BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
COMPUTER SCIENCE
YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

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	Basic concepts of Python programming Creating reusable and modular code, promoting good programming practices such as code reusability, readability, and maintainability. Concepts of RDBMS.
UNIT TEST 1(10/6/2024)TOPICS :REVISION STD XI,FUNCTIONS,DATABASE CONCEPTS,RELATIONAL DATA MODEL			
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.
UNIT TEST 2(31/7/2024)TOPICS :SQL,CONNECTIVITY,EXCEPTION HANDLING			
AUGUST	Computational Thinking and Programming-2	Introduction to Files,Text Files	Files as a medium for permanent storage. Types of Files and paths.Text File Handling

SEPTEMBER	Computational Thinking and Programming-2	Binary Files,CSV Files	Binary and CSV file Handling
TERM END EVALUATION (18/10/2024) TOPICS:REVISION STD XI,FUNCTIONS,DATABASE CONCEPTS,RELATIONAL DATA MODEL,SQL,CONNECTIVITY,EXCEPTION HANDLING,TEXT FILE,BINARY FILE,CSV FILE			
OCTOBER	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.
NOVEMBER	Computer Networks	Introduction to Web Services	Introduction to web services.
FIRST MODEL:2/12/2024 TO 13/12/2024			
SECOND MODEL:3/1/2025 TO 15/1/2025			
S.No	**NAME OF SCHOOL**	**NAME OF TEACHERS**	**SIGNATURE**
1	BVM, ELAMAKKARA	BINDU T C	
2	BVM, EROOR	ANUPAMA USHA	
3	BVV, THRIKKAKARA	ALEYAMMA GEORGE	
4	BVM, GIRINAGAR	GIRIJA PILLAI	
5	BAV, KAKKANAD	SEEMA C	
6	BMV, TRIPUNITHURA	SUSMITHA SHENOY	
7	BMV, VELLOOR	ANOOP M A	

CLASS: XII

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH/ APRIL	**PART A: Unit 2: Self-management Skills** **PART A: Unit 3: Information and Communication Technology Skills**	PART A: Unit 2: Self-management Skills • Session 1 Motivation and Positive Attitude • Session 2 Result Orientation • Session 3 Self-awareness PART A: Unit 3: Information and Communication Technology Skills Session 1 Getting Started with Spreadsheet Session 2 Performing Basic Operations in a Spreadsheet Session 3 Working with Data and Formatting Text Session 4 Advanced Features in Spreadsheet Session 5 Presentation Software Session 6 Opening, Closing, Saving and Printing a Presentation Session 7 Working with Slides and Text in a Presentation Session 8 Advanced Features used in Presentation	PART A: Unit 2: Self-management Skills • sources of motivation and inspiration • personality PART A: Unit 3: Information and Communication Technology Skills spreadsheet application presentation application
JUNE	**PART A:Unit 1 : Communication Skills-IV** **PART B: Unit 1: Capstone Project**	Unit 1 : Communication Skills-IV: • Session 1 Active Listening • Session 2 Parts of Speech • Session 3 Writing Sentences Unit 1: Capstone Project • Understanding the problem • Decomposing the problem through DT framework • Analytic Approach • Data Requirements • Data Collection • Modelling approach	Unit 1 : Communication Skills-III: • Importance of active listening • Steps to active listening Unit 1: Capstone Project: AI Project Cycle

			Unit Test I Starts: 10/06/2024
JULY	**PART B: Unit 1:Capstone Project**	Unit 1: Capstone Project • How to validate model quality • Metrics of model quality by simple Maths and examples from small datasets • Introduction to commonly used algorithms and the science behind them • Showcase through a compelling story	Unit 1: Capstone Project: • Model validation , RMSE , MSE , MAPE
	PART A: Unit 4: Entrepreneurial Skills	PART A: Unit 4: Entrepreneurship Skills Session 1 Entrepreneurship and Entrepreneur Session 2 Barriers to Entrepreneurship Session 3 Entrepreneurial Attitudes Session 4 Entrepreneurial Competencies	PART A: Unit 4: Entrepreneurship Skills Behavioral and entrepreneurial competencies
			Unit Test II Starts: 31 /07/2024
AUGUST	**PART B: Unit 2: Model Life Cycle**	PART B: Unit 2: Model Life Cycle • Different aspects of Model (Train, test, validate, hyper parameters, Commonly used platforms to build and runmodels) • Lifecycle of an AI model (Build, Deploy, Retrain)	PART B: Unit 2: Model Life Cycle AI Project Cycle, Model validation, AI deployment, IBM Watson
SEPTEMBER	**PART A: Unit 5: Green Skills**	PART A: Unit 5: Green Skills Session 1 Green Jobs Session 2 Importance of Green Jobs	PART A: Unit 5: Green Skills Role of green jobs

