BHARATIYA VIDYA BHAVAN , KOCHI
YEAR PLAN 2025-2026
STD XII ENGLISH

MONTH	MAIN TEXT (FLAMINGO)	SUPPLEMENTARY READER (VISTAS)	WRITING
MARCH / APRIL (22 DAYS)	THE LAST LESSON LOST SPRING MY MOTHER AT SIXTY-SIX (P)	THE THIRD LEVEL THE TIGER KING (not t o be included for UT -1)	
UNIT TEST 1 (JUNE 9 - 17)			
JUNE (22 DAYS)	DEEP WATER KEEPING QUIET (P)	JOURNEY TO THE END OF THE EARTH THE ENEMY (not t o be included for UT -2)	NOTICE LETTER TO THE EDITOR
JULY (24 DAYS)	THE RATTRAP (not t o be included for UT -2) A THING OF BEAUTY (P) INDIGO (not t o be included for UT -2)		INVITATION (FORMAL AND INFORMAL)
UNIT TEST 2 (JULY 25 - AUG 2)			
AUGUST (21 DAYS)	A ROADSIDE STAND (P) AUNT JENNIFER'S TIGERS (P) GOING PLACES	ON THE FACE OF IT	REPORT WRITING (NEWSPAPER & MAGAZINE) ARTICLE
SEPTEMBER (18 DAYS)	THE INTERVIEW (not to be included for Pre Model Examination)	MEMORIES OF CHILDHOOD (not to be included for Pre Model Examination)	
PRE MODEL EXAMINATION (OCT 7 - 18)			
OCTOBER (22 DAYS)	POETS AND PANCAKES (not to be included for Pre Model Examination)		JOB APPLICATION
FIRST MODEL EXAMINATION (NOV 24 - DEC 12)			
SECOND MODEL EXAMINATION (JAN 1 - 14)			

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

YEAR PLAN MATHEMATICS(041)

CLASS XII 2025-2026

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH	3.MATRICES	Introduction Matrix Types of matrices Operations on matrices Transpose of a matrix symmetric and skew symmetric matrices. Invertible matrices	Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non- commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restricted to square matrices of order 2). Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).
APRIL	4.DETERMINANTS	Introduction Determinant Area of a Triangle Minors and Cofactors Adjoint and Inverse of a Matrix Applications of Determinants and Matrices	Determinant of a square matrix (up to 3 x 3 matrices),, minors, cofactors 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 systems of linear equations by examples, solving systems of linear equations in two or three variables (having unique solution) using inverse of a matrix.
JUNE	1.RELATIONS AND FUNCTIONS **(Not for first Unit Test)**	Introduction Types of Relations Types of Functions	Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.
FIRST UNIT TEST(09/06/25 - 17/06/25) (chapters 3 and 4)			

JUNE	2 .INVERSE TRIGONOMETRIC FUNCTIONS	Introduction Basic Concepts	Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions
JUNE	12.LINEAR PROGRAMMING	Introduction Linear Programming Problem	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).
JULY	5.CONTINUITY & DIFFERENTIABILITY	Introduction Continuity Differentiability Exponential and Logarithmic Functions Logarithmic Differentiation Derivatives of Functions in Parametric Forms Second Order Derivative	Continuity and differentiability, chain rule, derivative of inverse trigonometric functions like $\sin^{-1} x$ $\cos^{-1} x$,$\tan^{-1} x$, 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.
JULY	6 .APPLICATION OF DERIVATIVES **(Not for the second Unit Test)**	Introduction Rate of Change of Quantities Increasing and Decreasing Functions Maxima and Minima	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).
SECOND UNIT TEST(Chapters 1,2,5,12) (25/07/25 - 02/08/25)			
AUGUST	7.INTEGRALS	Introduction Integration as an Inverse Process of Differentiation Methods of	Integration as an inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of simple integrals of the

		Integration Integrals of Some Particular Functions Integration by Partial Fractions Integration by Parts Definite Integral	following types and problems based on them
AUGUST	8. Application of Integrals (Not for Pre model exam)	Introduction Area under Simple Curves	Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses; (in standard form only)
SEPTEMBER	9. Differential Equations(Not for Pre model exam)	Introduction Basic Concepts General and Particular Solutions of a Differential Equation Methods of Solving First Order, First Degree 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 dy/dx+ $P\ y = Q$, where P and Q are functions of x or constants . dx/dy + Px = Q where P and Q are functions of y or constants

SEPTEMBER	13. Probability (Not for Pre model exam)	Introduction Conditional Probability Multiplication Theorem on Probability Independent Events Bayes' Theorem	Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem, Random variable and its probability distribution, Mean of the random variable.
PRE MODEL EXAM (7/10/25 to 18/10/25) (Chapters1,2,3,4,5,6,7,12)			
OCTOBER	10. Vectors	Introduction Some Basic Concepts Types of Vectors Addition of Vectors Multiplication of a Vector by a Scalar Product of Two 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 vectors by a scalar ,position vector of a point dividing a line segment in a given ratio ,definition ,geometrical interpretation ,properties and application of scalar product of vectors ,vector product of vectors

NOVEMBER	11. Three dimensional Geometry	Introduction Direction Cosines and Direction Ratios of a Line Equation of a Line in Space Angle between Two Lines Shortest Distance between Two Lines	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 2 lines
FIRST MODEL EXAM (24/11/2025 TO 12/12/2025)			

BHARATIYA VIDYA BHAVAN, KOCHI

YEAR PLAN FOR THE ACADEMIC YEAR 2025- 2026

Std. XII - PHYSICS

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH/ APRIL	**Chapter–1: Electric Charges and Fields**	**Electric charges, Electric Field, Electric Flux, Gauss's law**	Electric charges, Conservation of charge, Coulomb's 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 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 (field inside and outside).
	Chapter–2: Electrostatic Potential and Capacitance	**Electric potential & potential energy, equipotential surfaces, Conductors and insulators, Dielectrics and electric polarization Capacitors 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).

