept of Balanced Diet & Nutrition Macro & Micro Nutrients: Food Sources & Functions Nutritive & Non-Nutritive Components of Diet Eating for Weight Control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance & Food Myths Importance of

English	Mathematics	Physics	Chemistry	Biology	Computer Science	Economics	Psychology	Physical Education
2. Flamingo, Prose: The Rattrap by Selma Lagerlof · about the author · the essential goodness in a human being can be awakened through understanding and love. · the human tendency to redeem oneself from dishonest ways · human loneliness and the need to bond with others · the metaphor in the title <mark>Learning Outcome</mark> effectively provide a synopsis of the story. Ø highlight the values and thought process of the story. Ø identify the insecurity while tackling personal fears and horrors Ø appreciate the significance of developing personal fears yet rising above them to savor real liberty.	*definite integrals in solving problems Topic: - Application of Integration <mark>Learning Outcomes:</mark> Each child will be able to: *draw the curve *find the point of intersection *identify the area to be calculated *calculate the area bounded by the curves such as lines, ellipse, parabola, circle.	Subtopics: *Alternating currents, peak and RMS value of alternating current/voltage. Reactance (inductive and capacitive), Phasor diagrams and impedance (LCR series circuit (phasors only). *Resonance, power in AC circuits. <mark>Learning Outcomes:</mark> Each student will be able to: *Magnetism and Matter : *Compare and contrast the magnetic field lines due to a solenoid and a bar magnet. *Infer the equation for the magnetic field intensity of a bar magnet by comparing it with that of an electric dipole. * Deduce the equation for torque on magnetic dipole in uniform magnetic field by comparing with electric dipole. *Compare the properties of dia, para and ferro magnetic materials. *Apply formulae and concepts to solve related questions from sample papers, NCERT and board papers. Electromagnetic	conductivity with dilution & related numerical, Kohlrausch law and its applications- Numerical Concept of electrolysis, Faraday's laws of electrolysis & related numerical Cells and batteries, Mechanism of corrosion. Topic:Chemical Kinetics Sub Topics: Rate of a reaction (instantaneous & average) Factors affecting rate of reaction (conc, temp, catalyst) and their graphical representation. Order and molecularity, rate law, specific rate constant. Integrated rate equations & half-life (zero and first order reactions). Pseudo molecular reactions. Collision theory (elementary idea only), Activation energy, Arrhenius equation Mathematical	Biological Evolution - Mechanism of Evolution and Hardy-Weinberg Principle -A Brief Account of Evolution - Origin and Evolution of Man Topic: Human Health and Disease Subtopics: - Common Diseases in Humans - Immunity - AIDS - Cancer - Drugs and alcohol abuse Topic: Microbes in Human Welfare Subtopics: - Microbes in Household products and Industrial Products - Microbes in Sewage	<mark>Learning Outcomes</mark> Each child will be able to- Create interface of Python with an SQL database Connect SQL with Python Create Database connectivity or CSV /Binary file applications Flipped Learning: Algorithms to read, write, search, modify and delete records Project code for connectivity- stationery shop management system Sample Project XII Each child will be able to create and store data in CSV files and create a CSV file based application	working • Meaning of full employment and involuntary unemployment • Problems of excess demand and deficient demand; corrective measures; changes in government spending, taxes and money supply <mark>Learning Outcomes</mark> Differentiate between ex-post and ex-ante in Economics. 2. Define and create a consumption function. 3.Define and formulate Average Propensity to Consume (APC) and Marginal	Disorders Bipolar and Related Disorders Schizophrenia Spectrum and Other Psychotic Disorders Neurodevelopmental Disorders Disruptive, Impulse-Control and Conduct Disorders Feeding and Eating Disorders Substance-Related and Addictive Disorders Learning Outcomes: Explain different models of abnormal behavior	Diet in Sports – Pre, During and Post Competition Requirements <mark>Learning Outcomes</mark> Each student will be able to: Understand the concept of a balanced diet and nutrition Classify Nutritive and Non-Nutritive components of the Diet Identify the ways to maintain a healthy weight Know about foods commonly causing food intolerance Recognize the pitfalls of dieting and food myths Unit VI Test & Measurement in Sport Fitness Test –

