DELHI PUBLIC SCHOOL MATHURA

SESSION:- 2024-25

SYLLABUS BIFURCATION
&
DATE SHEET

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Delhi Public School, Mathura

SESSION 2024 - 2025

CLASS – XII

Subject: English Core (301)

MONTH & NO. OF WORKING DAYS	Text Books	TOPIC	Project	EXAM SYLLABUS
March	Flamingo	The Last lesson My Mother at Sixty-Six		Complete March Syllabus for PT – 1 scheduled on 28/03/24
	Vistas	The Third Level		
	Writing	Notice Writing Formal & Informal Invitation		
APRIL **24 days**	Flamingo	Lost Spring Keeping Quiet	ALS Activities	Complete April Syllabus for PT – 2 scheduled on 30/04/24
	Vistas	The Tiger King		
	Writing	Letter for Job		
MAY **27 days**	Flamingo	Deep water The Rattrap A thing of Beauty	**Project:** Research topic: (interview based) "Evolving food tastes in my neighbourhood" Includes: interview in neighbourhood & report	N/A
	Vistas	Journey to the End of the Earth		
	Writing	Letter to the Editor		
JULY **27 days**	Flamingo	Indigo A Roadside Stand	ALS Activities	Complete March, April & May Syllabus for Summative Examination scheduled on 04/07/24
	Vistas	The Enemy		
	Writing	Article Writing		
AUGUST **24 days**	Flamingo	Poets & Pancakes Aunt Jeniffer's Tiger		Complete July & August Syllabus for PT 3 scheduled on 20/08/24
	Writing	Report Writing		
SEPTEMBER **25 days**	Flamingo	The Interview Going Places		N/A
	Vistas	On the face of it		
OCTOBER **23 days**	Vistas	Memories of Childhood: • The Cutting of My Long Hair • We too are human beings	**Project:** Theatrical production / One act play (team project) Judgment Criterion: time limit, content/script/ questionnaire, creativity, preparedness, clarity of speech, use of props, expression/ body language, portfolio-presentation	Complete Syllabus from March till May for Test Series 1 scheduled on 25/10/24

NOVEMBER **23 days**	**TS-1 Syllabus 25/10/2024 –** **Flamingo:** The Last lesson, My Mother at Sixty-Six, Lost Spring, Keeping Quiet, Deep water, The Rattrap, A thing of Beauty **Vistas:** The Third Level, The Tiger King, Journey to the End of the Earth **Writing:** Notice Writing, Formal & Informal Invitation, Letter for Job, Letter to the Editor **TS-2 Syllabus 21/11/2024 –** **Flamingo:** Indigo, A Roadside Stand, Poets & Pancakes, Aunt Jeniffer's Tiger, The Interview, Going Places **Vistas:** The Enemy, On the face of it, Memories of Childhood (The Cutting of My Long Hair, We too are human beings) **Writing:** Notice Writing, Letter for Job, Article Writing, Report Writing
DECEMBER **26 days**	Pre Board 1 **PB-1 Scheduled on: 16/12/24** **Extensive revision using worksheets covering reading skills, creative writing skills & literature**
JANUARY **25 days**	Pre Board 2 **PB-1 Scheduled on: 11/01/25** **Extensive revision using worksheets covering reading skills, creative writing skills & literature**

Delhi Public School, Mathura

SESSION 2024 - 2025

CLASS – XII

Subject: - Mathematics (041)

MONTH & NO. OF WORKING DAYS	UNIT	TOPIC	EXAM SYLLABUS
March	UNIT-2 (ALGEBRA)	CH3 : MATRICES Concept, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operations on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication. Multiplication of matrices and existence of non-zero matrices whose product is the zero matrix . Invertible matrices **CH-4: Determinants** Determinant of a square matrix (up to 3 x 3 matrices), minors, co-factors and applications of determinants in finding the area of a triangle. Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of system of linear equations by examples, solving system of linear equations in two or three variables (having unique solution) using inverse of a matrix.	N/A
APRIL **24 days**	UNIT-3 CALCULUS UNIT-1	**Continuity and Differentiability** Continuity and differentiability, derivative of composite functions, chain rule, derivative of inverse trigonometric functions like $\sin^{-1} x$, $\cos^{-1} x$ and $\tan^{-1} x$, derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives. **CH-2: Inverse Trigonometric Functions** Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions.	Unit-2 MATRICES AND DETERMINANTS **PT-1** EXAM DATE - 23/04/2024
MAY **27 days**	UNIT-3 UNIT-1	CH-6: **Applications of Derivatives** Applications of derivatives: rate of change of quantities, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real-life situations). **CH-1 : . Relations and Functions** Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.	**Ch-5** **Continuity and Differentiability** **CH-2: Inverse Trigonometric Functions** **PT-2** EXAM DATE - 28/5/2024
JULY **27 days**	UNIT-3	**CH-7 Integrals** Integration as inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the following types and problems based on them	Complete March, April & May Syllabus for Summative Examination

