DELHI PUBLIC SCHOOL PARADIP REFINERY

CURRICULUM FOR SESSION 2021-2022

CLASS – XII SCIENCE

ENGLISH

MONTH	NO. OF PERIODS	CHAPTER NO.	CHAPTER	SUB - TOPIC
APRIL	2	1	The Last Lesson	Intro, Explanation & Discussion of qns
	2	Poem	My Mother st sixty six	Intro, Explanation & Discussion of qns
	2		Notice Writing	Intro,Explanation & Class work
	3		Advertisement	Intro,Explanation & Class work
	3	1	The Third Level	intro, Explanation & Discussion of qns
	2		Article Writing	Intro,Explanation & Class work
MAY	1		Reading Skills-Comprehension	Intro,Explanation & Class work
	2		Debate Writing	Intro,Explanation & Class work
	3	2	Lost Spring	Intro, Explanation & Discussion of qns
	2	poem	An Elementary school classroom	Intro, Explanation & Discussion of qns
	2		Job Application	Intro,Explanation & Class work
JUNE	2		Poster Making	Intro,Explanation & Class work
	3		Invitation	Intro,Explanation & Class work
	2	3	Deep Water	Intro, Explanation & Discussion of qns
	2	2	The Tiger King	Intro, Explanation & Discussion of qns
JULY	3	4	The Rattrap	Intro, Explanation & Discussion of qns
	2	3	Journey to the end of the earth	Intro, Explanation & Discussion of qns
	2		Speech Writing	Intro,Explanation & Class work
	3		Report Writing	Intro,Explanation & Class work
	2	poem	Keeping Quiet	Intro, Explanation & Discussion of qns
	2		Letter to the Editor	Intro,Explanation & Class work
	2		Letter of Complaint	Intro,Explanation & Class work
AUGUST	2		Placing an Order	Intro,Explanation & Class work

	2		Letter of Enquiry	Intro, Explanation & Class work
	3	5	Indigo	Intro, Explanation & Discussion of qns
	2	poem	A Thing of Beauty	Intro, Explanation & Discussion of qns
	4	4	The Enemy	Intro, Explanation & Discussion of qns
	3	6	Poets and Pancakes	Intro, Explanation & Discussion of qns
SEPTEMBER	3	poem	A Roadside Stand	Intro, Explanation & Discussion of qns
	3	5	Should Wizard hit mommy	Intro, Explanation & Discussion of qns
OCTOBER	2	7	The Interview	Intro, Explanation & Discussion of qns
	2	poem	Aunt Jennifer's Tigers	Intro, Explanation & Discussion of qns
	3	6	On the Face of it	Intro, Explanation & Discussion of qns
NOVEMBER	3	8	Going Places	Intro, Explanation & Discussion of qns
	4	7	Evans Tries the O level	Intro, Explanation & Discussion of qns
	3	8	Memories of Childhood	Intro, Explanation & Discussion of qns

PHYSICS

MONTH	NO. OF PERIODS	CHAPTER NO.	CHAPTER	SUB - TOPIC
APRIL	20	1 & 2	Electric Charges and Fields & Electrostatic Potential	Chapter-1 --Electric Charges, Conductors and Insulators, Charging by Induction, Basic Properties of Electric Charge, Coulomb's Law, Forces Between Multiple Charges, Electric Field, Electric Field Lines,Electric Flux, Electric Dipole, Dipole in a Uniform External Field,Coutinuous Charge Distribution, Gauss's Law,Application of Gauss's Law. Chapter-2--Electrostatic Potential,Potential Due to a Point Charge,Potential Due to an Electric Dipole,Potential due to system of charges,equipotential surfaces, electrical potential energy of a system of two point charges and of electric dipole in an electric field.