JUNE	**Chapter–3:** **Current Electricity**	**Electric current, drift velocity, Ohm's law, temperature dependence of resistance, Internal resistance and emf of a cell, Kirchhoff's rules, Wheatstone bridge.**	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.
	Chapter–4: **Moving Charges and Magnetism**	**Biot - Savart law and its applications, Ampere's law and its applications, 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, torque experienced by a current loop in uniform magnetic field, moving coil galvanometer**	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.
FIRST UNIT TEST (25 marks) ***[9 JUNE to 17 JUNE*** **Electric Charges and Fields – Electrostatic Potential and Capacitance - 8(including potential due to a dipole)**			
JULY	**Chapter–5:** **Magnetism and Matter**	**Bar magnet, magnetic field intensity due to a magnetic dipole (bar magnet), torque on a magnetic dipole. Magnetic properties of materials, Magnetization of materials, effect of temperature on magnetic properties.**	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.
	Chapter–6: **Electromagnetic Induction**	**Electromagnetic induction; Lenz's Law, Self and mutual induction.**	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.

SECOND UNIT TEST (25 marks) ***[25 JULY to 2 AUGUST]***

Electrostatic Potential and Capacitance (from equipotential surface)
Current Electricity
Moving Charges and Magnetism
(including Force on a current-carrying conductor in a uniform magnetic field)

AUGUST	**Chapter–7: Alternating Current**	**Alternating currents, LCR series circuit (phasors only), AC generator, Transformer.**	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, Electromagnetic spectrum**	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.
	Chapter–9: Ray Optics and Optical Instruments	**Reflection of light, spherical mirrors, refraction of light, refraction at spherical surfaces, lenses, , lens maker's formula, refraction of light through a prism.** **Optical instruments**	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.

SEPTEMBER	**Chapter–10:** **Wave Optics**	**Wave front and Huygen's principle, Interference, diffraction due to a single slit.**	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's 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, Einstein's photoelectric equation, de-Broglie relation.**	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.
	Chapter–12: Atoms	**Alpha-particle scattering experiment; Bohr model of hydrogen atom**	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).
OCTOBER	**Chapter–13: Nuclei**	**Composition and size of nucleus, nuclear force, mass defect & binding energy per nucleon , nuclear fission, nuclear fusion**	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	**Energy bands in conductors, Intrinsic and extrinsic semiconductors- , p-n junction, application of junction diode.**	Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier.
	PRE MODEL EXAMINATION (7th October to 18th October) **Electric Charges and Fields & Electrostatic -potential and capacitance** **Current Electricity** **Moving Charges and Magnetism & Magnetism and Matter** **EMI & AC** **EM Waves** **Ray Optics** **Wave Optics (Upto Interference, including reflection and refraction using Huygen's principle)**		
NOVEMBER & DECEMBER		**FIRST MODEL EXAMINATION (ALL CHAPTERS)** **(24th November to 12th December)**	

JANUARY		**SECOND MODEL EXAMINATION (ALL CHAPTERS)** **(January 1st to 14th)**

BHARATIYA VIDYA BHAVAN, KOCHI

YEAR PLAN FOR THE ACADEMIC YEAR 2025-'26

CLASS XII CHEMISTRY

MONTH	TOPIC	SUB TOPIC	CONCEPTS
MARCH /APRIL	1. SOLUTIONS 6. HALOALKANES AND HALOARENES	SOLUTIONS - Types of solutions, expression of concentration of solutions of solids in liquids, solubility of gases in liquids, solid solutions, colligative properties - relative lowering of vapour pressure, Raoult's law, elevation of boiling point, depression of freezing point, osmotic pressure, determination of molecular masses using colligative properties, abnormal molecular mass, Van't Hoff factor . Haloalkanes and halo arenes - Nomenclature, nature of C–X bond, physical properties.	SOLUTIONS- Concentration terms and units , Henry's and Raoult's law, Ideal and non- ideal solution , colligative properties , osmosis and reverse osmosis , abnormal molar mass and van't Hoff's factor. Haloalkanes and halo arenes - IUPAC nomenclature, preparation, properties , reaction mechanisms of haloalkanes and haloarenes"
JUNE	6. HALO ALKANES AND HALOARENES	Haloalkanes and halo arenes : Chemical properties, mechanism of substitution reactions, optical rotation. Nature of C–X bond, substitution reactions (Directive influence of halogen in mono substituted compounds only).Uses and environmental effects of dichloromethane , trichloromethane ,	Haloalkanes and halo arenes-Application of haloalkanes and haloarenes

		tetrachloromethane , iodoform , freons , DDT.	
	7.ALCOHOLS, PHENOLS AND ETHERS	Alcohols , Phenols and ethers : 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	Alcohols, Phenols and Ethers- IUPAC nomenclature, preparation, properties , reaction mechanisms of Alcohols, phenols and Ethers.
FIRST UNIT - TEST (9-6-2025 to 17-6-2025) **PORTIONS** **SOLUTIONS** **HALOALKANES AND HALOARENES- Including physical properties**			
JULY	8.ALDEHYDES KETONES AND CARBOXYLIC ACIDS.	Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties, mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes: uses.	IUPAC nomenclature of aldehydes , ketones and carboxylic acids , structure of carboxyl groups, preparation of aldehydes and ketones, physical and chemical characterictics of aldehydes and ketones , preparation of carboxylic acids , physical

		Carboxylic acid-Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.	and chemical characteristics of carboxylic acids. Application of aldehydes , ketones and acids.
	10.BIOMOLECULES	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, quarternary structures (qualitative idea only), denaturation of proteins, enzymes . Hormones- Elementary idea excluding structure.Vitamins- Classification and functions.Nucleic acids – DNA and RNA	Biomolecules - Carbohydrates- classification, fructose and glucose, sources of protein , types of protein , denaturation of protein , enzymes , vitamins , structure and chemical composition of nucleic acids, role of biomolecules.
SECOND UNIT – TEST **(25-7-2025 to 2-8-2025)** **PORTIONS** **6. HALO ALKANES & HALOARENES - from chemical properties** **7. ALCOHOLS , PHENOLS AND ETHERS** **8. ALDEHYDES , KETONES AND CARBOXYLIC ACIDS - upto physical properties(physical properties not included)**			