			scheduled on **11/07/2024**
AUGUST 24 days	UNIT-3	**CH-7 Integrals** $\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^2 \pm a^2}}, \int \frac{dx}{\sqrt{a^2 - x^2}}, \int \frac{dx}{ax^2 + bx + c}, \int \frac{dx}{\sqrt{ax^2 + bx + c}}$ $\int \frac{px + q}{ax^2 + bx + c} dx, \int \frac{px + q}{\sqrt{ax^2 + bx + c}} dx, \int \sqrt{a^2 \pm x^2}\, dx, \int \sqrt{x^2 - a^2}\, dx$ $\int \sqrt{ax^2 + bx + c}\, dx,$ Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals. **Ch-8: Applications of the Integrals** Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses (in standard form only) **Ch-9: Differential Equations** Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree. Solutions of linear differential equation of the type:	**N/A**
SEPTEMBER 25 days	Unit-4	**Unit-IV: Vectors and Three-Dimensional Geometry** **1. Vectors** Vectors and scalars, magnitude and direction of a vector. Direction cosines and direction ratios of a vector. Types of vectors (equal, unit, zero, parallel and collinear vectors), position vector of a point, negative of a vector, components of a vector, addition of vectors, multiplication of a vector by a scalar, position vector of a point dividing a line segment in a given ratio. Definition, Geometrical Interpretation, properties and application of scalar (dot) product of vectors, vector (cross) product of vectors. **2. Three – dimensional Geometry** Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines. Angle between two lines.	Ch 7, 8 **Pt-3** Date- 17/09/2024

OCTOBER **23 days**	UNIT-5 UNIT-6	**Unit-V: Linear Programming** **1. Linear Programming** Introduction, related terminology such as constraints, objective function, optimization, graphical method of solution for problems in two variables, feasible and infeasible regions (bounded or unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints). **Unit-VI: Probability** **1. Probability** Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, mean of random variable	**N/A**
NOVEMBER **23 days**		Test series1- ch 1 to 6 date- 9/11/24 Test series2- ch 7 to 13 date- 30/11/24	
DECEMBER **26 days**		Pre Board 1 Ch1, 2 (3/12/24) Ch 3, 4 (4/12/24) Ch5 (5/12/24) Ch6 (6/12/24) Ch7 (7/12/24) Ch 8 (9/12/24) **exam date- 31/12/24** Ch9 (10/12/24) Ch10 (11/12/24) Ch11 (12/12/24) Ch12 (13/12/24) Ch13 (14/12/24	
JANUARY **25 days**		Pre Board 2 Ch1, 2 (01//01/25) Ch3, 4 (02/01/25) Ch5,6 (03/01/25) Ch7, 8 (04/01/25) **exam date- 24/01/25** Ch9, 10 (06/01/25) Ch11, 12 (07/01/25) Ch13 (08/01/25)	

Delhi Public School, Mathura

SESSION 2024 - 2025

CLASS – XII

Subject: - Physics (042)

MONTH & NO. OF WORKING DAYS	UNIT	TOPIC	Practical	EXAM SYLLABUS
March	Unit 1 Electrostatics	**Chapter–1**: **Electric Charges and Fields** Electric charges, Conservation of charge, Coulomb;law-force between two- point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gausss theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside). **Chapter–2**: **Electrostatic Potential and Capacitance** Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric 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 (no derivation, formulae only).		
APRIL **24 days**	Unit II: Current Electricity	**Chapter–3: Current Electricity** 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 (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, temperature dependence of resistance, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff;s rules, Wheatstone bridge.		PT -1 02/04/24 Unit 1 Electrostatics