OCTOBER	**PART B: Unit 3: Story- telling through data**	PART B: Unit 3: Story- telling through data • The Need for Storytelling • How to create stories? • Ethics of storytelling	PART B: Unit 3: Story- telling through data • story telling
			End Term Evaluation Starts: 18/10/2024
NOVEMBER	**PART B: Unit 3: Story- telling through data**	PART B: Unit 3: Story- telling through data • Types of Data and Suitable Charts • Stories During the Steps of Predictive Modeling • Best Practices of Storytelling	PART B: Unit 3: Story- telling through data • power of data story telling
DECEMBER			**First Model Examination Starts: 02/12/2024**
JANUARY			**Second Model Examination starts: 03/01/2025**
FEBRUARY			
MARCH			

S.No	NAME OF SCHOOL	NAME OF TEACHERS	SIGNATURE
1	BVM, ELAMAKKARA		
2	BVM, EROOR		

3	BVV, THRIKKAKARA		
4	BVM, GIRINAGAR		
5	BAV, KAKKANAD		
6	BMV, TRIPUNITHURA		
7	BMV, VELLOOR		

BHARATIYA VIDYA BHAVAN, KOCHI

YEAR PLAN FOR THE ACADEMIC YEAR 2024- 2025
Std. XII - PHYSICS

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
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).
JUNE	**Chapter–2: Electrostatic Potential and Capacitance** **Chapter–3: Current Electricity**	**Electric potential & potential energy, equipotential surfaces, Conductors and insulators, Dielectrics and electric polarization** **Capacitors and capacitance** **Electric current, drift velocity, Ohm's law, temperature dependence of resistance, Internal resistance and emf of acell, Kirchhoff's rules, Wheatstone bridge.**	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).Electric current, flow of electric charges 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.

FIRST UNIT TEST (25marks)
Electric Charges and Fields -17 MARKS,
Electrostatic Potential and Capacitance) - 8 MARKS(includingpotential due to a dipole)

JULY	Chapter–4: Moving Charges and Magnetism(continues) Chapter–5: Magnetism and Matter	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 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.	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. 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.
	SECOND UNIT TEST (25marks) **Electrostatic Potential and Capacitance (from equipotential surface) - 8 MARKS,** **Current Electricity -10 MARKS,** **Moving Charges and Magnetism** **(including Ampere circuital law and its applications.) - 7 MARKS**		
AUGUST	Chapter–6: Electromagnetic Induction Chapter–7: Alternating Current	Electromagnetic induction; Lenz's Law, Self and mutual induction. Alternating currents, LCR series circuit (phasors only), AC generator, Transformer.	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction. 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.

SEPTEMBER	**Chapter–8:** **Electromagnetic Waves** **Chapter–9:** **Ray Optics and Optical Instruments** **Chapter–10:** **Wave Optics**	**Basic idea of displacement current, Electromagnetic waves,** **Electromagnetic spectrum** **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** **Wave front and Huygen's principle, Interference, diffraction due to a single slit.**	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. 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. 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).
OCTOBER	**Chapter–11:** **Dual Nature of Radiation and Matter** **Chapter–12: Atoms** **Chapter–13: Nuclei**	**Dual nature of radiation, Photoelectric effect, Einstein's photoelectric equation, de-Broglie relation.** **Alpha-particle scattering experiment;** **Bohr model of hydrogen atom.** **Composition and size of nucleus, nuclear force, mass defect & binding energy per nucleon , nuclear fission, nuclear fusion**	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. 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). 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.