AUGUST	2.ELECTROCHEMISTRY	Redox reactions, conductance in electrolytic solutions, specific and molar conductivity, variationsof conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis(elementary idea), dry cell-electrolytic cells and Galvanic cells, lead accumulator, 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, fuel cells, corrosion.	Electrochemical cell, Nernst equation, Electrolytic conductivity and molar conductivity, Kohlrausch's law , electrolysis , fuel cells and batteries, corrosion
SEPTEMBER	3. CHEMICAL KINETICS	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.	Chemical kinetics - types of chemical reactions , average rate of reaction, rate equation , order of reaction, rate constant, rate of reaction, rate equation for different orders of reaction, rate constant and order of reaction, collision theory.
	4. d and f BLOCK ELEMENTS	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	d and f Block Elements:Position of transition elements, electronic configuration, physical and chemical characteristics of transition elements, variable oxidation number , electrode4 potantail, oxidation states, magnetic

		character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$.	properties , complex copounds, prreparation of metal oxides, properties of f-block elements
PRE MODEL EXAMINATION (7-10-2025 to 18-10-2025) 1. SOLUTIONS 6. HALOALKANES AND HALOARENES 7. ALCOHOLS , PHENOLS AND ETHERS 8. ALDEHYDES , KETONES AND CARBOXYLIC ACIDS 10. BIOMOLECULES 2. ELECTROCHEMISTRY 3. CHEMICAL KINETICS 4. d and f BLOCK ELEMENTS			
OCTOBER	5.CO-ORDINATION COMPOUNDS	Co-ordination compounds :Co-ordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT	Co-ordination compounds : Werners theory, co-ordination entity , co-ordination number, polyhedron , oxidation number of central atom , homolectic and heteroleptic complexes, IUPAC nomenclature, isomerism, valence bond theory , magnetic properties oc complexes." "Co-ordination compounds: Crystal field theory, synergic bond, applications of complex copounds.
NOVEMBER	9. AMINES	AMINES:Nomenclature, classification, structure, methods of	Amines : Structure of amines , classification, IUPAC nomenclature ,

		preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.Diazonium salts : Preparation , chemical reactions and importance in synthetic organic chemistry	preparation , physical and chemical properties , diazotisation , preparation of diazonium salts, importance of diazonium salts

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA			
STD XII – BOTANY – YEAR PLAN(2025-26)			
2025-2026			
MONTH	**TOPIC**	**SUB TOPICS**	**CONCEPTS**
MARCH/ APRIL	4.Principles of Inheritance and variation	4.1 Mendel's Laws of Inheritance 4.2 Inheritance of One Gene 4.3 Inheritance of Two Genes 4.4 Sex Determination	Hybridization experiments-Monohybrid cross and Dihybrid cross Law of segregation,Law of Dominance, Independent assortment Deviations from Mendelian pattern of inheritance Chromosomal theory of inheritance Sex determination mechanisms
JUNE	4.Principles of Inheritance and variation (Contd.)	4.5 Mutation 4.6 Genetic Disorders	Pedigree analysis Mendelian disorders Chromosomal disorders
FIRST UNIT TEST [JUNE 9th TO 17 th] CHAPTER 4: Principles of Inheritance and variation -Upto 4.6.2 (included)			
JUNE/JULY	5.Molecular basis of inheritance	5.1 The DNA 5.2 The Search for Genetic Material 5.3 RNA World 5.4 Replication 5.5 Transcription 5.6 Genetic Code 5.7 Translation 5.8 Regulation of Gene Expression 5.9 Human Genome Project,Rice Genome Proect 5.10 DNA Fingerprinting	Structure of Polynucleotide Chain Packaging of DNA Helix Transforming Principle,Biochemical Characterisation of Transforming Principle The Genetic Material is DNA Properties of Genetic Material (DNA versus RNA) The Experimental Proof for Replication The Machinery and the Enzymes Transcription Unit Mutations and Genetic Code tRNA– the Adapter Molecule The Lac operon Goals of HGP,Methodologies,Salient Features of Human Genome and Rice Genome Project Applications and Future Challenges Repetitive DNA,Satellite DNA,Polymorphism, Variable Number of Tandem Repeats
JULY/AUGUST	9-Biotechnology Principles and Processes	9.1 Principles of Biotechnology 9.2 Tools of Recombinant DNA Technology 9.3 Processes of Recombinant DNA Technology	Genetic engineering,Bioprocess engineering, recombinant DNA ,gene cloning and gene transfer, restriction endonuclease Gel electrophoresis Cloning Vectors Competent Host (For Transformation with Recombinant DNA) Processes of Recombinant DNA Technology
SECOND UNIT TEST [JULY 25th TO AUGUST 2nd] CHAPTERS 4 and 5 4. Principles of Inheritance and variation-4.7 to 4.8.3 5. Molecular basis of Inheritance -5.1 to 5.3 (Included)			
AUGUST/SEPTEMBER	10-Biotechnology and its Applications 1-Sexual Reproduction in Flowering Plants	10.1 Biotechnological Applications in Agriculture 10.2 Biotechnological Applications in Medicine 10.3 Transgenic Animals 10.4 Ethical Issues 1.1 Flower – A Fascinating Organ of Angiosperms 1.2 Pre-fertilisation : Structures and Events 1.3 Double Fertilisation	Green Revolution,tissue culture,somatic hybridisationPest Resistant Plants Genetically Engineered Insulin Gene Therapy Transgenic Animals Ethical Issues Regarding Transgenic Animals Molecular Diagnosis Stamen, Microsporangium, and Pollen Grain The Pistil, Megasporangium, and Embryo Sac Pollination Double Fertilization
SEPTEMBER	1-Sexual Reproduction in Flowering Plants (CONTD...)	1.4 Post-fertilisation: Structures and Events 1.5 Apomixis and Polyembryony	Post-Fertilization: Structures and Events Apomixis and polyembryony
OCTOBER/NOVEMBER	12. Ecosystem	12.1 Ecosystem structure and function 12.2 Productivity 12.3 Decomposition 12.4 Energy flow 12.5 Ecological pyramids	Stratification NPP, GPP, Primary production and secondary production PAR, GFC, DFC and standing crop Types of ecological pyramids
TERM END EVALUATION [OCTOBER 7th TO OCTOBER 18th] CHAPTERS 4, 5 , 9 and 10 4.Principles of Inheritance and variation 5.Molecular basis of inheritance 9-Biotechnology Principles and Processes 10-Biotechnology and its Applications			
FIRST MODEL EXAMINATION [NOVEMBER 24th TO DECEMBER 12th] CHAPTERS 1,4,5,9 ,10 and 12			
SECOND MODEL EXAMINATION [JANUARY 1st TO 14 th] CHAPTERS 1,4,5,9, 10 and 12			