MAY **27 days**	Unit III:Magnetic Effects of Current and Magnetism	**Chapter–4: Moving Charges and Magnetism** Concept of magnetic field, Oersted ;s experiment. Biot - Savart law and its application to current carrying circular loop. Ampere&;s law and its applications to infinitely long straight wire.Straight solenoid (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; Current loop as a magnetic dipole and its magnetic dipole moment,moving coil galvanometer- its current sensitivity and conversion to ammeter and voltmeter. **Chapter–5: Magnetism and Matter** Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines. Magnetic properties of materials- Para-, dia- and ferro - magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.	1. To determine resistivity of two / three wires by plotting a graph for potential difference versus current. 2. To find resistance of a given wire / standard resistor using metre bridge. 3. To verify the laws of combination (series) of resistances using a metre bridge.	**PT-2** **07/05/24** **Unit 2 and 3** **Currently electricity** **Moving charges and magnetism**
JULY **27 days**	Unit IV: Electromagnetic Induction and Alternating Currents	**Chapter–6: Electromagnetic Induction** Electromagnetic induction; Faraday&;s laws, induced EMF and current; Lenz Law, Self and mutual induction.	1. To determine resistance of a galvanometer by half-deflection method and to find its figure of merit. 2. To find the value of v for different values of u in case of a concave mirror and to find the focal length. 3. To find the focal length of a convex mirror, using a convex lens. 4. To find the focal length of a convex lens by plotting graphs between u and v or between 1/u and 1/v .	Mid semester 08/07/24 up to unit IV Electromagnetic induction

			5. To determine angle of minimum deviation for a given prism by plotting a graph	
AUGUST **24 days**	Unit V: Electromagnetic waves	**Chapter–7: Alternating Current** Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer. **Chapter–8: Electromagnetic Waves** Basic idea of displacement current, 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.	1. To assemble a household circuit comprising three bulbs, three (on/off) switches, a fuse and a power source. 2. To assemble the components of a given electrical circuit. 3. To draw the diagram of a given open circuit comprising at least a battery,resistor/rheostat, key, ammeter and voltmeter. Mark the components that are not connected in proper order and correct the circuit and also the circuit diagram.	**PT-3** **27/08/24** **Alternating current** **Electromagnetic waves**
SEPTEMBER **25 days**	Unit VI: Optics Unit VII: Dual Nature of Radiation and Matter	**Chapter–9: Ray Optics and Optical Instruments** Ray Optics: 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. Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers. **Chapter–10: Wave Optics** Wave optics: Wave front and Huygen's principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen's principle. Interference, Young& double slit experiment and expression for fringe width (No derivation final expression only), coherent sources and sustained interference of light,diffraction due to a single slit, width of central maxima (qualitative treatment only). **Chapter–11: Dual Nature of Radiation and Matter** Dual nature of radiation, Photoelectric effect, Hertz and Lenard&s observations; Einstein&	1. To identify a diode, an LED, a resistor and a capacitor from a mixed collection of such items. 2. To observe refraction and lateral deviation of a beam of light incident obliquely on a glass slab. 3. To observe diffraction of light due to a thin slit.	

		photoelectric equation-particle nature of light. Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation.		
OCTOBER **23 days**	Unit VIII: Atoms and Nuclei Unit IX: Electronic Devices	**Chapter–12: 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 nth orbit,hydrogen line spectra (qualitative treatment only). **Chapter–13: Nuclei** Composition and size of nucleus, nuclear force Mass-energy relation, mass defect; binding energy per nucleon and its variation with mass number; nuclear fission, nuclear fusion. **Chapter–14: Semiconductor Electronics: Materials, Devices and Simple circuits** Simple Circuits Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-Vcharacteristics in forward and reverse bias, application of junction diode -diode as a rectifier.		
NOVEMBER **23 days**	Test series 1: Unit 1 Electrostatics ,unit 2 Currently Electricity, unit 3 Magnetic effect of current and magnetism ,Unit 4 Electromagnetic induction and Alternating current, Test series 2 : Unit 5 Electromagnetic waves, Unit 6 Optics , Unit 7 Dual nature of matter and radiation , unit 8 Atoms and nuceli , unit 9 semiconductor electronics materials and simple circuit			
DECEMBER **26 days**	Pre Board 1 Complete Syllabus			
JANUARY **25 days**	Pre Board 2 Complete Syllabus			

