DELHI PUBLIC SCHOOL PARADIP REFINERY
SPLIT UP SYLLABUS (2025-26)
CLASS : XII (SCIENCE)

SUBJECT : ENGLISH CORE

Sl No	TERM - I & TERM - II	MONTH	CHAPTER NUMBER	CHAPTER NAME	SUB TOPIC	ACTIVITY	PT PORTION	REMARKS
		APRIL	Flamingo : ch 1,2 poem 1	• The Last Lesson • Lost Spring My mother at 66			PT1	
		MAY	Writing skills Flamingo	• Aunt Jennifer's tigers Notice writing ,			PT 1	
		JUNE	Flamingo ch 3, poem 3 Writing skills	Deep Water, Keeping Quiet Revision PT1			PT1 &2	
		JULY	Flamingo - Ch 4, 5&6 Vistas Writing Skills	The Rattrap • Indigo • Poets and Pancakes The Third Level Letter to the editor Article Writing			PT 2	

		AUGUST	Flamingo – Poem 4 Vistas -ch 3&4 Writing skills	A Thing of Beauty The Tiger King • Journey to the end of the Earth • The Enemy Job Application and CV invitation			PT 3	ASL ACTIVITI S TO BE DONE THROU GHOUT THE SESSIO N AT REGULA INTERV ALS
		SEPTE MB ER	Flamingo- ch 7,8 Poem 5	• The Interview• Going Places			PT 3	
			Writing skills	• A Roadside Stand Report Writing			PT3	
		OCTOBE R	Vistas -ch 6 Poem 6	• On the Face of It • Aunt Jennifer's Tigers PROJECT INITIATION				
		NOVEMB ER	Vistas – ch 9	• Memories of Childhood ◦ The Cutting of My Long Hair ◦ We Too are Human Beings				
		DECEMB ER		Revision for Preboard 1			AS L (iN TE RN AL AS SE SS ME NT S	
		JANUARY		PROJECT SUBMISSIO N AND				

				VIVA				
		FEBRU AR Y						
		MARCH						

SUBJECT : PHYSICS

MONTH	CHAPTER NAME	SUB TOPIC	ACTIVITY/ PRACTICAL	PT PORTION
April	Electric Charges and Fields (Chapter-1)	Electric charges, Conservation of charge, Coulomb's law-forces between multiple charges, superposition principle and continuous charge distribution.		
May	Electric Charges and Fields (Chapter-1)	Electric field, electric field due to a point charge, field lines, dipole, field due to a dipole, torque on a dipole in uniform field. Electric flux, Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and Uniformly charged thin spherical shell	To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and 1/v. **(Experiment-2)**	**PT-II**
June	Electrostatic Potential and Capacitance (Chapter-2)	Electric potential, potential difference, potential due to a point charge, a dipole and system of charges, equi-potential surfaces, electrical potential energy of a system of two-point charges and of electric dipole in an E-field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, 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	To study the nature and size of the image formed by a (i) convex lens, or (ii) concave mirror, on a screen by using a candle and a screen. (**Activity-2**) To determine angle of minimum deviation for a given prism by plotting a graph between angle of incidence and angle of deviation. **(Experiment-3)**	
	Current Electricity (Chapter-3)	Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current, Ohm's law, V-I characteristics electrical energy and power, resistivity and conductivity, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and parallel, Kirchhoff's rules, Wheatstone bridge.	To determine resistivity of two / three wires by plotting a graph for potential difference versus current. (**Experiment-4**)	
	Moving Charges and Magnetism	Magnetic field, Oersted's experiment. Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire.	To find resistance of a given wire / standard resistor using metre bridge. **(Experiment-5**)	

July and August	(Chapter-4)	Straight solenoid, force on a moving charge in uniform Magnetic and electric fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform field; Current loop as a magnetic dipole and its magnetic dipole moment, moving coil galvanometer its current sensitivity and conversion to ammeter and voltmeter.	To verify the laws of combination (series) of resistances using a metre bridge. (**Experiment-6)**	
	Magnetism and Matter (Chapter-5)	Bar magnet, bar magnet as an equivalent solenoid , magnetic field intensity due to a magnetic dipole-along its axis and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines. Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.	To determine resistance of a galvanometer by half-deflection method and to find its figure of merit. **(Experiment-7)** To study the variation in potential drop with length of a wire for a steady current. **(Activity-3)**	
	Electromagnetic Induction (Chapter-6)	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.		
	Alternating Current (Chapter-7)	Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance, LCR series circuit (phasors), resonance, power in AC circuits, power factor, wattles current.AC generator, Transformer		
September	Electromagnetic Waves	Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature, Electromagnetic spectrum-including elementary facts about their uses	To convert the given galvanometer (of known resistance and figure of merit) into a voltmeter of desired range and to verify the same. **(Experiment-8)**	
	Ray Optics and Optical Instruments (Chapter-9)	Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibers, refraction at spherical surfaces, 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. Microscopes and astronomical telescopes and their magnifying powers.	To find the value of v for different values of u in case of a concave mirror and to find the focal length. (**Experiment-1**) To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab.	