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA			
STD XII – ZOOLOGY – YEAR PLAN			
2025-2026			
MONTH	**TOPIC**	**SUB TOPICS**	**CONCEPTS**
MARCH - APRIL	CHAPTER 2 HUMAN REPRODUCTION	2.1 Male reproductive system 2.2 Female reproductive system 2.3 Gametogenesis 2.4 Menstrual cycle 2.5 Fertilization and implantation 2.6 Pregnancy and embryonic development 2.7 Parturition and lactation	Structure and functions of male reproductive organs Structure and functions of female reproductive organs Spermatogenesis and oogenesis, Hormonal control, structure of sperm , structure of ovary Various events during menstrual cycle, hormonal control, menstrual hygiene Structure of ovum , sex determination, cleavage Formation of placenta , placental hormones , milestones of embryonic development Foetal ejection reflex , significance of colostrum
JUNE	CHAPTER 3 REPRODUCTIVE HEALTH	3.1 Reproductive health - problems and strategies 3.2 Population explosion and birth control 3.3 Medical termination of pregnancy 3.4 Sexually transmitted diseases 3.5 Infertility	Need for reproductive health IMR, MMR, contraceptive methods Why MTP is legalised? Types of STDs, symptoms and preventive measures ART - IVF, ZIFT, GIFT

	CHAPTER 6 EVOLUTION	6.1 Origin of life 6.2 Evolution of life forms - a theory 6.3 What are the evidences of evolution ? 6.4 What is adaptive radiation ? 6.5 Biological evolution 6.6 Mechanism of evolution 6.7 Hardy-weinberg 6.8 A brief account of evolution principle 6.9 Origin and evolution of man	Big bang theory, formation of universe Different theories on origin of life Paleontology, comparative anatomy, embryology, molecular evidences Darwin's finches , placental mammals and marsupials of australia Branching descent and natural selection Hugo de Vries theory and Darwin's theory on evolution Hardy Weinberg equilibrium, founder effect, opertional techniques of natural selection Evolution of plants and animals through geological periods Different evolutionary stages of man
FIRST UNIT TEST (JUNE 9-17) CHAPTER 2. HUMAN REPRODUCTION 2.1 TO 2.5 (EXCLUDING 2.5 FERTILIZATION AND IMPLANTATION)			

JULY	CHAPTER 7 HUMAN HEALTH AND DISEASE	7.1 Common Diseases in Humans 7.2 Immunity 7.3 AIDS 7.4 Cancer 7.5 Drugs and Alcohol Abuse	Source, symptoms, target site and mode of transmission of common diseases in humans Innate and acquired, active and passive, vaccination, allergies, auto immunity and immune system Replication of retro virus, its transmission and prevention Types, causes, detection, diagonosis and treatment Classification of drugs, their source, target site and effect on our body Adolescence and drug abuse, addiction and dependence, effects of drug, alcohol abuse, prevention and control
	CHAPTER 8 MICROBES IN HUMAN WELFARE	8.1 Microbes in Household Products 8.2 Microbes in Industrial Products 8.3 Microbes in Sewage Treatment 8.4 Microbes in Production of Biogas	Microbes in food processing Fermented beverages, antibiotics, bioactive molecules Primary and secondary treatment of sewage Study of biogas plant and biogas production
AUGUST	CHAPTER 8 MICROBES IN HUMAN WELFARE CONTINUES..	8.5 Microbes as Biocontrol Agents 8.6 Microbes as Biofertilisers	Biological control of pests and diseases Organic farming , role of mycorrhizae and cyano bacteria

	CHAPTER 11 ORGANISMS AND POPULATIONS	11.1 Populations	Population attributes, growth, growth models, life history variation, population interactions
SECOND UNIT TEST (JULY 25 - AUGUST 2) CHAPTER 2 HUMAN REPRODUCTION (FROM 2.5 TILL THE END OF THE CHAPTER) , CHAPTER 3 REPRODUCTIVE HEALTH & CHAPTER 6 : EVOLUTION			
SEPTEMBER	CHAPTER 13 BIODIVERSITY AND ITS CONSERVATION	13.1 Biodiversity	Types of biodiversity, representation of global biodiversity, patterns of biodiversity, loss of biodiversity
OCTOBER	.CHAPTER 13 BIODIVERSITY AND ITS CONSERVATION CONTINUES…	13.2 Biodiversity Conservation	Why and How should we conserve biodiversity? In situ and Ex-situ
PREMODEL EXAMINATION (OCTOBER 7-18) CH 2, 3, 6 , 7, 8 AND 11			
NOVEMBER	**REVISION**		
FIRST MODEL EXAMINATION (NOVEMBER 24 - DECEMBER 12) FULL PORTIONS			
SECOND MODEL EXAMINATION (JANUARY 1 - 14) FULL PORTIONS			

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA	
YEAR PLAN - 2025-'26	
STD : XII	**SUBJECT : ECONOMICS (030)**
	PART A–MACROECONOMICS
March/ April	Unit 2: Money &Banking
June	Unit 1-National Income and related aggregates
July	Unit 4: Government budget and the economy Unit 5: Balance of Payments & Foreign Exchange
August	Unit 3: Determination of income and employment

	PART-B- INDIAN ECONOMIC DEVELOPMENT
March/April	Unit I: Development Experience (1947-90) 1: Indian economy on the eve of Independence 2:Indian economy 1950-1990
June	Unit II: Economic Reforms since 1991 3: Liberalisation, Privatisation and Globalisation: an appraisal Unit III: Current challenges facing theIndian Economy 4: Human Capital Formation in India
July	Unit III: current challenges facing the Indian Economy 5: Rural development
August	Unit III: Current challenges facing the Indian Economy 6: Employment: Growth, Informalisation and other issues
September	Unit III: Current challenges facing the Indian Economy 7: Environment and Sustainable Development
November	Unit IV: Development experiences of India: A comparison with neighbours 8: Comparative development experiences of India and its neighbours