Delhi Public School, Mathura

SESSION 2024 - 2025

CLASS – XII

Subject: - Chemistry (043)

MONTH & NO. OF WORKING DAYS	UNIT	TOPIC	Practical	EXAM SYLLABUS
March	Unit 1 Solutions	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.	Volumetric Analysis (KMnO4 / FAS) and (KMnO4 / Oxalic Acid)	
APRIL **24 days**	Unit 2 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.		PT – 1 Unit 1 Solutions Unit 2 Electrochemistry Exam on:- 09/04/2024
MAY **27 days**	Unit- 3 Chemical Kinetics	Rate of reaction Rate law and rate constant Collision theory of chemical reaction Order and molecularity of reaction Arrhenius equation of temperature coefficient	Salt Analysis	PT – 2 Unit- 3 Chemical Kinetics Exam on:- 14/05/2024

JULY **27 days**	Unit 4 The d and f Block Elements Unit-5 Coordination Compounds	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, color, 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. Coordination compounds - Introduction, ligands, coordination number, color, magnetic properties and shapes IUPAC nomenclature of mononuclear coordination compounds. Werner's theory, VBT, and CFT; structure and stereoisomerism		Unit – 1,2,3,4 Midsemester Exam on 11/07/2024
AUGUST **24 days**	Unit-6 Haloalkanes and Haloarenes Unit 7 Alcohols, Phenols and Ethers	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, trichloro methane, tetrachloromethane, iodoform, freons, DDT. 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, electrophilic substitution reactions, uses of phenols. Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses.	Tests of Functional Groups	

SEPTEMBER **25 days**	Unit -8 Aldehydes, Ketones and Carboxylic Acids Unit - 9 Amines	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. 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.		PT – 3 Unit – 5,6 Exam on – 03/09/2024
OCTOBER **23 days**	Unit - 10 Biomolecules	Carbohydrates - Classification (aldoses and ketoses), monosaccharides (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.	Tests of Functional Groups	Unit 13 Amines Unit 14 Biomolecules
NOVEMBER **23 days**	**Test Series 1**: Unit 2 Solutions, Unit 3 Electrochemistry, Unit 10 Haloalkanes and Haloarenes, Unit 11 Alcohols, Phenols and Ethers, Unit 8 The d and f Block Elements **Test Series 2:** Unit 9 Coordination Compounds, Unit 4 Chemical Kinetics, Unit 12 Aldehydes, Ketones and Carboxylic Acids, Unit 13 Amines, Unit 14 Biomolecules			
DECEMBER **26 days**	Pre Board Full Syllabus			
JANUARY **25 days**	Pre Board 2 Full Syllabus			

Delhi Public School, Mathura

SESSION 2024 - 2025

CLASS – XII

Subject: - BIOLOGY (044)

MONTH & NO. OF WORKING DAYS	UNIT	TOPIC	Practical	EXAM SYLLABUS
March	Unit 6 REPRODUCTION	**Chapter-2:** Sexual Reproduction in Flowering Plants Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; out breeding 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. **Chapter-4** Chapter-4: 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).	TO STUDY POLLEN GERMINATION. TO PREPARE SLIDE FROM ONION ROOT TIP TO STUDY MITOSIS	N/A
APRIL **24 days**	Unit 6 REPRODUCTION	**Chapter-3: 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).		COMPLETE MARCH SYLLABUS CH-2 AND 4 PT-1 ON 23/04/24
MAY **27 days**	Unit 7 GENETICS AND EVOLUTION	**Chapter-5: Principles of Inheritance and Variation** 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. **Chapter-6: Molecular Basis of Inheritance** Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA	- TO STUDY T.S OF TESTIS, OVARY AND BLASTULLA THROUGH PERMANENT SLIDES. TO STUDY CONTROLLED BREEDING TECHNIQUE	**CHAPTER 3 AND 5 PT-2 ON 28/05/24**

		packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene 8 expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.		
JULY **27 days**		**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.		CHAPTER 6,7 AND 3 MIDSEMESTER ON 22/07/24
AUGUST **24 days**	Unit 8 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; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse. **Chapter-10: Microbes in Human Welfare** Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicioususe.	TO STUDY HOMOLOGOUS AND ANALOGOUS ORGANS. . TO STUDY COMMON DISEASE CAUSING ORGANISMS AND DISEASES.	**CHAPTER 8,10 ,11** **PT3 ON 17/09/24**
SEPTEMBER **25 days**	Unit 9 Biotechnology and its Applications	**Chapter-11: Biotechnology - Principles and Processes** Genetic Engineering (Recombinant DNA Technology). **Chapter-12: Biotechnology and its Applications** 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.		
OCTOBER **23 days**	Unit 10 Ecology and Environment	**Chapter-13: Organisms and Populations** Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution. **Chapter-14**: **Ecosystem** Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy. **Chapter-15: Biodiversity and its Conservation** Biodiversity-Concept, 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.	.TO ISOLATE DNA FROM SPINACH. .TO CALCULATE POPULATION DENSITY AND FREQUENCY BY QUADRATE METHOD. .	

NOVEMBER **23 days**	Test Series 1 and 2 CHAPTER 2 TO 15 EXAM ON 9/11/24 AND 30/11/24
DECEMBER **26 days**	Pre Board 1 COMPLETE SYLLABUS EXAM ON 31/12/24
JANUARY **25 days**	Pre Board 2 COMPLETE SYLLABUS EXAM ON 24/01/25

Delhi Public School, Mathura

SESSION 2024 - 2025

CLASS – XII

Subject: - Computer Science (083)

MONTH & NO. OF WORKING DAYS	UNIT	TOPIC	Practical	EXAM SYLLABUS
March	DATABASE	**Ch 13 :** RELATIONAL DATABASE, SIMPLE QUERIES IN SQL & TABLE CREATION **Ch 14 :** MORE ON SQL	CREATE TABLE AND DATABASE IN SQL	
APRIL **24 days**	COMPUTER NETWORK	**Ch 11 :** COMPUTER NETWORK – I **Ch 12 :** COMPUTER NETWORK - II		CH-13 & CH-14 On 26/04/2024
MAY **27 days**	PYTHON	**Ch 1 :** PYTHON REVISION TOUR I **Ch 2 :** PYTHON REVISION TOUR II **Ch 4:** USING PYTHON LIBRARIES	CREATE FUNCTION AND WORKING WITH DATA STRUCTURE	CH-11 & CH-12 On 31/05/2024
JULY **27 days**	PYTHON FUNCTION	**Ch 3 :** WORKING WITH FUNCTIONS **Ch 6:** RECURSION **Ch 9 :** DATA STRUCTURE IN PYTHON-I		
AUGUST **24 days**	ADVANCED PYTHON	**Ch 10 :** DATA STRUCTURE IN PYTHON-II **Ch 5 :** DATA FILE HANDLING **Ch 7 :** IDEA OF ALGORITHM **Ch 8:** DATA VISUALIZATION USING PYPLOT	Data and information visualization	Ch- 6,8,9, 10,11,12, 13 AND 14 MIDSEMESTER On 18/07/2024
SEPTEMBER **25 days**	ADVANCED PYTHON	**Ch 15:**CREATING DJANGO BASED BASIC WEB APPLICATION **Ch 16:**INTERFACE PYTHON WITH MYSQL **Ch 17:** SOCIETY, LAW AND ETHICS		
OCTOBER **23 days**		PRACTICAL & PROJECT WORK	.	
NOVEMBER **23 days**	**Test Series 1** CHAPTER 3 TO 10 EXAM ON 11/11/24 **Test Series 2** CHAPTER 13 to 15 EXAM ON 02/12/24			
DECEMBER **26 days**	**I Preboard Exam** COMPLETE SYLLABUS EXAM ON 28/12/24			
JANUARY **25 days**	**II Preboard Exam** COMPLETE SYLLABUS EXAM ON 27/01/24			

Delhi Public School, Mathura

SESSION 2024 - 2025

CLASS – XII

Subject: - Physical Education (048)