			(**Activity-1**)	
	Wave Optics	Wave front and Huygens's principle, reflection and refraction of plane wave at a plane surface. Proof of laws of reflection and refraction using Huygens's principle. Interference, Young's double slit experiment and fringe width, coherent sources and sustained interference, diffraction due to single slit, width of central maxima.	To assemble the components of a given electrical circuit. (**Activity-4**)	
October	Dual Nature of Radiation and Matter	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.	To draw the diagram of a given open circuit comprising at least a battery, resistor/ rheostat, key, ammeter and voltmeter. **(Activity-5)**	
	Atoms	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	To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items. **(Activity-6)**	
November	Nuclei	Composition and size of nucleus, nuclear force, Mass-energy , mass defect, binding energy per nucleon and its variation with mass number, nuclear fission & fusion.	To draw the I-V characteristic curve for a p-n junction diode in forward and reverse bias. **(Experiment-9)**	
	Semiconductor Electronics	Energy bands in conductors, semiconductors and insulators, Intrinsic and extrinsic semiconductors- p and n type, p-n junction diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier.		
December		REVISION AND MOCK TEST		
January		REVISION AND MOCK TEST		
Febrauary		REVISION AND PRE-BOARD		

SUBJECT : CHEMISTRY

Sl. No.	MONTH	No of periods	CH. NO.	CH. NAME	PT PORTION	TERM-I&II PORTION	SUB TOPICS	EXPERIMENTS INCLUDED
1	APRIL	24	5	COORDINATION COMPOUNDS	PT-I	TERM-I	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 & biological system)	Volumetric analysis Determination of concentration/ molarity of KMnO4 solution by titrating it against a standard solution of: i. Ferrous Ammonium Sulphate (Students will be required to prepare standard solutions by weighing themselves).
2	MAY	18	1	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 molar mass,Vant Hoff's factor.	Volumetric analysis Determination of concentration/ molarity of KMnO4 solution by titrating it against a standard solution of: ii. Oxalic acid,
3	JUNE	29	2	ELECTROCHEMISTRY	PT-II		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, variation of conductivity with concentration,Kohlrausch's law,	A.Preparation of doubble salt of Ferrous Ammonium Sulphate or potash Alum . Preparation of Potassium Ferric Oxalate .

							elecrolysis(elementary idea), dry cell,electrolytic cell, Galvanic cells , lead accumulator, fuel cells and corrosion.	
4	JULY	13	4	D & 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 of properties of KMnO4 & K2Cr2O7. Lanthanoids - Electronic configuration, oxidation states and lanthanoid contraction and its consequences.	
5	AUGUST	21	3	CHEMICAL KINETICS			Rate of reaction (average and instataneous),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 ,Arrehenius equation .	B. Characteristic tests of carbohydrates, fats and proteins in pure samples and their detection in given food stuffs.

6	SEPT	24	6	HALOALKANES & 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.	C.Functional group identification of organic compounds.
7	OCT	21	7	ALCOHOLS PHENOLS & ETHERS	PT-III	TERM-II	Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of dehydration. 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	Salt analysis (Qualitative analysis) (4 marks) Determination of one cation and one anion in a given salt. Cations- Pb2+, Cu2+, As3+, Al3+, Fe3+, Mn2+, Ni2+, Zn2+, Co2+, Ca2+, Sr2+, Ba2+, Mg2+, NH4+ Anions – (CO3)2- , S2- , NO2- , SO2- , NO3, Br-, I-, PO43- , C2O42- ,CH3COO-(Note: Insoluble salts excluded)
8	NOV	27	8	ALDEHYDES KETONES & 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.	
9	DEC	24	9 & 10	AMINES & BIOMOLECULES		**Amines:** Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines. Diazonium salt: Preparation & chemical reactions & importance in synthetic organic chemistry. **Biomolecules:**Carbohydrates - Classification (aldoses and ketoses), monosaccahrides (glucose and fructose), D-L configuration 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. Nucleic Acids: DNA and RNA.Vitamins : Classifications and functions	
10	JAN			REVISION			REVISION
11	FEB			REVISION		REVISION	REVISION

SUBJECT : MATHEMATICS

GRADE	XII			
Name of the text book	Publisher	No. of chapters given in the text book	No of units/ chapters deleted if any	Reason for deleting the unit
MATHEMATICS Textbook for class XII, Part – 1 &Part – 2	NCERT	13	Nil	……..