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YEAR PLAN FOR THE ACADEMIC YEAR 2025-26

CLASS XII - BUSINESS STUDIES (054)

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH	Nature and Significance of Management	Introduction	Management - concept, objectives, and importance
		Nature of Management	Management as Science, Art and Profession
		Levels of Management	Levels of Management
		Functions of Management	Management functions-planning, organizing, staffing, directing and controlling
		Co-ordination -The Essence of Management	Coordination- concept and importance
MARCH-APRIL	Principles of Management	Principles of Management - The Concept	Principles of Management-concept and significance
		Principles of Management	Fayol's principles of management
		Taylor's Scientific Management	Taylor's Scientific management - principles and techniques
UNIT TEST I (25 MARKS) 9JUNE -17 JUNE			
JUNE	Business Environment	Introduction	Meaning and importance of Business environment
		Dimensions of Business Environment	Dimensions of Business Environment - Economic, Social, Technological, Political and Legal
		Demonetisation	Demonetization - concept and features
JUNE/JULY	Marketing	Introduction	Marketing – Concept, functions and philosophies
		Marketing Mix	Marketing Mix – Concept and elements
		Product	Product – branding, labelling and packaging – Concept
		Pricing	Price - Concept, Factors determining price
		Physical Distribution	Physical Distribution – concept, components and channels of distribution
		Promotion	Promotion – Concept and elements; Advertising, Personal Selling, Sales Promotion and Public Relations
JULY	Financial Markets	Introduction	Financial Markets: Concept
		Money Market	Money Market: Concept
		Capital Market	Capital market and its types (primary and secondary)
		Stock Exchange	Stock Exchange - Functions and trading procedure
		Securities and Exchange Board of India(SEBI)	Securities and Exchange Board of India (SEBI) - objectives and functions
UNIT TEST II (25 MARKS) 25 JULY -2 AUGUST			
AUGUST	Consumer Protection	Introduction	Consumer Protection: Concept and importance
		The Consumer Protection Act,2019	The Consumer Protection Act, 2019
		Who is a Consumer?	Meaning of consumer
		Rights and Responsibilities of a Consumer	Rights and responsibilities of consumers
		Who can file a complaint?	Who can file a complaint?
		Redressal Agencies uner Consumer Protection Act	Redressal machinery
		Reliefs Available	Remedies available
		Role of Consumer Organisations and NGOS	Consumer Awareness- Role of Consumer Organisations and Non-Governmental Organisations(NGOs)
AUGUST	Financial Management	Introduction	Financial Management: Concept, role and objectives
		Financial Decisions	Financial decisions: investment, financing and dividend - Meaning and factors affecting
		Financial Planning	Financial Planning - concept and importance
		Capital Structure	Capital Structure – concept and factors affecting capital structure
		Fixed and Working Capital	Fixed and Working Capital - Concept and factors affecting their requirements
AUGUST - SEPTEMBER	Planning	Introduction	Planning: Concept, importance and limitation
		Planning Process	Planning process
		Types of Plans	Single use and Standing Plans. Objectives, Strategy, Policy, Procedure, Method, Rule, Budget and Programme
AUGUST - SEPTEMBER	Organizing	Introduction	Organising: Concept and importance
		Steps in the process of Organising	Organising Process
		Organisation Structure	Structure of organisation- functional and divisional concept.
		Delegation	Formal and informal organization - concept
		Decentralisation	Delegation: concept, elements and importance
			Decentralization: concept and importance
SEPTEMBER	Staffing	Introduction	Concept and importance of staffing
		Staffing as a Part of Human Resource Management	Staffing as a part of Human Resource Management concept
		Staffing Process	Staffing process
		Recruitment	Recruitment process
		Selection	Selection – process
		Training and Development	Training and Development - Concept and importance, Methods of training - on the job and off the job - vestibule training, apprenticeship training and internship training
SEPTEMBER	Directing	Introduction	Directing: Concept and importance
		Elements of Direction	Elements of Directing
		Motivation	Motivation - concept, Maslow's hierarchy of needs, Financial and non-financial incentives
PRE-MODEL (80 MARKS) 07 OCTOBER - 18 OCTOBER (INCLUDING MOTIVATION)			
OCTOBER	Directing	Leadership	Leadership - concept, styles - authoritative, democratic and laissez faire
		Communication	Communication - concept, formal and informal communication; barriers to effective communication, How to overcome the barriers?
OCTOBER - NOVEMBER	Controlling	Controlling	Controlling - Concept and importance
		Relationship between Planning and Controlling	Relationship between planning and controlling
		Controlling Process	Steps in process of control
MODEL EXAMINATION (80 MARKS) 24 NOVEMBER - 12 DECEMBER			

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA			
YEAR PLAN FOR THE ACADEMIC YEAR 2025-26			
CLASS	**XII**		
SUBJECT	**ACCOUNTANCY(055)**		
MONTH	**TOPIC**	**SUB-TOPICS**	**CONCEPTS**
MARCH-APRIL	ACCOUNTING FOR SHARE CAPITAL	8.1 Features of a Company 8.2 Kinds of Companies 8.3 Share Capital of a Company 8.4 Nature and Classes of Shares 8.5 Issue of Shares 8.6 Accounting Treatment 8.7 Forfeiture of Shares	Company and Share Capital Features of a Company Kind of Companies. Share Capital of a Company and its Categories. Nature and Classes of Shares. Issue of Shares. Accounting Treatment, Calls in Arrears and Calls in Advance, Over Subscription and Under Subscription, Issue of Shares at a Premium and at a Discount, Issue of Shares for Consideration other than Cash. Forfeiture of Shares. Reissue of Forfeited Shares.
UNIT TEST 1 - 25 MARKS			

