BHARATIYA VIDYA BHAVAN, KOCHI

STD XI ENGLISH - YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

MONTH	TOPIC / SUB-TOPIC		GRAMMAR	WRITING
	HORNBILL	SNAPSHOTS		
JUNE (21 days)	L1. The Portrait of a Lady P1. A Photograph	L1. The Summer of the Beautiful White Horse	G1 Tenses	W1 Poster
JULY (24 days)	P2. The Laburnum Top L2. We're Not Afraid to Die.... if We Can All Be Together (Not included for Unit Test 1)		G2. Sentence Reordering	
UNIT TEST I (31/07/2024 - 07/08/2024)				
AUGUST (20 days)	L3. Discovering Tut: the Saga Continues			R1. Note Making W2. Speech
SEPTEMBER (16 days)	P3. The Voice of the Rain	L2. The Address		W3. Advertisements (Classifieds) i. Situation Wanted/ vacant ii. For sale/ To Let
TERM END EVALUATION (18/10/2024 - 30/10/2024)				
OCTOBER (22 days)	P4. Childhood	L3. Mother's Day	G3. IF Clauses	
NOVEMBER (24 days)		L4. Birth	G2. Sentence Reordering	W3. Advertisements (Classifieds) iii. Automobile iv. Missing v. Lost and Found vi. Educational Institution vii. Travel and Tours
DECEMBER (17 days)	L4. The Adventure P5. Father to Son			W4. Debate
UNIT TEST II (03/01/2025 - 10/01/2025)				
JANUARY (24 days)	L5. Silk Road	L5. The Tale of Melon City	G4. Transformation of Sentences (Active / passive)	
FEBRUARY (22 days)	Revision			
FINAL EXAMINATION (17/02/2025 - 28/02/2025)				

NAME OF THE TEACHER	NAME OF THE SCHOOL	SIGNATURE
MINI M SONIA P M	Bhavan's Vidya Mandir, Elamakkara	
DEVI P S	Bhavan's Vidya Mandir, Girinagar	
SMITHA LAKSHMI R	Bhavan's Newsprint Vidyalaya, Velloor	
PUSHPA K	Bhavan's Adarsha Vidyalaya, Kakkanad	
HARITHA VIKRAMAN	Bhavan's Munshi Vidyashram, Tripunithura	

Std : XI

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
YEAR PLAN FOR THE ACADEMIC YEAR 2024-25
CLASS XI - ACCOUNTANCY
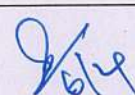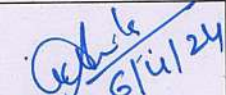
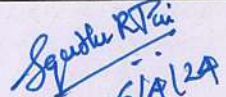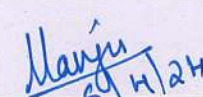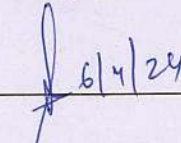| MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	Introduction to Accounting	1.1 Meaning of Accounting	Accounting- concept, meaning, Advantages and limitations, Role of accounting in Business.
		1.2 Accounting as a Source of Information	As a source of information, Types of Accounting information and their needs, Users of accounting information. Qualitative Characteristics of Accounting Information
		1.3 Objectives of Accounting	Maintenance of Records of Business Transaction Calculation of Profit and Loss Depiction of Financial Position Providing Accounting Information to its User
		1.4 Basic Terms in Accounting	Entity, Business Transaction, Capital, Drawings\Liabilities (Non-Current and Current). Assets (Non-Current, Current); Expenditure (Capital and Revenue), Expense, Revenue, Income, Profit, Gain, Loss, Purchase, Sales, Goods, Stock, Debtor, Creditor, Voucher, Discount (Trade discount and Cash Discount)
JUNE -JULY	Theory Base of Accounting	2.1 Generally Accepted Accounting Principles	Fundamental accounting assumptions': Concept
		2.2 Basic Accounting Concepts	Business Entity, Money Measurement, Going Concern, Accounting Period, Cost Concept, Dual Aspect, Revenue Recognition, Matching, Full Disclosure. Consistency, Conservatism, Materiality and Objectivity