MONTH & NO. OF WORKING DAYS	UNIT	TOPIC	Practical / Record file	EXAM SYLLABUS
March	I	MANAGEMENT 0F SPORTING EVENTS	1. BROCKPORT PHYSICAL FITNESS TEST	NA
APRIL 24 days	II	CHILDREN AND WOMEN IN SPORTS	2. 600 M RUN/WALK TEST. 3. PUSH-UPS/MODIFIED 4. PREPARATION OF PRACTICAL FILE	**COMPLETE MARCH & APRIL FOR PT- 1 SCHEDULED ON 26/04/24**
MAY 27 days	III IV	YOGA AS PREVENTIVE MEASURES FOR LIFESTYLE DISEASE PHYSICAL EDUCATION AND SPORTS FOR CWSN	5. YOGIC PRACTICES 6. SIT AND REACH TEST	**COMPLETE APRIL AND MAY FOR PT – 2 SCHEDULED ON 31/05/24**
JULY 27 days	V VI	SPORTS AND NUTRITION TEST AND MEASUREMENT	7. RECORD FILE SHALL INCLUDE FITNESS TEST ADMINISTRATION.	**COMPLETE MARCH APRIL MAY AND JULY SYLLABUS FOR MID SEMESTER SCHEDULED ON 18/07/24**
AUGUST 24 days	VII	PHYSIOLOGY AND INJURIES IN SPORTS.	8. PROFICIENCY IN SPORTS OF CHOICE.	**NA**
SEPTEMBER 25 days	VIII	BIOMECHNICS AND SPORTS	9. Skill of any one IOA recognised Sport	**COMPLETE SYLLABUS AUGUST AND SEPTEMBER FOR PT – 3 SCHEDULED ON 24/09/24**
OCTOBER 23 days	IX X	PSYCHOLOGY & SPORTS TRAINING IN SPORTS	10. Viva Voce (Health/ Games & Sports/ Yoga)	**NA**
NOVEMBER 23 days	**TEST SERIES 1 DATE – 11/11/24** SYLLABUS UNIT I -V = MANAGEMENT 0F SPORTING EVENTS, CHILDREN AND WOMEN IN SPORTS, YOGA AS PREVENTIVE MEASURES FOR LIFESTYLE DISEASE, PHYSICAL EDUCATION AND SPORTS FOR CWSN, SPORTS AND NUTRITION			
DECEMBER 26 days	**TEST SERIES 2 - DATE – 2/12/24** SYLLABUS – UNIT VI – X = TEST AND MEASUREMENT, PHYSIOLOGY, AND INJURIES IN SPORTS, BIOMECHNICS AND SPORTS, TRAINING IN SPORTS, PSYCHOLOGY & SPORTS Pre-Board 1			

	PRE-BOARD 1 EXAM DATE – 28/12/24 REVISION USING WORKSHEET AND OSWAL SAMPLE PAPER LATEST EDITION AND PREVIOUS YEAR QUESTION PAPER
JANUARY **25 days**	Pre-Board 2 **PRE-BOARD 2 EXAM DATE - 27/01/25** REVISION USING WORKSHEET AND OSWAL SAMPLE PAPER LATEST EDITION AND PREVIOUS YEAR QUESTION PAPER

Practical
01. Physical Fitness Test: SAI Khelo India Test, Brockport Physical Fitness Test (BPFT)* 6 Marks
02. Proficiency in Games and Sports (Skill of any one IOA recognised Sport/Game of Choice) ** 7
Marks 03. Yogic Practices 7 Marks
04. Record File *** 5 Marks
05. Viva Voce (Health/ Games & Sports/ Yoga) 5 Marks
***Record File shall include:**
❖ Practical-1: Fitness tests administration.
❖ Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each
lifestyle disease.
❖ Practical-3: Anyone one IOA recognised Sport/Game of choice. Labelled diagram of Field &
Equipment. Also mention its Rules, Terminologies & Skills.

Delhi Public School, Mathura

SESSION 2024 - 2025

Examination Schedule (Periodic Tests)