UNIT WISE WEIGHTAGE FOR MOCK & PRE BOARD EXAM (CLASS- XII)

UNIT	UNIT NAME	MARKS
I	RELATIONS AND FUNCTIONS	08
II	ALGEBRA	10
III	CALCULUS	35
IV	VECTOR AND THREE- DIMENSIONAL GEOMETRY	14
V	LINEAR PROGRAMMING	05
VI	PROBABILITY	08
	TOTAL	80

MONTH & YEAR	UNIT	THEME /SUB THEME	KEY CONCEPTS TO BE DEVELOPED.	ACTIVITIES TO BE PERFORMED
APRIL – 2025	3 , 4 & 1	➢ Matrices ➢ Determinants ➢ Relations & Functions	• Matrix • Types of Matrices • Operations on Matrices • Transpose of a Matrix • Symmetric & Skew Symmetric Matrices • Determinant • Area of a Triangle • Minors & Cofactors • Adjoint& Inverse of a non singularMatrix • Matrix Method of solving a system. • Types of Relations • Types of Functions	To sketch the graph of a^x(lets say 2^x) and loga x(lets say log2 x) for a> 0 & a ≠ 1 and to examine that they are mirror image of each other.
MAY- 2025	2	➢ Inverse Trigonometric Functions	• Domain,Range,Graph • Properties.	To establish a relationship between log10 x & loge x
JUNE- 2025	5	➢ Continuity and Differentiability	• Continuity • Differentiability • Exponential & Logarithmic Functions • Logarithmic Differentiation • Derivative of fun. In parametric form • Second order Derivative	To find analytically the limit of a fun. at x= c & to check the continuity of the fun. At x= c
JULY- 2024	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	To verify that for a function f(x) to be continues at given point x0 ,Δ y = |f(x0 +Δ x)-f(x0) | is arbitrarily small.

AUGUST-2025	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.	To Understand the concept of Increasing & Decreasing functions To understand the concept of Local Max/ Local Min
SEPTEMBER- 2025	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	Calculation of $\int_0^1 \sqrt{1-x^2}\,dx$ as the limit of a Sum
OCTOBER- 2025	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 • Coplanarity of two Lines	To verify that the angle in a semicircle is a right angle using vector method
NOVEMBER- 2025	13	➢ Probability	• Conditional Probability • Multiplication Theorem on Probability • Independent Events • Bayes ' Theorem	To understand the concept of conditional probability i.e P(A/B)
			• Random Variables & its Probability Distributions	
DECEMBER- 2025		• Revision	• Discussion of Board Papers	Activity test For 10 marks.

		• Mock test		
JANUARY- 2026		• Revision • Pre Board	• Discussion of Sample Papers	
FEBRUARY- 2026		• Revision • Self Study	• Discussion of Most Expected Questions	

Internal Assessment	20 Marks
Periodic Tests (Best 2 out of 3 tests Conducted)	10 Marks
Mathematics Activities	10 Marks

SUBJECT : BIOLOGY

S NO	MONTHS	UNIT NO. AND NAME	CHAPTER	SUB TOPICS	ACTIVITY INCLUDED	PT PORTION
1	**APRIL**	***Unit-VI Reproduction***	**Chapter-2: Sexual Reproduction in Flowering Plants**	Sexual Reproduction in Flowering Plants : 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.	A.1. Prepare a temporary mount to observe pollen germination A.3..Prepare a temporary mount of onion root tip to study mitosis. B.1.Flowers adapted to pollination by different agencies(wind,insect,birds) B.2 Pollen germination on stigma through a permanent slide or scanning electron micrograph. B.4.Meiosis of onion bud cell or grasshopper testis through permanent slides.B8.Controlled pollination - emasculation, tagging and bagging.	PT-I

	MAY		**Chapter-3: Human Reproduction**	Human reproduction: 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).	B.3..Identification of stages of gamete development,T.S of testis,T.S of ovary through permanent slides(from grasshopper/mice) B.4.T.S of blastula through permanent slides(Mammalian)	
			Chapter-4: Reproductive Health	Reproductive Health: Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness).		

2	**JUNE**	***Unit-VII Genetics and Evolution***	**Chapter-5: Principles of Inheritance and Variation**	Principles of Inheritance: 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; Sex determination - in humans, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.	B.5 Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colourblindness. B.6.Mendelian inheritance using seeds of different colour/sizes of any plant.	PT-II
	JULY		**Chapter-6: Molecular Basis of Inheritance**	Molecular basis of Inheritance: Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma; transcription, genetic code, translation; gene expression and regulation - lac operon; genome and human and rice genome projects; DNA fingerprinting.		