Ø learn new words and phrases. Ø justify the title Ø express oneself through writing tasks 3. Vistas, Prose: Journey to the End of the Earth by Tishani Joshi · about the author · the aim of the expedition · Antarctica, the right place to study about the changes in the environment · the need to address· environmental issues immediately, if mankind is to survive Ø do a comparative study between the lesson and The Ailing Planet Ø reason out the causes of the depletion of the earth Ø learn about the need to address environmental issues Ø examine the reason why Antartica is the perfect place to study about the changes in the environment		Induction: *Explain the consequences of Faraday's experiments. *State Faraday's laws in EMI and Lenz's Law. *Apply Lenz's law/ Fleming's right-hand rule to infer the direction of induced current to different circuit configurations. *Differentiate between self and mutual induction. *Derive mathematically the expressions of self inductance of a long solenoid, mutual inductance of two coaxial solenoids. Alternating Current: *Differentiate between ac and dc voltage.*Mathematically derive the equation for mean value and rms value of a c voltage /current. *Explain behaviour of resistor, capacitor, and inductor to a.c graphically. *Derive phase relation between current and voltage for these. *Represent the phase relation between current and voltage through phasor	expression. Numerical on the above topics Electrochemistry: Explain the term redox reactions and give examples. Describe the construction and working of an electrochemical cell (Daniel cell) and write the cell reactions and representation. Differentiate between electrolytic and electrochemical cells. Define and explain measurement of electrode potential of an electrode. Define emf, standard electrode potential and electrochemical series. Derive Nernst equation and relation between Gibb's energy change & emf of a cell. Solve numerical related to standard electrode potential, electrochemical series, Nernst	Treatment Plant - Production of Biogas - Microbes as Biocontrol Agents and as Biofertilisers Each student will be able to- -describe the role of lactose in lac operon -explain why Human Genome project is called a mega project -list the steps of DNA fingerprinting -explain different theories for origin of life -describe Miller's experiment for evolution - mention the theories of evolution and their	Flipped Learning: YouTube video and NCERT book Extract	propensity to consume (MPC). 4. Define and formulate Average Propensity to Save (APS) and Marginal propensity to save (MPS). 5. Define investment, autonomous investment. 6. Explain the determinants of income in a two-sector model 7.Formulate the aggregate demand and disposable income of an economy. 8. Explain the determination of equilibrium income in the short run 9. Establish macroeconomic equilibrium with price level fixed through the graphical and algebraic	Describe the symptoms of various disorders Differentiate between hallucinations and delusions Differentiate between illness anxiety and somatic symptom disorder	SAI Khelo India Fitness Test in school: ● Age group 5-8 yrs/ class 1-3: BMI, Flamingo Balance Test, Plate Tapping Test ● Age group 9-18yrs/ class 4-12: 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) Measurement of Cardio-Vascular Fitness – Harvard Step Test – Duration of the Exercise in Seconds x 100/5.5 X Pulse

4. Flamingo, Poetry: A Roadside Stand by Robert Frost · about the poet · the lives of poor deprived people of the villages · the fact that progress and development is unequal between the cities and the villages · the feelings of the owners of a roadside shed · the callous attitude of the government, the civic authorities and the social service agencies · the poet. filled with sadness to see the almost childish longing ==Learning Outcome== Ø bring out the callous attitude of the rich towards the poor Ø justify the title Ø bring out the theme- progress and development is unequal between the cities and villages Ø comment on the rhyme scheme and the stanza division 5. Flamingo, Prose: Indigo by Louis Fischer · Gandhi's role in		diagrams. *Deduce the phase relation between current and voltage in a LCR circuit. *Correlate resonance in LCR circuit and its application in tuning. *Graphically represent the dependence of current on frequency for series LCR circuit. Lab Activity: (i) To find the focal length of a convex lens by plotting a graph between u and v. (ii) To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias.	equation, relation between ΔG and emf. Define Ohm's law. Define and derive units for resistance, resistivity, conductance, conductivity, molar Define and relate molar & specific conductance in electrolytic solutions. Explain the variation of molar conductivity with dilution. State and explain Kohlrausch law and concept of electrolysis. Predict the product of electrolysis. Solve numerical related to Specific, molar conductivity, Kohlrausch and Faraday's laws. Explain the construction and working of the 10 cells, 20 cells and fuel cells. Discuss the mechanism of corrosion writing the chemical equations involved at the respective electrodes.	evidences - compare divergent and convergent evolution - explain adaptive radiation and biological evolution - compare mutation theory of Hugo de Vries and Darwin's theory of natural selection -state Hardy- Weinberg principle -explain giving three reasons as to how Hardy- Weinberg equilibrium can be affected. - list the steps of origin and evolution of man -state any two factors which affect the health - mention the symptoms, preventive		methods. 10. Describe the effects of autonomous change in aggregate demand on income and output. 11. Deconstruct the multiplier mechanism in the final goods market 12. Illustrate paradox of thrift 13. Differentiate between excess and deficient demand. 14. Solve the problem of excess and deficient demand through monetary and fiscal tools.		count of 1-1.5 Min after Exercise Computing Basal Metabolic Rate (BMR) Rikli & Jones - Senior Citizen Fitness Test I. Chair Stand Test for lower body strength II. Arm Curl Test for upper body strength III. Chair Sit & Reach Test for lower body flexibility IV. Back Scratch Test for upper body flexibility V. Eight Foot Up & Go Test for agility VI. Six Minute Walk Test for Aerobic Endurance Johnsen – Methney Test of Motor Educability (Front Roll, Roll, Jumping Half-Turn, Jumping full-turn ==Learning==