CLASS – X & XII

DATE	DAY	X	XII
PT 1		MM 40	MM 40
28/03/2024	THURSDAY	SCIENCE	ENGLISH
2/04/2024	TUESDAY	ENGLISH	PHYSICS/ ACC/ HISTORY
09/04/2024	TUESDAY	MATHS	CHEM/ BSt./POL SC.
15/04/2024)	MONDAY	SST	ECONOMICS
23/04/2024	TUESDAY	HINDI	MATHS/BIO/PAINTING/SANSKRIT
26/04/2024	SATURDAY	COMPUTER	PHY ED/ COMP SC.
PT 2		X M.M.(40)	XII M.M.(40)
30/04/2024	TUESDAY	SCIENCE	ENGLISH
07/05/2024	TUESDAY	ENGLISH	PHYSICS/ ACC/ HISTORY
14/05/2024	TUESDAY	MATHS	CHEM/ BSt./POL SC.
21/05/2024	TUESDAY	SST	ECONOMICS
28/05/2024	TUESDAY	HINDI	MATHS/BIO/PAINTING/SANSKRIT
31/05/2024	FRIDAY	COMPUTER	PHY ED/ COMP SC.
MIDSEMESTER		X M.M.(80)	XII M.M.(80)
04/07/2024	THURSDAY	HINDI	ENGLISH
08/07/2024	MONDAY	MATHS	PHYSICS/ ACC/ HISTORY
11/07/2024	THURSDAY	COMP	CHEM/ BSt./POL SC.
15/07/2024	MONDAY	SST	ECONOMICS
18/07/2024	THURSDAY	ENGLISH	PHY ED/ COMP SC
22/07/2024	MONDAY	SCIENCE	MATHS/BIO/PAINTING/SANSKRIT
PT 3		X M.M.(40)	XII M.M.(40)
20/08/2024	TUESDAY	SCIENCE	ENGLISH
27/08/2024)	TUESDAY	ENGLISH	PHYSICS/ ACC/ HISTORY
03/09/2024	TUESDAY	MATHS	CHEM/ BSt./POL SC.
10/09/2024	TUESDAY	SST	ECONOMICS
17/09/2024	TUESDAY	COMP	MATHS/BIO/PAINTING/SANSKRIT
24/09/2024	TUESDAY	HINDI	PHY ED/ COMP SC.

Delhi Public School, Mathura

SESSION 2024 - 2025

Examination Schedule (Periodic Tests)

Class X & XII (Test Series & Pre-Boards)

DATE	DAY	X	XII
Test Series 1		M.M. (80)	M.M. (80)
25/10/2024	FRIDAY	SCIENCE	ENGLISH
28/10/2024	MONDAY	ENGLISH	PHYSICS/ ACC/HISTORY
5/11/2024	TUESDAY	MATHS	CHEM/ BSt./POL SC.
7/11/2024	THURSDAY	SST	ECONOMICS
9/11/2024	SATURDAY	HINDI	MATHS/BIO/PAINTING/SANSKRIT
11/11/2024	MONDAY	COMPUTER	PHY ED/ COMP SC.
Test Series 2		X M.M. (80)	XII M.M. (80)
21/11/2024	THURSDAY	SCIENCE	ENGLISH
23/11/2024	SATURDAY	ENGLISH	PHYSICS/ ACC/HISTORY
25/11/2024	MONDAY	HINDI	CHEM/ BSt./POL SC.
27/11/2024	WEDNESDAY	SST	ECONOMICS
30/11/2024	SATURDAY	MATHS	MATHS/BIO/PAINTING/SANSKRIT
2/12 /2024	MONDAY	COMPUTER	PHY ED/ COMP SC.
Pre Board 1		X M.M. (80)	XII M.M. (80)
16/12 /2024	MONDAY	HINDI	ENGLISH
19/12 /2024	THURSDAY	SST	PHYSICS/ ACC/HISTORY
23/12 /2024	MONDAY	MATHS	CHEM/ BSt./POL SC.
26/12 /2024	THURSDAY	ENGLISH	ECONOMICS
28/12 /2024	SATURDAY	COMP	PHY ED/ COMP SC
31/12 /2024	TUESDAY	SCIENCE	MATHS/BIO/PAINTING/SANSKRIT
Pre Board 2		X M.M. (80)	XII M.M. (80)
11/01/2025	SATURDAY	SCIENCE	ENGLISH
15/01/2025	WEDNESDAY	ENGLISH	PHYSICS/ ACC/HISTORY
18/01/2025	SATURDAY	MATHS	CHEM/ BSt./POL SC.
21/01/2025	TUESDAY	SST	ECONOMICS
24/01/2025	FRIDAY	HINDI	MATHS/BIO/PAINTING/SANSKRIT
27/01/2025	MONDAY	COMP	PHY ED/ COMP SC.