June	ISSUE OF DEBENTURES	9.1 Meaning of Debentures 9.2 Distinction between Shares and Debentures 9.3 Types of Debentures 9.4 Terms of Issue of Debentures 9.5 Over Subscription 9.6 Issue of Debentures for Consideration other than Cash 9.7 Issue of Debentures as a Collateral Security 9.8 Issue of Debentures 9.9 Interest on Debentures 9.10 Writing off Discount/Loss on Issue of Debentures	Meaning of Debentures. Distinction between Shares and Debentures. Types of Debentures. Issue of Debentures- Par, Premium & Discount Pro Rata & Rejection. Issue of Debentures other than cash- Par, Premium & Discount. With & Without Journal Entries & effect in Balance Sheet. Accounting Treatment for different cases. Journal Entries & TDS. Sources to write off & Preparation of ledger accounts.
JUNE	FINANCIAL STATEMENT ANALYSIS	11.1 Meaning of Analysis of Financial Statements 11.2 Significance of Analysis of Financial Statements 11.3 Objectives of Analysis of Financial Statements 11.4 Tools of Analysis of Financial Statements 11.54.7 Limitations of Financial Analysis	Meaning of Analysis of financial statements. Significance of Analysis of financial statements. Objectives of Analysis of financial statements. Comparative, Common Size, Ratio Analysis and Cash Flow Statement. Limitations of Financial Analysis

JUNE	TOOLS OF FINANCIAL STATEMENT ANALYSIS- COMPARATIVE, COMMON SIZE STATEMENTS.ACCOUNTING RATIOS	12.4 Tools of Analysis of Financial Statements 12.5 Comparative Statements 12.6 Common Size Statement 13.1 Meaning of Accounting Ratios 13.2 Objectives of Ratio Analysis 13.3 Advantages of Ratio Analysis 13.4 Limitations of Ratio Analysis 13.5 Types of Ratios 13.6 Liquidity Ratios 13.7 Solvency Ratios 13.8 Activity (or Turnover) Ratio 13.9 Profitability Ratios	Preparation of comparative and common size statement, Accounting Ratios: Meaning, Objectives Advantages, Classification and computation-.Liquidity Ratios: ,Solvency Ratios: Activity Ratios: Profitability Ratios:
JULY	CASH FLOW STATEMENT	14.1 Objectives of Cash Flow Statement 14.2 Benefits of Cash Flow Statement 14.3 Cash and Cash Equivalents 14.4 Cash Flows 14.5 Classification of Activities for the Preparation of Cash Flow Statement 14.6 Ascertaining Cash Flow from Operating Activities 14.7 Ascertainment of Cash Flow from Investing and Financing Activities 14.8 Preparation of Cash Flow Statement	Meaning, objectives Benefits of Cash Flow Statement Cash and Cash Equivalents, Classification of Activities and preparation (as per AS 3 (Revised)
UNIT TEST I1 - 25 MARKS			

AUGUST	**ACCOUNTING FOR PARTNERSHIP FIRMS -BASIC CONCEPTS**	1.1 Nature of Partnership 1.2 Partnership Deed 1.3 Special Aspects of Partnership Accounts 1.4 Maintenance of Capital Accounts of Partners 1.5 Distribution of Profit among Partners 1.6 Guarantee of Profit to a Partner 1.7 Past Adjustments	Meaning nature and definition Contents of Partnership Deed. Provisions of the Indian Partnership Act 1932 in the absence of partnership deed. Fixed v/s fluctuating capital accounts. Preparation of Profit and Loss Appropriation account- division of profit among partners Guarantee of profits to the partners and partner to the firm. Past adjustments (relating to interest on capital, interest on drawing, salary and profit sharing ratio).
AUGUST	**GOODWILL: NATURE AND VALUATION**	2.1 Nature of Goodwill 2.2 Factors affecting Goodwill 2.3 Types of Goodwill 2.4 Methods of valuation of Goodwill	Meaning and Nature Factors affecting goodwill Self-generated and Purchased Methods of valuation - average profit, super profit and capitalization.

AUGUST	**RECONSTITUTION OF A PARTNERSHIP FIRM - ADMISSION OF PARNTERS**	3.1 Modes of Reconstitution of a Partnership Firm 3.2 Admission of a New Partner 3.3 New Profit Sharing Ratio 3.4 Sacrificing Ratio 3.5 Goodwill 3.6 Adjustment for Accumulated Profits and Losses 3.7 Revaluation of Assets and Reassessment of Liabilities 3.8 Adjustment of Capitals	Cases of Reconstitution Effect of admission of a partner on change in the profit sharing ratio Old Ratio - New Ratio Treatment of goodwill (as per AS 26) Treatment of reserves, accumulated profits and losses Treatment for revaluation of assets and re-assessment of liabilities Adjustment of capital accounts and preparation of capital, current account and Balance Sheet..
SEPTEMBER	**RECONSTITUTION OF A PARTNERSHIP FIRM - CHANGE IN PROFIT SHARING RATIO AMONG THE EXISTING PARTNERS**	4.1 New Profit Sharing Ratio 4.2 Sacrificing Ratio/Gaining Ratio 4.3 Goodwill 4.4 Adjustment for Accumulated Profits and Losses 4.5 Revaluation of Assets and Reassessment of Liabilities 4.6 Adjustment of Capitals	Calculation of New Profit sharing Ratio. Sacrificing ratio, gaining ratio- Calculation. Accounting Treatment of Goodwill. Treatment of reserves and accumulated profits. Accounting for revaluation of assets and reassessment of liabilities Preparation of revaluation account and Balance Sheet.