helping the peasants · Rajkumar Shukla, the resolute peasant · the sharecropping arrangement · Gandhi's defiance of the official orders · Gandhi.s influence on the lawyers · Civil Disobedience triumphs · Gandhi's agreement to 25% compensation · self -reliance and making of free India Learning Outcome Ø reflect on the historical significance of indigo plantations in India Ø examine the themes of colonialism and resistance. Ø speak about the Champaran Movement and Gandhi's role in helping peasants Ø find out more about the sharecropping agreement Ø draft a character sketch of Rajkumar Shukla Ø comment on Gandhi's influence on the lawyer examine how self-reliant Indian independence and help to			Kinetics: Define and distinguish between average and instantaneous rate. Express rate in terms of reactants and products & Rate law. Explain the dependence of rate on factors like concentration, temperature, volume and catalyst. Distinguish between elementary and complex reactions. Discuss the mechanism of complex reactions. Differentiate between order and molecularity of a reaction. Derive integrated rate equations for zero & first order reaction & solve numerical related to them. Analyses the graphs for determination of the rate constant. Define the terms- Half-life period & solve numerical	measures and cure of two common diseases - explain the life cycle of malarial parasite in human body -list the four types of barriers in innate immunity - differentiate between innate and acquired immunity as well as active and passive immunity - compare the role of B and T lymphocytes -list three ways of transmission of HIV infection -mention the events which occur in human body to cause immunodeficiency, when HIV gains entry into the body -				<mark>Outcomes</mark> Each student will be able to: Understand the importance of flexibility, explosive strength and balance Determine physical fitness Index through Harvard Step Test Compute Basal Metabolic Rate (BMR) Understand the ideal BMI Describe the procedure of Rikli & Jones – Senior Citizen Fitness Test Unit VIII Biomechanics & Sports Newton's Law of Motion & its application in sports Types of Levers

	sharecroppers were all bound together .			related to first order kinetic equation and half-life. Explain the postulates of collision theory. Derive Arrhenius equation and solve related numerical.	describe the causes of cancer and its treatment -list the drug types and their effects -name the different types of microbes - explain the role of microbes in household and industrial products - describe the importance of microbes in sewage treatment and in production of biogas - mention the usefulness of microbes as biocontrol agents and as biofertilizers			and their application in Sports Equilibrium – Dynamic & Static and Centre of Gravity and its application in sports Friction & Sports Projectile in Sport ==Learning Outcomes== Each student will be able to: Understand Newton's Law of Motion and its application in sports Recognize the concept of Equilibrium and its application in sports Know about the Centre of Gravity and will be able to apply it in sports Define Friction and application in

									sports Understand the concept of Projectile in sports
	1. Long Writing Skill, Long Writing Skills: Report Writing · format · content · expression · word limit · marking scheme Learning Outcome Ø differentiate between a magazine and newspaper report Ø speak about the format, style and tone of a letter to the editor Ø suggest expressions and phrases to draft a letter Ø draft a magazine and newspaper reports 2. Flamingo, Prose: Poets and Pancakes by Asokamitran · about the writer · interpretation of the title · theme and humour	Topic: Differential Equations Learning Outcome Each student will be able to *define a differential equation. Its order and degree *form the differential equation whose general solution is given *solve the differential equation using the method of separating variables *define a homogenous differential equation *identify a linear differential equation *solve a linear differential equation (dy/dx +Py=Q Topic: Linear Programming Problem Learning Outcomes: Each child will be able to	Topic: Alternating Current (cont.) Subtopics: Power factor, wattless current , AC generator , Transformer. Topic: Electromagnetic Waves Subtopics: *Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only) *Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses. Topic: Ray Optics Subtopics: *Mirror formula. *Refraction of light *Total internal reflection and optical fibers. *Refraction at spherical surfaces Learning Outcomes: Each student will be able to: Alternating	Topic: Aldehydes, Ketones and Carboxylic Acids Sub Topics: IUPAC nomenclature and isomerism Methods of preparation (acetaldehyde and acetone) Name reactions (Stephen & Rosenmund reduction) Physical and Chemical properties - Mechanism of nucleophilic addition, addition elimination , reactivity of alpha hydrogen-Aldol condensation Name reactions (Clemmensons reduc, Canninzaro reaction Tests for the functional group- Tollen's & Fehling (oxidation) and iodoform) Carboxylic acids:	Topic: Biotechnology: Principles and Processes Subtopics: - Principles of Biotechnology -Tools of Recombinant DNA technology - Processes of Recombinant DNA technology Topic: Biotechnology and its Applications Subtopics: - Biotechnological Applications in Agriculture - Biotechnological Applications in Medicine -Transgenic animals	Data Structure: Stack, operations on stack (push & pop), implementatio n of stack using list. Applications Functions- push, pop, peek, display (11 days) Unit II: Computer Networks ● Evolution of Networking: ARPANET, Internet, Interspace Different ways of sending data across the network with reference to switching techniques (Circuit and Packet switching).	RURAL DEVELOPME NT Key issues- credit and marketing- role of cooperatives, Agricultural diversification, alternative farming- organic farming Learning outcome: Summarise the key areas of rural development Justify the importance of agricultural diversification List the functions performed by NABARD Analyse the rural banking system and micro credit	UNIT 5 THERAPEUTI C APPROACHE S Nature and process of psychotherapy Therapeutic relationship Behaviour Therapy Cognitive Therapy Humanistic- existential Therapy Alternative Therapies Rehabilitation of the Mentally Ill Learning Outcomes Explain the	Unit IX Psychology & Sports Personality; its definition & types (Jung Classification & Big Five Theory) Motivation, its type & techniques Exercise Adherence: Reasons, Benefits & Strategies for Enhancing it Meaning, Concept & Types of Aggressions in Sports Psychological Attributes in Sports – Self Esteem, Mental Imagery, Self-Talk, Goal Setting