MAY	18	2&3	Electrostatic Potential & Current Electricity	Chapter-2-Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarisation, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor. Chapter–3:Electric current, Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, electrical resistance, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, Carbon resistors, colour code for carbon resistors; series and parallel combinations of resistors; temperature dependence of resistance.
JUNE	12	4	Moving Charges and Magnetism	Concept of magnetic field, Oersted's experiment. Biot - Savart law and its applications,Ampere's law and its applications to infinitely long straight wire. Straight and toroidal solenoids, force on a moving charge in uniform magnetic and electric fields, Cyclotron.Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; moving coil galvanometer.
JULY	24	5 &6	Magnetism and Matter & Electromagnetic Induction	Chapter–5: Magnetism and Matter-The Barmagnet,Magnetism and Gauss'sLaw, The Earth's Magnetism,Magnetisation and Magnetic Intensity,Magnetic Poperties of Materials,Permanent Magnet and Electromagnets. Chapter-6--The Experiments of Faraday and Henery,Magnetic Flux,Faraday's Law of Induction,Lenz's Law and Conservation of Energy,Motional Electromotive Force, Energy Consideration:A Quantitative Study,Eddy Currents,Inductance,AC Generator,Transformer

AUGUST	23	7,8&9	Alternating Current & Electromagnetic Waves , Optics and Optical Instruments	Chapter-7--AC voltage Applied to a Resistor,Phasors,AC Voltage Applied to an Inductor,AC Voltage Applied to a Capacitor,AC Voltage Applied to a Series LCR Circuit,Power in AC,LC Oscillations. Chapter-8--Displacement Current,Electromagnetic Waves,Electromagnetic Spectrum,Applications of EM radiations Chapter-9-Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and its applications, optical fibres, refraction at spherical surfaces, lenses, thin lens formula, lensmaker's formula, magnification, power of a lens, combination of thin lenses in contact,refraction of light through a prism. Scattering of light - blue colour of sky and reddish apprearance of the sun at sunrise and sunset. Microscopes and astronomical telescopes and their magnifying powers
SEPTEMBER	13			Revision For Half Yearly
OCTOBER	23	10, 11 &12	Chapter-10 :Wave optics, Chapter: 11 Dual Nature of Radiation and Matter, Chapter:12 Atoms	Chapter-10: Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface . Proof of laws of reflection and refraction using Huygen's principle. Interference, Young's double slit experiment and expression for fringe width, coherent sources and sustained interference of light, diffraction due to a single slit, resolving power of microscope and astronomical telescope, polarisation, plane polarised light, Brewster's law, uses of plane polarised light and Polaroids. Chapter-11: Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation, Davisson-Germer experiment. Chapter-12: Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model, energy levels, hydrogen spectrum
NOVEMBER	21	13 &14	Chapter-13: Nuclei, Chapter-14: Semiconductor electronics	Chapter-13: Composition and size of nucleus, Radioactivity, alpha, beta and gamma particles/rays and their properties; radioactive decay law, half life and mean life Energy bands in conductors, semiconductors and insulators ,Semiconductor diode - I-V characteristics in forward and reverse bias, diode asa rectifier;Special purpose p-n junction diodes: LED, photodiode, solar cell and Zener diode and their characteristics, zener diode as a voltage regulator.

CHEMISTRY

MONTH	NO. OF PERIODS	CHAPTER NO.	CHAPTER	SUB - TOPIC
April	12	Chapter -1	SOLID STATE	Classification of solids based on different binding forces: molecular, ionic, covalent and metallic solids, amorphous and crystalline solids (elementary idea). Unit cell in two dimensional and three dimensional lattices, calculation of density of unit cell, packing in solids, packing efficiency, voids, number of atoms per unit cell in a cubic unit cell, point defects, electrical and magnetic properties. Band theory of metals, conductors, semiconductors and insulators and n and p type semiconductors.
	10	Chapter-2	SOLUTIONS	Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, Raoult's law, colligative properties - relative lowering of vapour pressure, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor.
MAY	10	Chapter-3	ELECTROCHEMISTRY	Redox reactions, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, fuel cells, corrosion.
	8	Chapter–4	CHEMICAL KINETICS	Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment), activation energy, Arrhenius equation.
JUNE	8	Chapter-5	SURFACE CHEMISTRY	Adsorption - physisorption and chemisorption, factors affecting adsorption of gases on solids, catalysis: homogenous and heterogenous, activity and selectivity of solid catalysts; enzyme catalysis, colloidal state: distinction between true solutions, colloids and suspension; lyophilic, lyophobic, multi-molecular and