SEPTEMBER	**RECONSTITUTION OF A PARTNERSHIP FIRM - RETIREMENT OF PARTNER**	5.1 Ascertaining the Amount Due to Retiring Partner 5.2 New Profit Sharing Ratio 5.3 Gaining Ratio 5.4 Treatment of Goodwill 5.5 Adjustment for Revaluation of Assets and Liabilities 5.6 Adjustment of Accumulated Profits and Losses 5.7 Disposal of Amount Due to Retiring Partner 5.8 Adjustment of Partners' Capitals 5.9 Retiring Partners Loan a/c	Effect of retirement of a partner on change in profit sharing ratio, Calculation New Ratio. New Ratio - Old Ratio Treatment of goodwill (as per AS 26), Treatment for revaluation of assets and reassessment of liabilities, Preparation of capital, current account and Balance Sheet. Adjustment of accumulated profits, losses and reserves, adjustment of capital accounts and Preparation of loan account of the retiring partner.
SEPTEMBER	**RECONSTITUTION OF A PARTNERSHIP FIRM - DEATH OF A PARTNER**	6.1 Ascertaining the Amount Due to Deceased Partner 6.2 New Profit Sharing Ratio 6.3 Gaining Ratio 6.4 Treatment of Goodwill 6.5 Adjustment for Revaluation of Assets and Liabilities 6.6 Adjustment of Accumulated Profits and Losses 6.7 Disposal of Amount Due to Deceased Partner 6.8 Executors a/c	Calculation of amount to be transferred to Executor's A/c Calculation New Ratio. New Ratio - Old Ratio Treatment of goodwill (as per AS 26), Treatment for revaluation of assets and reassessment of liabilities, Preparation of capital, current account and Balance Sheet. Adjustment of accumulated profits, losses and reserves, adjustment of capital account Calculation of deceased partner's share of profit till the date of death. Preparation of deceased partner's capital account and his executor's account.
PREMODEL EXAMINATION - 80 MARKS			

OCTOBER	DISSOLUTION OF PARTNERSHIP FIRM	7.1 Dissolution of Partnership 7.2 Dissolution of a Firm 7.3 Settlement of Accounts 7.4 Accounting Treatment	Dissolution of partnership and partnership firm, Types of dissolution of a firm. Settlement of accounts - preparation of realization account, and other related accounts: capital accounts of partners and cash/bank a/c
NOVEMBER	**FIRST MODEL EXAMINATION**		

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
COMPUTER SCIENCE
YEAR PLAN FOR THE ACADEMIC YEAR 2025-26

CLASS: XII

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH/ APRIL	Computational Thinking and Programming-2 Database Management	Revision of python topics in class XI (Functions Database concepts Relational data model till delete command)	Basic concepts of Python programming Creating reusable and modular code, promoting good programming practices such as code reusability, readability, and maintainability. Concepts of RDBMS.
JUNE	Database Management	Structured Query Language	The use of RDBMS to store, organize, and retrieve large amounts of data efficiently. Understand and use MySQL commands to store and manage data. Grouping and filtering of records to get cumulative data. Extracting data from multiple tables.
JULY	Computational Thinking and Programming-2 Database Management	Interface of Python with an SQL Database, Excepton Handling	Client Server architecture -to transfer and manage data between a front end and back end. Handle errors raised by programs using try, except and finally.
AUGUST	Computational Thinking and Programming-2	Introduction to Files,Text Files, Binary Files, CSV Files	Files as a medium for permanent storage. Binary and CSV file Handling Types of Files and paths.Text File Handling
SEPTEMBER	Computational Thinking and Programming-2, Computer Networks	Data Structure, Evolution of Networking,Data communication terminologies,Transmission Media,Network Devices,Network Types,Network Protocol	Understand the concept of Stack. Various types of transmission media used in different types of networks, including wired ,wireless networks,network types,topologies,network protocol and network devices.
OCTOBER	Revision	Revision	

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INFORMATICS PRACTICES(065)
YEAR PLAN FOR THE ACADEMIC YEAR 2025-2026
CLASS: XII

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH/APRIL	Unit 1: Data Handling using Pandas –I	Introduction to Python libraries- Pandas, Matplotlib Data structures in Pandas - Series and Data Frames Series: Creation of Series from – ndarray, dictionary, scalar value , Mathematical operations on series – addition, subtraction, multiplication, division ,Head and Tail functions Selection, Indexing and Slicing Attributes of Series – name, index.name, values, size, emptyDataFrames: creation - from dictionary of Series, list of dictionaries, displaying dataframe Attributes of DataFrames – index, columns, dtypes, values, shape, size, T, ndim, head(), tail()	Data analysis using Python libraries,Concepts of data structures,Series creation and its operations. Creation of 2D data sructure: Dataframe and its attributes
JUNE	Unit 1: Data Handling using Pandas –I	Dataframe Creation using Text/CSV files, display; iteration; Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Indexing using Labels, Boolean Indexing; Importing/Exporting Data between CSV files and Data Frames.	DataFrame creation (Revision) Operations and methods dataframes. Dataframes indexing , concept of importing and exporting data using csv
JULY	**Unit 1: Data Visualization, I Unit 3:ntroduction to Computer Networks**	Data Visualization: Purpose of plotting; drawing and saving following types of plots using Matplotlib –line plot, bar graph, histogram Customizing plots: adding label, title, and legend in plots. Introduction to networks, Types of network: PAN, LAN, MAN, WAN. Network Devices: modem, hub, switch, repeater, router, gateway Network Topologies: Star, Bus, Tree, Mesh.Introduction to Internet, URL, W W W, and its applications- Web, email, Chat, VoIP. Website: Introduction, difference between a website and webpage, static vs dynamicweb page, web server and hosting of a website. Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.	Visualizing data using matplotlib library, Network and types of Network,Network Devices,Network Topology,Internet and web fundementals
AUGUST	**Unit 2: Database Query using SQL**	Database Query using SQL Revision of database concepts and SQL commands covered in class XI Math functions: POWER (), ROUND (), MOD (). Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME ().	Database Query using SQL Revision of database concepts,SQL single row functions- Math and Date functions
SEPTEMBER	**Unit 2: Database Query using SQL**	Text functions: UCASE ()/ UPPER (), LCASE ()/ LOWER (), MID ()/ SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*). Querying and manipulating data using Group by, Having, Order by. Working with two tables using equi-join.	SQL single row functions- Text functions Aggregate Functions,Group by Clause, Having clause, Order by clause,SQL join

OCTOBER	**Unit 4: Societal Impacts**	Societal Impacts Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS), cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act. E-waste: hazards and management. Awareness about health concerns related to the usage of technology	Societal Impacts- cybercrime and cyber laws, E-waste: hazards and management.
PRE MODEL EXAMINATION 07/10/2025 TO 18/10/2025			
NOVEMBER	**FIRST MODEL EXAMINATION 24/11/2025 TO 12/12/2025**		
JANUARY	**SECOND MODEL EXAMINATION 01/01/2026 TO 14/01/2026**		