used · characterisation · Communism and MRA Ø interpret and justify the title Ø speak about the humour used and the theme of the lesson Ø draft character sketches Ø bring out the struggle that Ashokmitran went through Ø comment on Communism and the role of MRA at the Gemini Studio 3. Vistas, Prose: The Enemy by Pearl S. Buck · about the author · the essential worth of human life and universal brotherhood. · think beyond countries and continents and races and wars. · oath taken by doctors, saving a person's lifemore important than their patriotic feelings · ones role as private individuals as well as citizens 	*define an L.P.P, objective function, constraints, feasible region, feasible solution *find the feasible region. *solve an L.P.P using Corner point method Topic: Probability Each child will be able to *define probability, random exp, event, sample space *recall the fundamental principle of addition and multiplication	Current (cont.) *State the principle of working of a c generator, transformer. *Interpret the causes of power loss in transformers. *List the ways of reducing the power loss in the transformer. Electromagnetic Waves:* *Differentiate between conduction current and displacement current. * List at least five characteristics of electromagnetic waves. * Explain transverse nature of em waves(qualitatively). * Identify the electromagnetic spectrum in terms of the wavelength/frequency * Write at least one use of the components of the spectrum. Ray Optics: *Apply mirror formula to solve related numerical questions. *Draw ray diagram to show refraction of light through a compound plate. *List the factors on which lateral displacement	Nomenclature, isomerism, acidic nature & its comparison Method of preparation (acetic acid & benzoic acid) Physical and chemical properties, mechanisms involved. Name reaction (HVZ , Kolbe, Boradine Hunsdiecker), Uses and tests for the functional group Structural elucidation questions Topic: Amines Sub Topics: Introduction, Nomenclature and Isomerism. Methods of preparation (Ethanamine and Aniline) Hoffmann Ammonolysis. Physical and Chemical properties of aliphatic and aromatic amines (Hoffmann Bromamide) Hinsberg test for	-Ethical issues Topic: Organisms and Populations Subtopics: -Population Attributes - Population Growth Each student will be able to: -explain biotechnology -mention two core techniques that enabled the birth of biotechnology -state three basic steps in genetically modifying an organism -list three key tools of recombinant DNA technology - explain the naming and mechanism of action of restriction enzymes - describe	● Data Communication terminologies: Concept of Channel, Bandwidth (Hz, KHz, MHz) and Data transfer rate (bps, Kbps, Mbps, Gbps, Tbps). ● Transmission media: Twisted pair cable, coaxial cable, optical fiber, infrared, radio link, microwave link and satellite link. ● Network devices: Modem, RJ45 connector, Ethernet Card, Router, Switch, Gateway, WiFi card. ● Network Topologies and types: Bus, Star, Tree, PAN, LAN, WAN, MAN. ● Network	programmes in India Define agricultural marketing Describe the need for government regulation in agricultural market Highlight the benefits and limitations of organic farming VIRONMENT AND SUSTAINABLE DEVELOPMENT aning of environment, Effects of economic development on resources and environment, global warming, ozone depletion 1.Appreciate the importance	nature and process of psychotherapy Describe the goals of psychotherapy Explain therapies like cognitive therapy, humanistic-existential therapy, biomedical therapy and alternative therapies Discuss how people with mental disorders can be rehabilitated UNIT 6: Attitude and Social cognition Explaining social behavior Nature and components of attitude Attitude formation -	 Each student will be able to: Classify different types of personality and their relationship with sports performance Recognise the concept of motivation and identify various types of motivation Identify various reasons to exercise, its associated benefits and strategies to promote exercise adherence Differentiate between different types of aggression in sports Explain various psychological attributes in sports