				macromolecular colloids; properties of colloids; Tyndall effect, Brownian movement, electrophoresis, coagulation, emulsion - types of emulsions.
JULY	8	Chapter–6	GENERAL PRICIPLES AND PROCESSES OF ISOLATION OF ELEMENTS	Principles and methods of extraction - concentration, oxidation, reduction - electrolytic method and refining; occurrence and principles of extraction of aluminium, copper, zinc and iron.
	12	Chapter–10	HALOALKANES AND HALOARENES	Haloalkanes: Nomenclature, nature of C–X bond, physical and chemical properties, optical rotation mechanism of substitution reactions. Haloarenes: Nature of C–X bond, substitution reactions (Directive influence of halogen in monosubstituted compounds only). Uses and environmental effects of - dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.
AUGUST	10	Chapter–11	ALCOHOL, PHENOL AND ETHER	Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration, uses with special reference to methanol and ethanol. Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophillic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.
	10	Chapter–12	ALDEHYDE,KETONE CARBOXYLIC ACIDS	Aldehydes and Ketones: Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes, uses. Carboxylic Acids: Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses
SEPTEMBER	8	Chapter–13	AMINES	Amines: Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines. Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry.
	8	Chapter–14	BIOMOLECULES	Carbohydrates - Classification (aldoses and ketoses), monosaccahrides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates. Proteins -Elementary idea of - amino acids, peptide bond, polypeptides, proteins, structure of proteins - primary, secondary,

				tertiary structure and quaternary structures (qualitative idea only), denaturation of proteins; enzymes. Hormones - Elementary idea excluding structure. Vitamins - Classification and functions. Nucleic Acids: DNA and RNA.
OCTOBER	8	Chapter–9	COORDINATION COMPOUNDS	Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT, and CFT; structure and stereoisomerism, importance of coordination compounds (in qualitative analysis, extraction of metals and biological system).
	10	Chapter-7	P BLOCK ELEMENTS	Group -15 Elements: General introduction, electronic configuration, occurrence, oxidation states, trends in physical and chemical properties; Nitrogen preparation properties and uses; compounds of Nitrogen: preparation and properties of Ammonia and Nitric Acid, Oxides of Nitrogen (Structure only); Phosphorus - allotropic forms, compounds of Phosphorus: Preparation and properties of Phosphine, Halides and Oxoacids (elementary idea only). Group 16 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties, dioxygen: preparation, properties and uses, classification of Oxides, Ozone, Sulphur -allotropic forms; compounds of Sulphur: preparation properties and uses of Sulphur-dioxide, Sulphuric Acid: industrial process of manufacture, properties and uses; Oxoacids of Sulphur (Structures only). Group 17 Elements: General introduction, electronic configuration, oxidation states, occurrence, trends in physical and chemical properties; compounds of halogens, Preparation, properties and uses of Chlorine and Hydrochloric acid, interhalogen compounds, Oxoacids of halogens (structures only). Group 18 Elements: General introduction, electronic configuration, occurrence, trends in physical and chemical properties, uses.
NOVEMBER	10	Chapter–8	D AND F BLOCK ELEMENTS	General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals – metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of K2Cr2O7 and KMnO4. Lanthanoids - Electronic configuration, oxidation states, chemical reactivity and

				lanthanoid contraction and its consequences. Actinoids - Electronic configuration, oxidation states and comparison with lanthanoids.
	8	Chapter-15	POLYMERS	Classification - natural and synthetic, methods of polymerization (addition and condensation), copolymerization, some important polymers: natural and synthetic like polythene, nylon polyesters, bakelite, rubber. Biodegradable and non-biodegradable polymers.
DECEMBER	8	Chapter-16	CHEMISTRY IN EVERYDAY LIFE	Chemicals in medicines - analgesics, tranquilizers antiseptics, disinfectants, antimicrobials, antifertility drugs, antibiotics, antacids, antihistamines. Chemicals in food - preservatives, artificial sweetening agents, elementary idea of antioxidants. Cleansing agents- soaps and detergents, cleansing action.