		2.3 Systems of Accounting	Meaning
		2.4 Basis of Accounting	Cash basis and Accrual Basis
		2.5 Accounting Standards	Applicability of Accounting Standards (AS) and Indian Accounting Standards (IndAS)
		2.6 Goods and Services Tax (GST)	Characteristics and Advantages.
JULY	**Recording of Business Transactions**	3.1 Voucher and Transactions	Source documents and Vouchers, Preparation of Vouchers
		3.2 Accounting Equation Approach	Meaning and Analysis.
UNIT TEST I (31 July – 7 August)			
AUGUST	**Recording of Business Transactions**	3.3 Rules of Debit and Credit.	Traditional and Modern Approach
		3.4 Books of Original Entry	Journal with GST
SEPTEMBER	**Recording of Business Transactions**	4.1 Cash Book	Simple cash book, cash book with bank column and petty cashbook
		4.2 Special Purpose books	Purchases book, sales book, Purchases return book, sales return book and Journal proper
			Note: Including trade discount, freight and cartage expenses for simple GST calculation.
OCTOBER	**Recording of Business Transactions**	4.3 Ledger	Format, posting from journal and subsidiary books, Balancing of accounts
OCTOBER-NOVEMBER	**Recording of Business Transactions**	5.1 Trial balance	Trial balance: objectives, meaning and preparation (Scope: Trial balance with balance method only)
TERM END EVALUATION (18 October – 30 October)			

NOVEMBER	Recording of Business Transactions	5.2 Rectification of Errors	Errors: classification-errors of omission, commission, principles, and compensating; their effect on Trial Balance. Detection and rectification of errors Preparation of suspense account.
		6.1 Bank reconciliation Statement	Need and preparation, Bank Reconciliation Statement
DECEMBER	Recording of Business Transactions	7.1 Depreciation	Depreciation: Meaning, Features, Need, Causes, factors · Other similar terms: Depletion and Amortisation · Methods of Depreciation: i. Straight Line Method (SLM) ii. Written Down Value Method (WDV) Note: Excluding change of method · Difference between SLM and WDV; Advantages of SLM and WDV · Method of recoding depreciation i. Charging to asset account ii. Creating provision for depreciation/accumulated depreciation account, Treatment of disposal of asset
		7.2 Provisions and Reserves	Meaning, Difference Between Provisions and Reserves. Types of Reserves: i. Revenue reserve ii. Capital reserve iii. General reserve iv. Specific reserve v. Secret Reserve Difference between capital and revenue reserve
UNIT TEST II (3 January – 10 January)			

JANUARY - FEBUARY	**Financial Statements**	8.1 Preparation of financial statements without adjustments	Meaning, objectives and importance; Revenue and Capital Receipts; Revenue and Capital Expenditure; Deferred Revenue expenditure. Opening journal entry. Trading and Profit and Loss Account: Gross Profit, Operating profit and Net profit. Preparation. Balance Sheet: need, grouping and marshalling of assets and liabilities. Preparation.
		8.2 Preparation of financial statements with adjustments	Adjustments in preparation of financial statements with respect to closing stock, outstanding expenses, prepaid expenses, accrued income, income received in advance, depreciation, bad debts, provision for doubtful debts, provision for discount on debtors, Abnormal loss, goods taken for personal use/staff welfare, interest on capital and manager's commission. Preparation of Trading and Profit and Loss account and Balance Sheet of a sole proprietorship with adjustments.
FEBUARY	**Accounts of Incomplete Records**	9.1 Incomplete Records	Features, reasons and limitations. Ascertainment of Profit/Loss by Statement of Affairs method. (excluding conversion method)
REVISION			
FINAL EXAMINATION (17 February - 28 February)			

SEEN AND SIGNED:

NAME OF THE SCHOOL	NAME OF THE TEACHER	SIGNATURE
BVM, ELAMAKKARA	SHYLAJA RAJESH, AKHILA LAL	
BVM, EROOR	SANGEETHA PAI R, RENUKA	
BVM, GIRINAGAR	ASHMI M R	
BVV, THRIKAKKARA	MINI MENON	
BMV, THIRUVAMKULAM	NIRMALA V K	
BNV, VELLOOR	MANJU BALAN	
BAV, KAKKANAD	SUDHA VARMA	