TERM END EVALUATION
Electric Charges and Fields & Electrostatic
potential and capacitance - 15 MARKS, Current Electricity - 8 MARKS,
Moving Charges and Magnetism & Magnetism and Matter - 15 MARKS,
EMI & AC - 15 MARKS, EM Waves- 5 MARKS,
Ray Optics (upto Optical instruments)- 12 MARKS

NOVEMBER	**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.
DECEMBER	**FIRST MODEL EXAM (ALL CHAPTERS)**		
JANUARY	**SECOND MODEL EXAMINATION (ALL CHAPTERS)**		

NAME OF THE SCHOOL	NAME OF THE TEACHER	SIGNATURE
BVM ELAMAKKARA	**JAYASREE L**	
BVV THRIKKAKARA	**LEENA P P**	
BNV VELLOOR	**BINDU VISWANATH**	
BVM GIRINAGAR	**SWAPNA PILLAI**	
BAV KAKKANAD	**MANJINI P**	
BVV EROOR	**KALA S PILLAI**	
BMV , TRIPUNITHURA	**ASHA S**	

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

CLASS	XII		
SUBJECT	ACCOUNTANCY		
MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH-APRIL	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).
JUNE	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.
UNIT TEST 1 - 25 MARKS			

JUNE	**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..
JULY	**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.

JULY	**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.
	UNIT TEST I1 - 25 MARKS		
AUGUST	**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.

AUGUST	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
SEPTEMBER	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.

SEPTEMBER	**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.
OCTOBER	**FINANCIAL STATEMENTS OF A COMPANY**	10.1 Meaning of Financial Statements 10.2 Nature of Financial Statements 10.3 Objectives of Financial Statements 10.4 Types of Financial Statements 10.5 Uses and Importance of Financial Statements 10.6 Limitations of Financial Statements	Meaning, Nature, Uses and importance of financial Statements. Statement of Profit and Loss and Balance Sheet in prescribed form with major headings and sub headings (as per Schedule III to the Companies Act, 2013)

OCTOBER	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
OCTOBER	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:

TERM END EVALUATION - 80 MARKS

NOVEMBER	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)
NOVEMBER	**PROJECT WORK**	**ONE SPECIFIC PROJECT**	One specific project based on financial statement analysis of a company covering any two aspects from the following: 1. Comparative and common size financial statements 2. Accounting Ratios 3. Segment Reports 4. Cash Flow Statements
DECEMBER	**FIRST MODEL EXAMINATION**		
JANUARY	**SECOND MODEL EXAMINATION**		
JANUARY	**PROJECT- PRACTICAL EXAMINATION**		

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
YEAR PLAN - 2024-'25
STD: XII - SUBJECT: ECONOMICS (030)

	PART A–MACROECONOMICS
April/May	**Unit 2: Money &Banking**
June/ July	**Unit 1-National Income and related aggregates**
August	**Unit 4: Government budget and the economy**
September	**Unit 5: Balance of Payments & Foreign Exchange**
October	**Unit 3: Determination of income and employment**

	PART-B- INDIAN ECONOMIC DEVELOPMENT
March/April	**Unit 1: Development Experience (1947-90)** **Indian economy on the eve of Independence** **Indian economy 1950-90**
July	**Unit 2: Economic Reforms since 1991 (LPG)** **Unit 3: Current challenges** **5: HCF**
August	**Unit 3: Current challenges** **6: Rural development** **7: Employment**
September	**Unit 3: Current challenges** **9: Environment and Sustainable Development**
November	**Unit 4: Comparative Development Experiences of India and its neighbours**

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

YEAR PLAN MATHEMATICS(041) CLASS XII 2024-2025

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.

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).

AUGUST	7.INTEGRALS (Definite integrals not included for term end exam)	Introduction Integration as an Inverse Process of Differentiation Methods of Integration Integrals of Some Particular Functions Integration by Partial Fractions Integration by Parts Definite Integral Fundamental Theorem of Calculus Evaluation of Definite Integrals by Substitution Some Properties of Definite Integrals	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 following types and problems based on them. $\int \frac{dx}{x^2 \pm a^2}, \int \frac{dx}{\sqrt{x^{2\pm}a2}} \quad \int \frac{dx}{\sqrt{a^{2-}-x2}} \qquad \int \frac{dx}{ax^2 + bx + c},$ $\int \frac{dx}{\sqrt{ax^2 + bx + c}} \quad \int \frac{px+q}{ax^2 + bx + c} \int \frac{px+q}{\sqrt{ax^{2+}bx+c}}$ $\int \sqrt{a^2 \pm x^2}\, dx, \int \sqrt{x^2 - a^2} \ , \int \sqrt{ax2 \ + \ bx \ + \ c}$ Fundamental Theorem of Calculus (without proof). Basic properties of definite integrals and evaluation of definite integrals.
SEPTEMBER	8.APPLICATION OF INTEGRATION(Not for the Term end evaluation)	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 the Term end evaluation)	Introduction Basic Concepts General and Particular Solutions of a Differential Equation	Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions

		Methods of Solving First Order, First Degree Differential Equations	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
		TERM END EVALUATION[Chapters 1,2,3,4,5,6,12,7(sections 7.1,7.2,7.3,7.4,7.5,7.6)](18/10/24 - 30/10/24)	
OCTOBER	10.VECTOR ALGEBRA	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.
OCTOBER	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.
NOVEMBER	13.PROBABILITY	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.

DECEMBER	

BVM ELAMAKKARA: BINDHU VISHAL, LOGIN RAJAN

BVM EROOR: MINI S NAIR, RENUKA GOPINATH

BVM GIRINAGAR: BEENA V NAIR,ZEENA MANUEL

BAV KAKKANAD: ANURAJ N , VARSHA R

BMV THIRUVANKULAM: MINU K JOY, REKHA R NAICK

BVV THRIKKAKARA: SINDHU AYYAPPAN

BNV VELLOOR: ABHILASH G NAIR, LALITHA K

BHARATIYA VIDYA BHAVAN, KOCHI

YEAR PLAN FOR THE ACADEMIC YEAR 2024-'25
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 Hofffactor . **Haloalkanes and halo arenes** - Nomenclature, nature of C–X bond, physical properties.	**SOLUTIONS**- Concentration terma and units , Henry's and Roults law, Ideal and non- ideal solution , colligative properties , osmosis and reverse osmosis , abnormal molar mass and vant Hoff's factor. **Haloalkanes and halo arenes** - IUPAC nomenclature, preparation, properties , reaction mechanisms of haloalkanes and haloarenes
JUNE	6.HALOALKANES AND HALOARENES 7.ALCOHOLS,PHENOLS AND ETHERS	**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 , tetrachloromethane , iodoform , freons , DDT. **Alcohlols , 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	**Haloalkanes and halo arenes**-Application of haloalkanes and haloarenes **Alcohols,Phenols and Ethers**- IUPAC nomenclature, preparation, properties , reaction mechanisms of Alcohols, phenols and Ethers

FIRST UNIT - TEST (10/6/2024-15/6/2024) **PORTIONS - SOLUTIONS (18) - Numericals 7 marks.** **HALOALKANES AND HALOARENES- Including physical properties (7)**
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. Carboxylic acid-Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses	IUPAC nomenclature of aldehydes , ketones and carboxylic acids , structure of carboxyl groups, preparation of aldehydes and ketones,physical and chemical characterictics of aldehydesa nd ketones , preparation of carboxylic acids , physical and chemical characteristics of carboxylic acids. Application of aldehydes , ketones and acids.
SECOND UNIT - TEST(31/07/2024 - 7/8/2024) **PORTIONS-6.HALO ALKANES & HALOARENES - from chemical properties.(8)7. ALCOHOLS , PHENOLS AND ETHERS (12)** **8.ALDEHYDES , KETONES AND CARBOXYLIC ACIDS - upto physical properties(physical properties not included)(5)**
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, Relationbetween Gibbs energy change and EMF of a cell, fuel cells, corrosion.	Electrochemical cell, Nernst equation, Electrolytic conductivity and molar conductivity, Kohlarauschs law , electrolysis , fuel cells and batteries, corrosion

SEPTEMBER	3. CHEMICAL KINETICS 10. BIOMOLECULES	**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. **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	**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. **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.
OCTOBER	4. d and f BLOCK ELEMENTS 5. COORDINATION COMPOUNDS	**"d" and "f" Block Elements**:General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals - metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$. **Co-ordination compounds** :Coordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT	**"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 properties , complex copounds, prreparation of metal oxides, properties of f-block elements **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 ,