		Physics	Chemistry	Biology	Computer Science	Economics	Psychology	Physical Education
Ø familiarise themselves with the specific background of political enmity. Ø identify and make connections between similar situations in own life experiences Ø speak about the significance of professional ethics and social obligation in sensitive times. Ø justify the title Ø express themselves through writing tasks Ø improve upon their reading and writing skills 4. Flamingo, Poetry:Aunt Jennifer's Tigers by Adrienne Rich · about the poet · interpret the title · symbolism · appreciate poetry - to infer the deeper meaning/message · poetic forms and figures of speech, rhyme and rhythm <mark>Learning Outcome</mark> Ø facilitate making connections between similar situations in different storylines/life experiences. Ø empathize with Aunt Jennifer's problems and seek resolution.		depends. *Explain the phenomenon of TIR. *Differentiate between reflection and TIR. *Apply condition for TIR to draw the path of light through totally reflecting prisms. *Explain the application of TIR in optical fibers. *Draw ray diagram to show refraction of light through a spherical refracting surface. Lab Activity: To find the focal length of a concave lens using a convex lens.	$1^0, 2^0$ & 3^0 amines. Diazonium salts: Benzene Diazonium Chloride- Preparation, Chemical reactions and Importance in synthetic organic chemistry. Related reasoning, application-based questions and interconversions. <mark>Learning Outcomes</mark> Aldehydes, Ketones & Acids: Name aldehydes, ketones and carboxylic acids according to IUPAC nomenclature. Draw the isomers for a given molecular formulae. Write equations for the preparation of preparation of ethanal, acetone & ethanoic acid. Explain the equations for name reactions (Stephen, Rosenmund, Clemmenson reduction, Canninzaro, Aldol condensation, HVZ & Boradine	biotechnological applications in agriculture -list any four applications of genetically modified plants -name the cry genes that control cotton bollworm and corn borer - explain the process involved in the production of nematode resistant tobacco plants - compare the insulin produced by Eli Lilly and the one produced by human body -describe the gene therapy procedure for ADA deficient patient -list four ways in which transgenic animals can be beneficial	Protocol: TCP/IP, File Transfer Protocol (FTP), PPP, HTTP, SMTP, POP3, Remote Login (Telnet) and Internet, Wireless / Mobile Communication protocol such as GSM, GPRS and WLL. <mark>Learning Outcomes</mark> Each child will be able to : =>Write codes for stacks - Push, pop, peek, display =>Write Algorithms to push, pop, peek and display stacks using lists and dictionaries Each child will be able to : •Explain the evolution of networking from ARPANET to	of environment in economic development 2.Explain the functions of environment 3.Infer the consequences of environment being pushed beyond its carrying capacity 4.Evaluate the impact of economic growth on environment 5.Highlight the causes of environmental degradation 6.Highlight the importance of sustainable development	Factors <mark>LEARNING OUTCOMES</mark>: Each student will be able to: Explain attitudes Describe how they are formed and changed Analyze how people interpret and explain the behavior of others Explain attitude formation	Unit X Training in Sports Concept of Talent Identification and Talent Development in Sports Introduction to Sports Training Cycle – Micro, Meso, Macro Cycle Types & Method to Develop – Strength, Endurance and Speed Types & Method to Develop – Flexibility and Coordinative Ability Circuit Training - Introduction & its importance <mark>Learning Outcomes</mark> Each student will be able to: Understand the concept of talent identification and

Ø think and produce spontaneous, fluid and expression in poetic texts to convey a social change. Ø discern prevailing inequalities in various guises. Ø develop the ability of appreciation of ideas and criticizing the thinking Ø justify the title 5. Vistas, Prose: On the Face of It by Susan Hill · about the author · theme of adolescence · making connections between similar situations in different storylines/life experiences · accepting the reality of life and shedding away stubbornness. · accepting responsibility and devote one's attention to the expected duties. ==Learning Outcome== Ø bring out the theme Ø justify the title Ø build up optimism and self- confidence. Ø fight out their loneliness,			Hunsdiecker reaction). Compare the reactivity of aldehydes and ketones towards nucleophilic addition reactions. Discuss and apply the mechanism for Aldol condensation and reactions involving Grignard reagent. Distinguish between aldehydes and ketones (DNP, Tollen's, Fehling and Iodoform test) giving the equations involved. Explain the test for carboxylic group (sodium bicarbonate test, Esterification) and write the equations involved. Compare the acidity of different types of acids. Solve interconversions and structural elucidation questions related to aldehydes, ketones & carboxylic acids. Amines Classify amines as primary, secondary and tertiary.	to humans -explain biopiracy and ethical issues -state three attributes of population - construct age pyramids showing expanding, stable and declining human population -describe the population growth and its factors - explain Verhulst-Pearl Logistic Growth of a population	the Internet and Interspace. •Differentiate between circuit switching and packet switching methods. •Define key data communication terms like channel, bandwidth, and data transfer rate. •Identify and compare various transmission media (wired and wireless). •Explain the function and use of common network devices (e.g., modem, router, switch). •Recognize different network topologies			methods used for talent development in sports Understand sports training and the different cycle used in the training process Understand different types & methods to develop - strength, endurance, and speed in sports training Understand different types & methods to develop – flexibility and coordinative ability Understand Circuit training and its importance

depression and disappointment. Ø accept the physically challenged people positively in their life and expand their social interaction express themselves through writing tasks			Name aliphatic and aromatic Amines according to common and IUPAC nomenclature. Draw the isomers for a given molecular formulae. Write the chemical equations for various methods of preparation of Ethylamine, Aniline and Diazonium salts. Explain the reactions for the chemical properties of amines. Explain name reaction (Hoffmann Ammonolysis & Hoffmann Bromamide reaction). Distinguish between 1^0, 2^0 & 3^0 amines (Hinsberg test). Discuss the importance of Diazonium salts in the synthesis of a series of aromatic compounds. Solve interconversions, reasoning and application-based questions related to amines.		such as bus, star, and tree. •Distinguish between types of networks: PAN, LAN, MAN, and WAN. •Describe standard communication protocols like TCP/IP, FTP, and HTTP. Explain the purpose of email and remote login protocols (SMTP, POP3, Telnet). Explain mobile and wireless communication protocols like GSM, GPRS, and WLL			