BIOLOGY

MONTH	NO. OF PERIODS	CHAPTER NO.	CHAPTER	SUB - TOPIC
APRIL	**30**	**1,2,3,**	**Chapter-1: Reproduction in Organisms** **Chapter-2: Sexual Reproduction in Flowering Plants** **Chapter-3: Human Reproduction**	Reproduction, a characteristic feature of all organisms for continuation of species; modes of reproduction - asexual and sexual reproduction; asexual reproduction - binary fission, sporulation, budding, gemmule formation, fragmentation; vegetative propagation in plants; events in sexual reproduction. Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; outbreeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation. Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).
MAY	**20**	**4,5**	**Chapter-4: Reproductive Health** **Chapter-5: Principles of Inheritance and Variation**	Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods; medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT, AI (brief overview). Heredity and variation, Mendelian inheritance; deviations from Mendelism – incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; linkage and crossing over; Sex determination - in human being, birds, grasshopper and honey bee; Mutation, Pedigree analysis, sex linked

				inheritance - haemophilia, colour blindness; Mendelian disorders in humans –sickle cell anaemia, Phenylketonuria, thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.
JUNE	**20**	**6**	**Chapter-6: Molecular Basis of Inheritance**	Structure of DNA and RNA; DNA packaging; Search for genetic material and DNA as genetic material; DNA replication; Central Dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; Human genome project; DNA fingerprinting.
JULY	**30**	**7 , 8, 9**	**Chapter-7: Evolution** **Chapter-8: Human Health and Diseases** **Chapter-9: Strategies for Enhancement in Food Production**	Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences); adaptive radiation; Biological evolution: Lamarck's theory of use and disuse of organs, Darwin's theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples, types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; brief account of evolution; human evolution. Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse. Animal husbandry, Plant breeding, tissue culture, single cell protein.
AUGUST	**30**	**10,11,12**	**Chapter-10: Microbes in Human Welfare** **Chapter-11: Biotechnology - Principles and Processes** **Chapter-12: Biotechnology and its Application**	Microbes in food processing, industrial production, Antibiotics; production and judicious use, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Genetic Engineering (Recombinant DNA Technology). Application of biotechnology in health and agriculture: genetically modified organisms - Bt crops; RNA interference, Human insulin, gene therapy; molecular diagnosis; transgenic animals; biosafety issues, biopiracy and patents.

SEPTEMBER	**Revision and Mid Term Examination**			
OCTOBER	**25**	**13,14**	**Chapter-13: Organisms and Populations** **Chapter-14: Ecosystem**	Organisms and environment: Habitat and niche, abiotic factors, ecological adaptations; population interactions - mutualism, competition, predation, parasitism, commensalism; population attributes - growth, birth rate and death rate, age distribution. Ecosystem: structure and function; productivity and decomposition; energy flow; pyramids of number, biomass, energy; nutrient cycles (carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).
NOVEMBER	**20**	**15,16**	**Chapter-15: Biodiversity and Conservation** **Chapter-16: Environmental Issues**	Biodiversity - Concept, levels, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites. Air pollution and its control; water pollution and its control; agrochemicals and their effects; solid waste management; radioactive waste management; greenhouse effect and climate change impact and mitigation; ozone layer depletion; deforestation; case study exemplifying success story addressing environmental issue(s).
DECEMBER	**Revision and Pre Board Examination**			

MATHEMATICS

MONTH	CHAPTER NO.	CHAPTER	SUB - TOPIC
APRIL	2,3 & 4	➢ Inverse Trigonometric Functions ➢ Matrices ➢ Determinants	• Domain, Range, Graph of Inverse trigonometric functions. • Properties of I.T.fun. • Applications of I.T.fun. • Matrix • Types of Matrices • Operations on Matrices • Transpose of a Matrix • Symmetric & Skew Symmetric Matrices • Elementary Operation • Determinant • Properties of determinants • Area of a Triangle • Minors & Cofactors • Adjoint & Inverse of a Matrix • Matrix Method of solving a system.
JUNE	5	➢ Continuity and Differentiability	• Continuity • Differentiability • Exponential & Logarithmic Functions • Logarithmic Differentiation • Derivative of fun. In parametric form • Second order Derivative • MVT& Rolle's Theorem
JULY	7 & 8	➢ Integrals ➢ Application of Integrals	• Methods of Integration • Integration by Partial Functions • Integration by parts • Definite Integral • Definite Integrals by Substitution • Properties of Definite Integrals • Area under Simple Curves • Area between two curves
AUGUST	6&9	➢ Application of Derivatives ➢ Differential Equations	• Rate of change of Quantities • Increasing and Decreasing Functions