TERM END EXAMINATION (18/10/24 - 30/10/24)			
PORTIONS - SOLUTIONS (8), HALOALKANES AND HALOARENES (10),ALCOHOLS , PHENOLS AND ETHERS (10) ,ALDEHYDES KETONES AND CARBOXYLIC ACIDS (15),ELECTROCHEMISTRY (15) , CHEMICAL KINETICS (12)			
NOVEMBER	5. COORDINATION COMPOUNDS 9. AMINES	**Coordination compounds** :CFT; structure and stereoisomerism, importance of coordination compounds (in qualitative inclusion, extraction of metals and biological system. **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	**Coordination compounds**: Crystal field theory, synergic bond, applications of complex copounds. **Amines** : Structure of amines , classification, IUPAC nomenclature , preparation , physical and chemical properties , diazotisation , preparation of diazinium salts, imporatance of diazonium salts

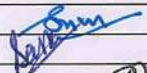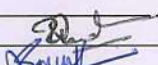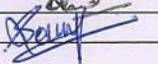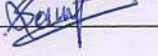# BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
STD XII – ZOOLOGY – YEAR PLAN
2024-2025

MONTH	TOPIC	SUB TOPICS	CONCEPTS
MARCH - APRIL	CHAPTER 2 HUMAN REPRODUCTION	2.1 Male reproductive system 2.2 Female reproductive system 2.3 Gametogenesis	Structure and functions of male reproductive organs Structure and functions of female reproductive organs Spermatogenesis and oogenesis,
JUNE	HUMAN REPRODUCTION contd..	2.4 Menstrual cycle 2.5 Fertilization and implantation 2.6 Pregnancy and embryonic development 2.7 Parturition and lactation	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
FIRST UNIT TEST (JUNE 10-15) CHAPTER 2. HUMAN REPRODUCTION 2.1 TO 2.5 (EXCLUDING 2.5 FERTILIZATION AND IMPLANTATION)			
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

JULY	CHAPTER 6 EVOLUTION	6.1 Origin of life 6.2 Evolution 0f 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

SECOND UNIT TEST (JULY 31 - AUGUST 7) CHAPTER 2 HUMAN REPRODUCTION (FROM 2.5 TILL THE END OF THE CHAPTER) AND CHAPTER 3 REPRODUCTIVE HEALTH

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

STD XII – BOTANY – YEAR PLAN(2024-25)

2024-2025

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 10th TO 15 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	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
AUGUST	5.Molecular basis of inheritance(Contd.)	5.9 Human Genome Project,Rice Genome Procct 5.10 DNA Fingerprinting	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
SECOND UNIT TEST [JULY 31st TO AUGUST 7th] **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)**			

SEPTEMBER	1-Sexual Reproduction in Flowering Plants	1.1 Flower – A Fascinating Organ of Angiosperms 1.2 Pre-fertilisation : Structures and Events 1.3 Double Fertilisation 1.4 Post-fertilisation: Structures and Events 1.5 Apomixis and Polyembryony	Stamen, Microsporangium, and Pollen Grain The Pistil, Megasporangium, and Embryo Sac Pollination Double Fertilization Post-Fertilization: Structures and Events Apomixis and polyembryony
OCTOBER	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
OCTOBER	10-Biotechnology and its Applications	10.1 Biotechnological Applications in Agriculture 10.2 Biotechnological Applications in Medicine	Green Revolution,tissue culture,somatic hybridisationPest Resistant Plants Genetically Engineered Insulin Gene Therapy Molecular Diagnosis
TERM END EVALUATION [OCTOBER 18th TO OCTOBER 30th] **CHAPTERS 1, 4, 5 and 9** **1-Sexual Reproduction in Flowering Plants** **4.Principles of Inheritance and variation** **5.Molecular basis of inheritance** **9-Biotechnology Principles and Processes (9.1 TO 9.2.2) - 9.2.2 onwards NOT included**			
NOVEMBER	10-Biotechnology and its Applications (Contd.)	10.3 Transgenic Animals 10.4 Ethical Issues	Transgenic Animals Ethical Issues Regarding Transgenic Animals
FIRST MODEL EXAMINATION [DECEMBER 2nd TO DECEMBER 13th] **CHAPTERS 1,4,5,9 and 10**			
SECOND MODEL EXAMINATION [JANUARY 3rd TO 15 th] **CHAPTERS 1,4,5,9 and 10**			

NAME OF THE SCHOOL	NAME OF THE TEACHER	SIGNATURE
BVM, ELAMAKKARA	SUMI U MENON	
BVM, GIRINAGAR	SAVITRI VISWAKUMAR	
BVM, EROOR	RADHIKA R	
BAV, KAKKANAD	SOUMYA K S	

YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

ENGLISH CORE STD XII

MONTH	TOPIC/SUBTOPIC		WRITING
	FLAMINGO	**VISTAS**	
MARCH/ APRIL	1.THE LAST LESSON 2. LOST SPRING P1. MY MOTHER AT SIXTY SIX	1.THE THIRD LEVEL 2. THE TIGER KING (NOT TO BE INCLUDED FOR UT 1)	
JUNE (21 DAYS)	P2. KEEPING QUIET (NOT TO BE INCLUDED FOR UT1) 3. DEEP WATER (NOT TO BE INCLUDED FOR UT1)	3. JOURNEY TO THE END OF THE EARTH (NOT TO BE INCLUDED FOR UT 1)	1. NOTICE
UNIT TEST 1 (JUNE 10 -15)			
JULY (24 DAYS)	4. THE RATTRAP (NOT TO BE INCLUDED FOR UT 2) P3. A THING OF BEAUTY (NOT TO BE INCLUDED FOR UT 2)		2. LETTER TO THE EDITOR
UNIT TEST 2 (JULY 31 - AUG 7)			
AUGUST (20 DAYS)	P4. A ROADSIDE STAND P5. AUNT JENNIFER'S TIGERS	4. THE ENEMY	3. REPORT WRITING (NEWSPAPER AND MAGAZINE)
SEPTEMBER (16 DAYS)	5. INDIGO 6. POETS AND PANCAKES (NOT TO BE INCLUDED FOR TERM END 1)		4.INVITATION - FORMAL & INFORMAL REPLY TO INVITATION

STD : XII

OCTOBER (22 DAYS)	7. THE INTERVIEW (NOT TO BE INCLUDED FOR TERM END 1)	5.ON THE FACE OF IT (NOT TO BE INCLUDED FOR TERM END 1)	5. ARTICLE 6. JOB APPLICATION LETTER
TERM END EVALUATION 1 (OCT 18 - 30)			
NOVEMBER (24 DAYS)	8. GOING PLACES	6. MEMORIES OF CHILDHOOD	
FIRST MODEL EXAMINATION (2 DEC -13 DEC) **SECOND MODEL EXAMINATION (3 JAN -15 JAN)** **BOARD ASL – 20 MARKS (TO BE DONE AS STIPULATED BY THE CBSE)**			

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
INFORMATICS PRACTICES(065)
YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

CLASS: XII

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
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	**Data Frames:** Operations on rows and columns: add, select, delete, rename; Head and Tail functions;	Operations on dataframes and built in functions, concept of importing and exporting data using csv

UNIT TEST I -10/06/2024 TO 15/06/2024
Portions: Introduction to Python libraries- Pandas, Matplotlib.
Data structures in Pandas - Series and Data Frames Creation - from dictionary of Series
MARKING SCHEME:
OBJECTIVE TYPE QUESTIONS [MCQs - 5 marks(20%)]
COMPETENCY BASED QUESTIONS
Assertion Reasoning - 1 Mark (4%)
Find the output, Find the errors and operations based on Series - 10 Marks (40%)
Series and Data Frame creation - 5 Marks (20%)
CONSTUCTED RESPONSE QUESTIONS [Short answer questions - 4 marks (16%)]

JULY	Unit 1: Data Handling using Pandas –I	**Data Frames:** creation - from Text/CSV files; Indexing using Labels, Boolean Indexing; Importing/Exporting Data between CSV files and Data Frames. iteration; Data Frame Creation using Text/CSV files	Dataframes indexing ,concept of importing and exporting data using csv
	UNIT TEST II -31/07/2024 TO 07/08/2024 **PORTIONS :Data Frames: creation - list of dictionaries, Text/CSV files ,display; iteration; Operations ,Indexing Importing/Exporting Data between CSV files and Data Frames.** **MARKING SCHEME:** **OBJECTIVE TYPE QUESTIONS [MCQs - 5 marks(20%)]** **COMPETENCY BASED QUESTIONS** **Assertion Reasoning - 1 Mark (4%)** **Find the output, Find the errors and operations based on DataFrame - 10 Marks (40%)** **Data Frame creation - 3 Marks (12%)** **CONSTUCTED RESPONSE QUESTIONS [Short answer questions - 6 marks (24%)]**		
AUGUST	**Unit 1: Data Visualization** **Unit 4: Societal Impacts**	**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. **Societal Impacts** Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright	Visualizing data using matplotlib library,Societal Impacts-Digital footprint,IPR