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CLASS: XII			
MONTH	**TOPIC**	**SUB-TOPICS**	**CONCEPTS**
MARCH/ APRIL	**PART B: Unit 2: Data Science Methodology: An Analytic Approach to Capstone Project**	INTRODUCTION TO DATA SCIENCE METHODOLOGY MODEL VALIDATION MODEL PERFORMANCE - EVALUATION METRICS PRACTICAL ACTIVITIES	Introduction to Data Science Methodology Steps for Data Science Methodology Model Validation Techniques Model Performance- Evaluation Metrics
	PART A: Unit 1 : Communication Skills-IV	• Active Listening • Parts of Speech • Writing Sentences	• Importance of active listening • Steps to active listening
JUNE	**PART B: Unit 3: Making Machines See**	HOW MACHINES SEE? WORKING OF COMPUTER VISION COMPUTER VISION – PROCESS APPLICATIONS OF COMPUTER VISION CHALLENGES OF COMPUTER VISION THE FUTURE OF COMPUTER VISION Working with OpenCV:(**For Advanced Learners)	How Machines See Working of Computer Vision Computer Vision Process Applications of Computer Vision Challenges of Computer Vision The Future of Computer Vision Working with OpenCV (**For Advanced Learners)
	PART B: Unit 1: Python Programming – II	Python Libraries Import and Export Data between CSV Files and DataFrames Handling Missing Values CASE STUDY PRACTICAL ACTIVITY - Linear Regression algorithm	Recap of NumPy library Recap of Pandas Library Importing and Exporting Data between CSV Files and DataFrames Handling missing value Linear Regression algorithm (**For Advanced Learners)

JULY	**PART A: Unit 2: Self-management Skills - IV**	• Motivation and Positive Attitude • Result Orientation • Self-awareness	• Sources of motivation and inspiration • Personality
	PART B: Unit 5: Introduction to Big Data and Data Analytics	What is Big Data? Types of Big Data Advantages and Disadvantages of Big Data Characteristics of Big Data Big Data Analytics Working on Big Data Analytics Mining Data Streams Future of Big Data Analytics	Introduction to Big Data Types of Big Data Advantages and Disadvantages of Big Data Characteristics of Big Data Big Data Analytics Working on Big Data Analytics Mining Data Streams Future of Big Data Analytics
August	**PART B: Unit 6: Understanding Neural Networks**	● Parts of a Neural Network ● Components of a Neural Network ● Working of a Neural Network ● Types of Neural Networks ● Future of Neural Networks and Societal Impact	1. Parts of a neural network. 2. Components of a neural network. 3. Working of a neural network. 4. Types of neural networks, such as feedforward, convolutional, and recurrent. 5. Impact of neural network on society.
	PART A: Unit 4: Entrepreneurial Skills	Entrepreneurship and Entrepreneur Barriers to Entrepreneurship Entrepreneurial Attitudes Entrepreneurial Competencies	1. Barriers to becoming entrepreneur 2. Behavioral and entrepreneurial competencies– adaptability/ decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity 3. Entrepreneurial competencies in particular: self - confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building

	PART B: Unit 4: AI with Orange Data Mining Tool	● What is Data Mining? ● Introduction to Orange Data Mining Tool ● Beneficiaries of Orange data mining ● Getting started with Orange tool ● Components of Orange ● Default Widget Catalogue ● Key domains of AI with ORANGE DATA MINING TOOL	1. Introduction to Orange Data Mining Tool 2. Components of Orange Data Mining Tool 3. Key domains of AI with Orange data mining tool – Data Science, Computer Vision, NLP
	PART B: Unit 7: Generative AI	● Introduction to Generative AI ● Working of Generative AI ● Generative and Discriminative models ● Applications of Generative AI ● LLM- Large Language Model ● Future of Generative AI ● Ethical and Social Implications of Generative AI	1. Introduction to Generative AI 2. Working of Generative AI 3. Generative and Discriminative models 4. Applications of Generative AI 5. LLM- Large Language Model 6. Future of Generative AI 7. Ethical and Social Implications of Generative AI

September	**PART A: Unit 5: Green Skills**	Green Jobs Importance of Green Job	1. Role of green jobs in toxin-free homes, 2. Green organic gardening, public transport and energy conservation, 3. Green jobs in water conservation 4. Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes, 5. Green jobs in green tourism 6. Green jobs in building and construction 7. Green jobs in appropriate technology 8. Role of green jobs in Improving energy and raw materials use 9. Role of green jobs in limiting greenhouse gas emissions 10. Role of green jobs minimizing waste and pollution 11. Role of green jobs in protecting and restoring ecosystems 12. Role of green jobs in support adaptation to the effects of climate change

	PART B: Unit 8: Data Storytelling	● Introduction to Storytelling ● Elements of a Story ● Introduction to Data Storytelling ● Why is Data Storytelling Powerful? ● Essential Elements of Data Storytelling ● Narrative Structure of a Data Story (Freytag's Pyramid) ● Types of Data and Visualizations for Different Data ● Steps to Create a Story Through Data ● Ethics in Data Storytelling	1. Introduction to Storytelling 2. Elements of a Story 3. Introduction to Data Storytelling 4. Why is Data Storytelling Powerful? 5. Essential Elements of Data Storytelling 6. Narrative Structure of a Data Story (Freytag's Pyramid) 7. Types of Data and Visualizations for Different Data 8. Steps to Create a Story Through Data 9. Ethics in Data Storytelling

October	**PART A: Unit 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	**Spreadsheet Software** 1. Introduction to spreadsheet application 2. Spreadsheet applications 3. Creating a new worksheet 4. Opening workbook and entering text 5. Resizing fonts and styles 6. Copying and moving 7. Filter and sorting 8. Formulas and functions 9. Password protection. 10. Printing a spreadsheet. **Presentation Software** ***(Saving a spreadsheet in various formats)*** 1. Introduction to presentation 2. Software packages for presentation 3. Creating a new presentation 4. Adding a slide 5. Deleting a slide 6. Entering and editing text 7. Formatting text 8. Inserting clipart and images 9. Slide layout 10. Saving a presentation 11. Printing a presentation document