			• Tangents and Normals • Approximations • Maxima and Minima • General & Particular solution of a Differential Equation • Formation of a Differential Equation Whose General Solution is given • Methods of Solving First Order, First Degree Differential Equations.
SEPTEMBER	10 & 12	➢ Vector Algebra ➢ Linear programming	• Types of vectors • Addition of vectors • Dot product • Cross product • Scalar Triple Product • Linear Programming Problem and its Mathematical Formulation • Graphical solution of LPP
OCTOBER	11	➢ Three Dimensional geometry	• Direction Cosines & Direction Ratios of a line • Equation of a line in space • Angle between two lines • Shortest distance between two lines • Plane • Coplanarity of two Lines • Angle between two Planes • Distance of a point from a Plane • Angle between a line and a Plane
NOVEMBER	1 & 13	➢ Relations & Functions ➢ Probability	• Types of Relations • Types of Functions • Composition of Functions • Inverse of an Invertible Function • Conditional Probability • Multiplication Theorem on Probability • Independent Events • Bayes ' Theorem • Random Variables & its Probability Distributions • Binomial Distributions
DECEMBER		• Revision	• Discussion of Board Papers

		• Mock test	
JANUARY		• Revision • Pre Board	• Discussion of Sample Papers
FEBRUARY		• Revision • Self Study	• Discussion of Most Expected Questions

PHYSICAL EDUCATION

MONTH	NO. OF PERIODS	CHAPTER NO.	CHAPTER	SUB TOPICS
APRIL	14	1	Planning in Sports	Meaning & Objectives Of Planning Various Committees & its Responsibilities (pre; during & post) Tournament – Knock-Out, League Or Round Robin & Combination Procedure To Draw Fixtures – Knock-Out (Bye & Seeding) & League (Staircase & Cyclic) Intramural & Extramural – Meaning, Objectives & Its Significance Specific Sports Programme (Sports Day, Health Run, Run For Fun, Run For Specific Cause & Run For Unity)
MAY	12	2	Sports & Nutrition	Balanced Diet & Nutrition: Macro & Micro Nutrients Nutritive & Non-Nutritive Components Of Diet Eating For Weight Control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance & Food Myths
JUNE	8	3	Yoga & Lifestyle	Asanas as preventive measures Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, Ardh Matsyendrasana Diabetes: Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana Asthema: Procedure, Benefits & contraindications for Sukhasana, Chakrasana, Gomukhasana,

				Parvatasana, Bhujangasana, Paschimottasana, Matsyasana Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, Sharasana Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana
JULY	16	4	Physical Education & Sports for CWSN (Children With Special Needs - Divyang)	Concept of Disability & Disorder Types of Disability, its causes & nature (cognitive disability, intellectual disability, physical disability) Types of Disorder, its cause & nature (ADHD, SPD, ASD, ODD, OCD) Disability Etiquettes Advantage of Physical Activities for children with special needs Strategies to make Physical Activities assessable for children with special need.
AUGUST	16	5	Children & Women in Sports	Motor development & factors affecting it Exercise Guidelines at different stages of growth & Development Common Postural Deformities - Knock Knee; Flat Foot; Round Shoulders; Lordosis, Kyphosis, Bow Legs and Scoliosis and their corrective measures Sports participation of women in India Special consideration (Menarch & Menstural Disfunction) emale Athletes Triad (Oestoperosis, Amenoria, Eating Disorders)
SEPTEMBER	8	6	Test & Measurement in Sports	Motor Fitness Test – 50 M Standing Start, 600 M Run/Walk, Sit & Reach, Partial Curl Up, Push Ups (Boys), Modified Push Ups (Girls), Standing Broad Jump, Agility – 4x10 M Shuttle Run, General Motor Fitness – Barrow three item general motor ability (Standing Broad Jump, Zig Zag Run, Medicine Ball Put – For Boys: 03 Kg & For Girls: 01 Kg) Measurement of Cardio Vascular Fitness – Harvard Step Test/Rockport Test
OCTOBER	12	7	Physiology & Injuries in Sports	Physiological factor determining component of Physical Fitness Effect of exercise on Cardio Respiratory System Effect of exercise on Muscular System Physiological