SEPTEMBER	**Unit 4: Societal Impacts** **Unit 2: Database Query using SQL**	**Societal Impacts** 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 **Database Query using SQL** Revision of database concepts and SQL commands covered in class XI **Math functions**: POWER (), ROUND (), MOD (). **Date Function**s: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME ().	Societal Impacts- cybercrime and cyber laws, E-waste: hazards and management. Data Base Concepts and SQL single row functions
OCTOBER	**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**	Data Base Concepts and SQL Aggregate functions

TERM END EVALUATION -18/10/2024 TO 30/10/2024
PORTIONS :Unit 1: Data Handling using Pandas -I and Data Visualization ,Unit 4: Societal Impacts, Unit 2: Database Query using SQL
Revision of database concepts and SQL commands covered in class XI,SQL SINGLE ROW FUNCTIONS

MARKING SCHEME:
Unit I Data Handling using Pandas -I and Data Visualization- 35 Marks,
Unit 4: Societal Impacts - 10 Marks
Unit 2: Database Query using SQL-25 Marks
OBJECTIVE TYPE QUESTIONS [MCQs - 16 marks (22%)]
COMPETENCY BASED QUESTIONS
Assertion Reasoning - 2 Mark (2 %)
Very Short Answer type questions carrying 02 marks each - 14 marks (20 %)
Short Answer type questions carrying 03 marks - 18 Marks (25.7%)
Questions carrying 05 marks each -20 Marks (28.5%)

NOVEMBER	**Unit 3: Introduction to Computer Networks**	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 dynamic web page, web server and hosting of a website. Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.	Network and types of Network,Network Devices,Network Topology, Internet and web fundementals
DECEMBER		**FIRST MODEL EXAMINATION -02/12/2024 TO 13/12/2024**	

JANUARY		**SECOND MODEL EXAMINATION -03/01/2025 TO 15/01/2025**	
S.No	**NAME OF**	**NAME OF TEACHERS**	**SIGNATURE**
1	BVM, ELAMAKKARA		
2	BVM, EROOR		
3	BVV, THRIKKAKARA		
4	BVM, GIRINAGAR		
5	BAV, KAKKANAD		
6	BMV, TRIPUNITHURA		
7	BMV, VELLOOR		

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

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
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)			
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	**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
UNIT TEST II (25 MARKS)			
JULY/AUGUST	**Organizing**	Introduction	Organising: Concept and importance
		Steps in the process of Organising	Organising Process
		Organisation Structure	Structure of organisation- functional and divisional concept.
			Formal and informal organization – concept
		Delegation	Delegation: concept, elements and importance

		Decentralisation	Decentralization: concept and importance
AUGUST	**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	Meaning, process, sources-internal and external (merits and demerits)
		Selection	Meaning, 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
AUGUST/ 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
		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?
SEPTEMBER	**Controlling**	Controlling	Controlling - Concept and importance
		Relationship between Planning and Controlling	Relationship between planning and controlling

		Controlling Process	Steps in process of control
TERM END EVALUATION (80 MARKS)			
OCTOBER	**Financial Markets**	Introduction	Financial Markets: Concept
		Money Market	Money Market: Concept
		Capital Market	Capital market and its types (primary and secondary), Difference between (primary and secondary) & (Capital market and money market)
		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
NOVEMBER	**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 under 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)
NOVEMBER	**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
NOVEMBER	**PROJECT**	Students are supposed to select one unit out of four and are required to make only ONE project from the selected unit. 1. Elements of Business Environment 2. Principles of Management 3. Stock Exchange 4. Marketing	
DECEMBER	**FIRST MODEL EXAMINATION**		
JANUARY	**SECOND MODEL EXAMINATION**		
JANUARY	**PRACTICAL EXAMINATION**		

SEEN	SIGNED
BVM, ELAMAKKARA –SHILAJA T R	
BVV, THRIKKAKARA –VIJILAKSHMI B	
BVM, EROOR – RENUKA BAIJU, ANITHA V	
BAV, KAKKANAD – SUDHA VARMA	
BVM, GIRINAGAR – ASHMI M R	
BMV, THIRUVAMKULAM – NIRMALA V K	
BNV, VELLOOR – MANJU BALAN	