	AUGUST		**Chapter-7: Evolution**	Origin of life; biological evolution and evidences for biological evolution (paleontology,comparative anatomy, embryology and molecular evidences); Darwin's contribution, modern synthetic 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; adaptive radiation; human evolution.	B.11.Flash cards models showing examples of homologous and analogous organs	
3	**SEPTEMBER**	***Unit-VIII Biology and Human Welfare***	**Chapter-8: Human Health and Diseases**	Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis,ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basicconcepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse.	B.9 Common disease - causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images. Comment on symptoms of diseases that they cause.	
			Chapter-10: Microbes in Human Welfare	Microbes in food processing, industrial production, sewage treatment, energy generation andmicrobes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.		
4	**OCTOBER**	***Unit-X Ecology and Environment***	**Chapter-11: Biotechnology - Principles and Processes**	Genetic Engineering (Recombinant DNA Technology).	A5..Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.	

	OCTOBER		**Chapter-12: Biotechnology and its Application**	Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents		
5	**NOVEMBER**	***Unit-X Ecology and Environment***	**Chapter-13: Organisms and Populations**	Organisms and Populations:Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.	A2.Study the plant population density by quadrat method.A3.Study the plant population frequency by quadrat method.B10.Models specimen showing symbolic association in root modules of leguminous plants, Cuscuta on host, lichens.	PT-III
	DECEMBER		**Chapter-14: Ecosystem**	Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy (Topics excluded: Ecological Succession and Nutrient Cycles)		
	DECEMBER		**Chapter-15: Biodiversity and its Conservation**	Bio-diversity and Conservation: Concept of biodiversity; patterns of biodiversity; importance of biodiversity; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, national parks, sanctuaries and Ramsar sites.		

SUBJECT : COMPUTER SCIENCE

Sl No	MONTH	CHAPTER NUMBER	CHAPTER NAME	SUB TOPIC	PT PORTION
1	March	Chapter-8	Computer Network-1	Evolution of networking , Data communication terminologies, Switching techniques ,Transmission media, Network topologies and Network types	PT-2
		Chapter-9	Computer Network-2	Network, Network protocol, Introduction to web services: WWW, Hyper Text Markup Language (HTML), Extensible Markup Language (XML), domain names, URL, website, web browser, web servers, web hosting	
2	April-May	Chapter-4	Using Python Libraries	Library, Importing Modules in a Python Program, Using Python Standard Library Functions and Modules, Creating Python Library	SAT-1
		Chapter-3	Working with Functions	Understanding of a functions, defining functions, Flow of execution in a function call, Passing Parameters, Returning values from Functions, Scope of Variables	
		Chapter-1	Revision Tour-1	Tokens in Python, Barebones of a Python Program, Variables and Assignments, Simple Input & Output, Data Types, Mutable & Immutable Types, Expressions, Statement Flow Controls, The if conditionals, Looping Statements, Jump Statements	PT-1
3	June	Chapter-2	Revision Tour-2	Strings, Lists, Tuples, Dictionaries	
4	July	Chapter-5	File Handling	Data Files, Opening & Closing of files, Working with Text Files, Standard Input, Output & Error Streams, Working with Binary Files, Working with CSV Files	
5	August	Chapter-10	Relational Databases	Purpose of DBMS, Relational Database Model, The Relational Model Terminology, History of MYSQL, MYSQL Datatbase System, MySQL and SQL	
		Chapter-11	Simple Queries in SQL	SQL Elements, SQL Command Syntax, Simple Queries, MYSQL Functions, Aggregate Functions	
		Chapter-12	Table Creation & Data Manipulation Commands	Databases in MYSQL, Creating Tables, Changing Data with DML Commands, More DDL Commands	
		Chapter-13	Grouping Records, Joins in SQL	Types of SQL Functions, Group By, Joins	
		Chapter-14	Interface Python with MYSQL	Connecting to MYSQL from Python, Parameterised Queries, Performing Insert and Update Queries	
6	September	Revision For Mid Term Exam			
7	October	Chapter-7	Data Structures	Elementary Data Representation, Different Data Structures, Operations on Data Structures, Stacks	
		Chapter-6	Exception Handling	Exception , Exception Handling	