Sept	1. Flamingo, Prose: The Interview by Christopher Silvester · about the author · theme · interview-part 1 · interview-part 2 Learning Outcome Ø review and revise sample interview questions. Ø learn about the technique of 'interview' as a new way of interrogating. Ø list down the use of linkers and signallers while conducting an interview Ø give reasons why Umberto Eco likes/does not like being interviewed Ø examine why the novel, The Name of the Rose is a great success, 2. Flamingo, Prose: Going Places by A.R. Barton · about the author · theme of adolescence · making connections between	Topic: Probability Learning Outcome Each student will be able to *list the various types of events *differentiate btw independent and mutually exclusive events *perceive the concept of reverse probability *learn the Baye's theorem *define a random variable **apply the concept of random variable in finding mean and variance Experiential Learning- *Identify the role of probability in Casino games * Probability of Patients recovering from Covid 19 in Delhi in August 2020 Activity- students will explain the computation of conditional Probability Revision for Mid term	Topic: Ray Optics (cont.) Subtopics: *Lenses, thin lens formula, lens maker's formula. *Magnification, power of a lens, combination of thin lenses in contact. *Refraction of light through a prism. Learning Outcomes: Each student will be able to: *Draw ray diagram to show refraction of light through a thin lens. *Derive lens maker's formula and lens formula mathematically. *Mathematically deduce the expression for refractive index of an equilateral glass prism. *Graphically represent the variation of angle of deviation with angle of incidence for a glass prism. *Apply the concepts and formulae logically to solve related conceptual questions and numerical.	Topic: d and f-Block Elements Sub topics: Introduction-d & f block elements, position in periodic table, electronic config, occurrence Characteristics of transition metals. General trends in properties of the first-row transition metals-metallic charac, ionization enthalpy, oxidation state, ionic radii, colour, catalytic property, magnetic properties, interstitial comp, alloy formation. Learning Outcomes Justify the position of d & f block elements in the periodic table. Write electronic configuration & predict the common characteristics of the d and f block elements. Explain the periodic trends in d block elements.	Topic: Organisms and Populations (contd.) Subtopics -Population Interactions Revision for Mid-Term Examination Learning Outcomes Each student will be able to -list any four population interactions and give one example of each. - differentiate between positive and negative interactions among populations - compare mutualism and commensalism as well as predation and parasitism. - justify that	Revision Compilation of record files Learning Outcomes Each child will be able to clarify doubts and solve CBSE papers Flipped Learning- Sample papers	EMPLOYMENT AND UNEMPLOYMENT Growth and changes in workforce participation rate in formal and informal sectors; problema and policies Learning outcomes: 1. Define the terms associated with population and employment 2. Define various types of workers 3. Highlight various trends of employment across rural and urban area, across various	UNIT 6: Attitude and Social cognition Attitude formation (process) Attitude change Prejudice and discrimination Strategies for handling Prejudice LEARNING OUTCOMES: Explain process of attitude formation and attitude change and the relationship between attitude and behavior. Define prejudice and discrimination and the	Revision of all the units and concentration on skill development for board practicals

	similar situations in different storylines/life experiences · accepting the realities of life and shedding away stubbornness · accept responsibility and devote one's attention to the expected duties. <mark>Learning Outcomes</mark> Ø list down the differences that show up between Sophie and Jansie in the story Ø describe the character and temperament of Sophie's father Ø answer why Sophie liked her brother Geoff more than any other person draft character sketches	Examination (5) Chap 2- Inverse Trigonometric Functions Chap-3 Matrices Chap-4 -Determinants Chap5-Continuity and Differentiation Chap6-App of Derivatives Chap7-Integrals Chap8-App of Integrals Chap 9-Differential Equations		Relate the general characteristics and properties of d and f block elements with their electronic configuration.	predators act as 'conduits' for energy transfer across trophic levels. -explain why the egrets always forage close to where the cattle are grazing - analyse the adaptive strategies used by organisms in the interactions (e.g., mimicry in prey, hooks in parasites).		sectors and gender. 4. Analyse the concept of casualisation of workforce and imformalisation of workforce 5. Define unemployment 6. Interpret the reasons behind various types of rural and urban unemployment 7. Justify the role of government in employment generation	sources of prejudice State the causes and sources in handling prejudice	
<mark>Oct</mark>	1. Vistas, Prose: Memories of Childhood by Zitkala - Sa and Bama · the account of Simmons, An	Topic: Vectors Learning Outcome: Each child will be able	Topic: Ray Optics(cont.) Subtopics: *Optical instruments: Microscopes – Simple	Topic:d and f-Block Elements contd.. Sub topics: General trends in	Topic: Ecosystem Subtopics: - Ecosystem- structure and	Unit II: Computer Networks (6 PERIODS) ● Mobile	DEVELOPMENT EXPERIENCES: INDIA, CHINA,	UNIT 7 Social Influences and Group processes	<mark>Revision of all the units and concentration on skill development for board</mark>