				changes due to ageing Sports injuries: Classification (Soft Tissue Injuries:(Abrasion, Contusion, Laceration, Incision, Sprain & Strain) Bone & Joint Injuries: (Dislocation, Fractures: Stress Fracture, Green Stick, Communated, Transverse Oblique & Impacted) Causes, Prevention& treatment First Aid – Aims & Objectives
NOVEMBER	16	8	Biomechanics & Sports	Meaning and Importance of Biomechanics in Sports Types of movements (Flexion, Extension, Abduction & Adduction) Newton's Law of Motion & its application in sports Friction & Sports
		9	Psychology & Sports	Personality; its definition & types – Trait & Types (Sheldon & Jung Classification) & Big Five Theory Motivation, its type & techniques Exercise Adherence; Reasons to Exercise, Benefits of Exercise Strategies for Enhancing Adherence to Exercise Meaning, Concept & Types of Aggressions in Sports
DECEMBER	8	10	Training in Sports	Strength – Definition, types & methods of improving Strength – Isometric, Isotonic & Isokinetic Endurance - Definition, types & methods to develop Endurance – Continuous Training, Interval Training & Fartlek Training Speed – Definition, types & methods to develop Speed – Acceleration Run & Pace Run Flexibility – Definition, types & methods to improve flexibility Coordinative Abilities – Definition & types Circuit Training - Introduction & its importance
	10		REVISION	

HINDUSTAN VOCAL MUSIC

MONTH	NO. OF PERIODS	CHAPTER	SUB - TOPIC
APRIL	15	unit-1 (definitions), unit 7 (raag bhairav), unit 6 (rupak taal)	alankar, kan, meend, khatka, murki, gamak, raag bhairav chota khayal and rupak taal demonstration
MAY	11	Unit 7 (raag bhairav badakhayal), Unit 8 (lifesketch)	badakhayal bandish, Ustad Faiyaz khan and Ustad Bade Ghulamali Khan
JUNE	8	unit 7 (raag bageshri), unit 6 (dhamar taal), unit 3 (time theory of raags)	raag bageshri chota khayal baandish, description of dhamar taal and description of time theory of raags.
JULY	18	unit 7 (raag malkauns), unit 6(jhaptaal), unit 4 (sangeet ratnakar and sangeet parijat)	raag malkauns chota khayal, dhamar taal description, and description of sangeet ratnakar and sangeet parijat.
AUGUST	17	unit 7 (raag shudh sarang), unit 1 (sadra and dadra)	raag shudh sarang chotakhayal bandish, sadra and dadra description
SEPTEMBER	6	unit 7 (tarana), unit 8(life sketch)	tarana in raag malkauns, Pt. krishna rao shankar
OCTOBER	13	unit 6(tilwada taal), unit 8 (life sketch)	tilwada taal description and abdul karim khan's life history
NOVEMBER	14	unit 7 (dhamar), unit 2 (classification of raags), unit 5 (tuning of tanpura)	dhamar in raag bhairav, raag description and tanpura theory.
DECEMBER	13	practice of all raags and taals	raag bhairav, bageshri, shudh sarang, malkauns and taal rupak, dhamar, jhaptaal, tilwada

INFORMATION TECHNOLOGY

MONTH	NO. OF PERIODS	CHAPTER NO.	CHAPTER	SUB - TOPIC
APRIL	14	PART-B Unit -1 PART-B Unit -2	Database Concepts – RDBMS Tool Operating Web Based Applications	• Basics of RDBMS. • SQL – Creating and Opening Database. • Creating and populating tables. • Modifying the content and structure of table. • Ordering and Grouping. • Operating with multiple tables. • Online Reservation Systems. • E-Governance. • Online Shopping and Bill payments. • Online Tutorials and Tests. • Project Management – Web Based Application development.
MAY	11	PART-B Unit -3	JAVA	• Oriented Programming • Java Language Elements • Operators • Control Flow
JUNE	8	PART-B Unit -3	JAVA	• Array • String Manipulation
JULY	16	PART-B Unit -3	JAVA	• Class Design • Exception Handling • Assertions • Threads • Wrapper Classes
AUGUST	17	PART-B Unit -4 PART-A Unit -1	Work Integrated Learning IT – DMA Communication Skills	• Identification of Work Areas. • Work Experience.
SEPTEMBER	8	PART-A Unit -2 PART-A Unit -4	Self-Management Skills Entrepreneurial Skills-	
OCTOBER	13	PART-B Unit -3 PART-B Unit -5	ICT Skills Green Skills	
NOVEMBER	16	REVISION		