SUBJECT : PHYSICAL EDUCATION

Sl No	MONTH	TOPIC	SUB TOPIC
1	APRIL	MANAGEMENT OF SPORTING EVENTS	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)
2	MAY	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)
3	JUNE	Yoga as preventive measure for Lifestyle disease	Asanas as preventive measures Obesity: Procedure, Benefits & contraindications for Vajrasana, Hastasana, Trikonasana, ArdhMatsyendrasanaDiabetes: Procedure, Benefits & contraindications for Bhujangasana, Paschimottasana, PavanMuktasana, Ardh MatsyendrasanaAsthema: Procedure, Benefits & contraindications for Sukhasana, Chakrasana, Gomukhasana,Parvatasana, Bhujangasana, Paschimottasana, MatsyasanaHypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana, SharasanaBack Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana

4	JULY	Physical Education & Sports for Children With Special Needs	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.
5	AUGUST	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
6	SEPTEMBER	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
7	OCTOBER	Physiology & Injuries in Sports	Physiological factor determining component of Physical FitnessEffect of exercise on Cardio Respiratory SystemEffect of exercise on Muscular System Physiological changes due to ageingSports 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& treatmentFirst Aid – Aims & Objectives

8	NOVEMBER	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
		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
9	DECEMBER	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
		REVISION	

SUBJECT : HINDUSTANI MUSIC VOCAL

Sl No	TERM - I & TERM - II	MONTH	CHAPTER NUMBER	CHAPTER NAME	SUB TOPIC	ACTIVITY	PT PORTION
1	Raag Bhairav Chota khayal, Definition of alankar, Kan, meend, khatka, murki, Gamak	April	Unit 1 and Unit 5	NA	Taan, Alaap, Notation, and Bandish	Singing the raag and Reciting Taal with the help of hands.	PT-1
2	Raag Bageshri Chota khayal, Gram, murchana, alaap, taan	May, June	Unit 1 and Unit 5	NA	Taan, Alaap, Notation, and Bandish	Singing the raag and Reciting Taal with the help of hands.	PT-1
3	Raag Malkauns chota khayal, Jhaptaal, Time theory of raags.	July	Unit 2, 4 and 5	NA	Taan, Alaap, Notation, and Bandish	Singing the raag and Reciting Taal with the help of hands.	PT-2
4	Raag Bhairav badakhayal, Rupak taal, Sangeet Ratnakar and sangeet parijat	August	Unit 1, 4 and 5	NA	Taan, Alaap, Notation, and Bandish	Singing the raag and Reciting Taal with the help of hands.	PT-3

SUBJECT : INFORMATION TECHNOLOGY

Sl No	MONTH	CHAPTER NUMBER	CHAPTER NAME	SUB TOPIC	PT PORTION
1	March	Part B Chapter-2	Operating Web Based Applications	Online Reservation Systems, E-Governance, Online Shopping and Bill payments, Online Tutorials and Tests, Project Management	PT-1
2	April-May	Part B Chapter 3	Fundamentals of Java programming	Java Language Elements, Operators, Control Flow,	PT-2
3	June-July	Part B Chapter 3	Fundamentals of Java programming	Array, String Manipulation, Oriented Programming, Class Design, Exception Handling, Assertions, Threads , Wrapper Classes	
4	August	Part B Chapter 1	Database Concepts-RDBMS Tool	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.	
		Part B Chapter 4	Work Integrated Learning IT – DMA	Identification of Work Areas, Work Experience.	
5	September	Revision For Mid Term Examination			
6	October	Part A Chapter 1	Communication Skills	Importance of active listening at workplace, Steps to active listening, Writing skills	
		Part A Chapter 3	Information and Communication Technology Skills	Getting Started with Spreadsheet, Performing Basic Operations in a Spreadsheet, Working with Data and Formatting Text, Advanced Features in Spreadsheet, Presentation Software, Opening, Closing, Saving and Printing a Presentation, Working with Slides and Text in a Presentation, Advanced Features used in Presentation	
7	November	Part A Chapter 2	Self-management Skills	Motivation and Positive Attitude, Result Orientation, Self-awareness	
		Part A Chapter 4	Entrepreneurship Skills	Entrepreneurship and Entrepreneur, Barriers to Entrepreneurship, Entrepreneurial Attitudes, Entrepreneurial Competencies	
		Part A Chapter 5	Green Skills	Role of green jobs in toxin-free homes, Green organic gardening, public transport and energy conservation, Green jobs in water conservation, Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes, Green jobs in green tourism, Green jobs in building and construction, Green jobs in appropriate technology, Role of green jobs in Improving energy and raw materials use, Role of green jobs in limiting greenhouse gas emissions, Role of green jobs minimizing waste and pollution, Role of green jobs in protecting and restoring ecosystems, Role of green jobs in support adaptation to the effects of climate change	