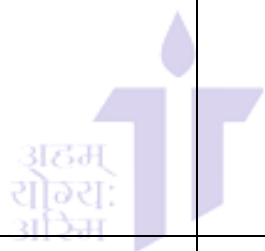|								
	American Indian · the autobiography 'Karukku' by Bama - a Tamil Dalit · reflecting childhood memories <mark>Learning Outcome</mark> Ø find out the commonality of theme found in the two distant cultures in the account Ø examine how injustice in any form cannot escape being noticed even by children Ø comment on Bama's experience as a victim of the caste system. speak about the kind of discrimination that Zitkala-Sa experiences	to *define a vector differentiate btw *vector and scalar list the various types of vectors *differentiate btw direction cosines/ratios *define scalar product of vectors *apply the scalar product concept in solving questions *define vector product of vectors *apply the vector * product concept in solving problems *evaluate the projection of a vector on another vector *find scalar triple product of given vectors. <u>Topic: Three Dimensional Geometry</u> *recall the concept of 3-D *list the various forms of line *apply the various equations of line in solving problems *define skew lines *calculate the distance btw two lines-skew and parallel lines Topic: Relation and Function Learning Outcomes:	and Compound *Astronomical telescopes (reflecting and refracting) Topic: Dual Nature of Radiation and Matter Subtopics: *Photoelectric effect, Hertz & Lenard's experimental set up and observations *Einstein photoelectric equation, particle nature of light. *De Broglie's wave equation and hypothesis. Topic: Electronic Devices Subtopics: *Energy bands in conductors, semiconductors, and insulators (qualitative ideas only) *Intrinsic and extrinsic semiconductors- p and n type, p-n junction. *Semiconductor diode - I-V characteristics in forward and reverse bias *Application of junction diode -diode as a rectifier. <mark>Learning Outcomes:</mark> Each student will be able to : Ray Optics: *Draw ray diagrams to show image formation by a simple and	properties- Colour, magnetic properties, interstitial comp, alloy formation. Preparation & properties of $KMnO_4$ & $K_2Cr_2O_7$. Structures of their ions Lanthanoids & Actinoids: Configuration, Oxidation state, chemical reactivity Lanthanoid contraction & its consequences. Comparison between lanthanoids and actinoids. Topic:Coordination Compounds Sub Topics: Introduction to the coordination compounds (terms-ligand, central atom/ion, coordination sphere, coordination entity, counter ion, oxidation state & coordination no & their calculation) IUPAC nomenclature of mononuclear Compounds	Function - Productivity - Decomposition -Energy Flow - Ecological Pyramids Topic: Biodiversity and Conservation Subtopics: -Biodiversity -Biodiversity conservation <mark>Learning Outcomes</mark> Each student will be able to: -describe the components of ecosystem -mention any two reasons why the primary productivity varies in different types of ecosystems - differentiate between net primary productivity and gross primary productivity - explain	Telecommunication Technologies: 1G, 2G, 3G, 4G and 5G; Mobile processors; Electronic mail protocols such as SMTP, POP3, Protocols for Chat and Video Conferencing: VoIP, Wireless technologies such as Wi-Fi and WiMax ● Network Security Concepts: Threats and prevention from Viruses, Worms, Trojan horse, Spams Use of Cookies, Protection using Firewall, https; India IT Act, Cyber Law, Cyber Crimes, IPR issues, hacking. ● Introduction To Web services: WWW, Hyper	<u>PAKISTAN</u> A comparison with neighbours-China and Pakistan; Issues- Economic growth, population, sectoral development, and human development indicators <mark>Learning Outcomes:</mark> Analyse China's road to becomean industrial superpower Relate China's policies with INdia's industrial policies Distinguish between India's and Pakistan's policy of nationalisation to boost economic growth Draw parallels between the demographic	Nature and formation of groups Type of groups Group think Group polarization Social Loafing Each student will be able to: Explain the nature and types of groups and know how they are formed . Describe the influence of group on individual behavior.	<mark>practicals</mark>

		*recall the definition of a function and relation *list the various types of relations *prove a relation to be an equivalence relation *evaluate the domain / range of given functions *perceive the concept of composite functions *evaluate the inverse of a function Art Integration: Various forms of functions Dancing Math	compound microscope, astronomical telescope. *Deduce mathematically the expression for the magnifying power of the optical instruments. *Compare and contrast reflecting telescope over refracting telescope. *Apply the concepts and formulae logically to solve related conceptual questions and numerical. Dual Nature of Radiation and Matter: *List the various methods of electron emission and define them. *Explain the various observations made by Hertz and Lenard experiments. *Graphically represent the conclusions from experimental set up on photoelectric effect. *State Einstein's laws of photoelectric emission *Conclude that wave nature cannot explain photo electric effect. *Correlate with radiation's dual nature	Isomerism (structural & stereo-isomerism) Bonding: Werner's theory VBT (Hybridisation & Geometry of complexes) CFT-Properties (magnetic behavior and color) Importance of coordination compounds (in qualitative inclusion, extraction of metals & biological <mark>Learning Outcomes</mark> d and f block elements Discuss the consequences of f-block elements w.r.t lanthanide contraction. Discuss the methods of preparation and chemical properties of $KMnO_4$ & $K_2Cr_2O_7$ by writing the reactions involved. Draw and explain the structures of manganate and dichromate ions involved. Give a comparative	decomposition of detritus by different agents which is then made available as nutrients to the plants - mention one example each of a detritivore and a decomposer -list three parameters used for constructing ecological pyramid - construct pyramids of numbers, biomass and energy - compare two different types of pyramids of biomass with the help of an example - mention three important components of biodiversity - explain the importance of biodiversity	Text Markup Language (HTML), Extensible Markup Language (XML); Hyper Text Transfer Protocol (HTTP); Domain Names; URL; Website, Web browser, Web Servers; Web Hosting REVISION FOR MID TERM EXAM (14 days) <mark>Learning Outcomes</mark> Each child will be able to: State the differences among different Telecom Technologies Differentiate among various network protocols Identify various security measures	indicators for India, China and kistan LANCE OF PAYMENT AND FOREIGN EXCHANGE P A/C- meaning and components P- surplus and deficits eign exchange rate- meaning and types ermination of flexible exchange rate naged Floating Exchange rate system <mark>rning Outcomes:</mark> Illustrate a BOP A/C Explain different components of current and capital account Evaluate autonomous and accommodati		

| | | | and infer that Matter possesses dual nature.
Electronic Devices:
*Differentiate between conductors, insulators, and semiconductors on the basis of conductivity and energy band diagram.
*Explain the formation of p type and n type semiconductors and pn junction diode.
*Draw circuit diagrams for characteristics of diode and graphically represent the variation of I with V. *Draw circuit diagram and explain working of a diode as a rectifier.
. | account of the lanthanoids and actinoids with respect to their electronic configurations, oxidation states and chemical behaviour.

Coordination Compounds
Explain the terms related to complexes.
Name mononuclear coordination compounds according to IUPAC.
Define different types of structural and stereo-isomerism in coordination compounds.
Discuss the nature of bonding in coordination compounds in terms of Werner's theory, VBT & CFT.
Differentiate between 1^0 and 2^0 valency.
Explain the formation of high spin and low spin complexes.
Explain the hybridisation of the central metal atom/ion in | for ecosystem functioning - state two effects of loss of biodiversity in a region - describe the causes of biodiversity loss -give reason as to why biodiversity should be conserved - differentiate between in situ and ex situ conservation of biodiversity. | used on computer network.

Identify different Network Models

Differentiate among different Network Models.
Differentiate among different telecom technologies
Differentiate among different generations of mobile telecom
Define various terms related to Web services
Differentiate between XML and HTML | ng transations Explain the causes behind disequilibrium in BOP A/C
Define foreign exchange market
Define fixed, floating and managed exchange rate | | |

			complexes based on magnetic properties. List the limitations of Werner's theory and VBT. Draw crystal field splitting patterns for tetrahedral and octahedral complexes. Explain the properties of complex compounds-colour, type of complex etc using CFT. Discuss the importance and applications of coordination compounds in daily life.						
Nov	Revision Test	Revision Test	Topic: Atoms and Nuclei Subtopics: *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 his orbit, of hydrogen line spectra (qualitative treatment only) *Composition and size of nucleus, nuclear force	Revision Test	Revision Test	Revision Test	Revision Test	Revision Test	Revision Test

| | | | | *Mass energy relation, mass defect; binding energy.
Topic: Wave Optics
Subtopics:
*Wave front and Huygen's principle
* Interference, Young's double slit experiment and expression for fringe width (No derivation final expression only)*Proof of laws of reflection and refraction using Huygens principle
*Diffraction due to a single slit, width of central maxima (qualitative treatment only)
<mark>Learning Outcomes</mark>
Each student will be able to:
Atoms and Nuclei:
*List the various models for structure of atom.
*Explain the observations of alpha particle scattering experiment.
 *State the postulates of the Bohr's model for hydrogen atom.
*Mathematically derive the expressions for radius, velocity, and total energy of an electron in hydrogen atom. | | | | | | |

			*Draw energy level diagram for hydrogen atom. *Write the equation for mass energy relation and mass defect. *Differentiate between nuclear fission and fusion. Wave Optics: *Draw the reflecting and refracting wavefronts using Huygen's principle. *Differentiate between coherent and incoherent sources. *Infer the conditions for sustained interference. *Draw the intensity versus path difference/phase difference graph for Young's Double Slit experiment. *Mathematically derive equation for path difference and phase difference for constructive and destructive interference. Revision Revision Test						
Dec	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination

Jan	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination	Pre-Board Examination
Feb	Revision Board Examination	Revision Board Examination	Revision Board Examination	Revision Board Examination	Revision Board Examination	Revision Board Examination	Revision Board Examination	Revision Board Examination	Revision Board Examination