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
STD XI – HISTORY
YEAR PLAN FOR THE ACADEMIC YEAR 2024-2025

MONTH	TOPIC	SUB TOPIC	CONCEPTS
JUNE	**1. Writing and City Life**	* Mesopotamia and its geography * Significance of urbanism * Development of writing * Urbanization in southern Mesopotamia: temples and kings * Life in the city * The legacy of writing	* Sources * Origin of the term Mesopotamia * Sources * Society and geography * Occupation of the people * Movement of goods into cities * Uses of writing and literacy * Urban society * Life in Ur and Mari * Contributions of Mesopotamia
JULY	**2. An Empire across Three Continents**	* The early empire * The third century crisis * Gender, literacy, culture * Social hierarchies * Late antiquity	* Sources * Roman and Iranian Empire * Pillars of Roman Empire * Succession to the throne * Administration of the empire – urbanization * Structure of family * Economic activities * Monetary system and bueaucracy
UNIT TEST I JULY 31 -AUGUST 7 (25 MARKS)			
AUGUST	**3. Nomadic Empires**	* Introduction,social and political background * The career of Genghis Khan *The Mongols after Genghis Khan * Social political and military organisation *Conclusion:situating Genghis Khan and the Mongols in world history	* Sources * Rise of Mongol tribe * Life and achievements of Genghis Khan * The Mongols after Genghis Khan * Social, Political and Military Organisation * Development in Trade & communication in Mongolia * The legal code of law – Yasa
SEPTEMBER	**4. The Three Orders**	* Introduction to feudalism * Second order, Knights * First order, First order * Factors affecting social and economic relations * New agricultural technology *A fourth order * Crisis of fourteenth century	* Sources to know the European society * Meaning and features of feudalism * The Three Orders * Technological changes in Agriculture * New towns and townspeople * Black death Bubonic plague * Political changes between 15th and 16th centuries
TERM END EVALUATION OCTOBER 18-30 (80 MARKS)			

OCTOBER	5. Changing Cultural Traditions	* Revival of Italian cities * Universities and humanism * Artists and realism, Architecture * First printed books *Copernican Revolution	* Sources * Renaissance * Changes occured in Europe * Renaissance from Italy * Revival of Italian cities * Humanism and its features * Contributions of Arabs * Artist and Realism * Print technology * Condition of women * Protestant Reformation * Scientific Revolution
NOVEMBER	6. Displacing Indigenous People	* European Imperialism * The native peoples * Mutual perceptions * North America * Native people lose their land* Constitution rights * Australia	* Sources * Geographical location of North America * Encounter of Europeans * Slavery system * Gold rush and the growth of industries * The winds of change

UNIT TEST II JANUARY 3 -10 (25 MARKS)

DECEMBER/ JANUARY	7. Paths to Modernization	* Introduction, Japan, political System * Modernising the economy * Industrial workers * After Defeat reemerging as global power * China, Rise of communist party in China * Establishing new democracy * Taiwan and Korea	* Japan - political system * Meiji Restoration * China * Establishing republic * The story of Korea - beginning of modernization * Two roads to modernisation

FINAL EXAMINATION FEBRUARY 17-28 (80 MARKS)

BHAVAN'S MUNSHI VIDYASHRAM, THIRUVAMKULAM – HAMILY K K

BHAVAN'S VIDYA MANDIR, GIRINAGAR – SANDHYA MENON

BHAVAN'S VIDYA MANDIR, ELAMAKKARA – LIBY P PRASAD

BHAVAN'S ADARSHA VIDYALAYA, KAKKANAD – JEENA MATHEW

BHARATIYA VIDYA BHAVAN, KOCHI
YEAR PLAN FOR THE ACADEMIC YEAR 2024-25
Subject:PSYCHOLOGY (037)
Class: XI

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	**Chapter 1** **What is Psychology?**	What is psychology? Understanding mind and behaviour Popular notion about the discipline of psychology. Evolution of psychology development of psychology in India Branches of psychology Psychology and other disciplines Psychology in every day life	Psychology as a discipline. Psychology as a natural science. Psychology as a social science.
JULY	**Chapter 2** **Methods of Enquiry in Psychology**	Goals of psychological enquiry, Nature of psychological data, some important methods in psychology,Analysis of Data, Limitations of Psychological Enquiry, Ethical Issues	Steps in conducting psychological research, Observational Method Experimental Method Correlational Research Survey Research Psychological Testing Case Study Quantitative Method , Qualitative Method

UNIT TEST- 1- 31- 07.08.2024 (25 marks)

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
AUGUST	**Chapter 3** **Human Development**	Meaning of Development Factors Influencing Development Context of Development Stages of human development	Life-Span Perspective on Development,Prenatal Stage Infancy,Childhood,Challenges of Adolescence,Adulthood and Old Age

SEPTEMBER	**Chapter 4** **Sensory, Attentional and** **Perceptual Processes**	Knowing the world,Nature and varieties of Stimulus,Sense Modalities,Attentional Processes,Perceptual Processes,The Perceiver,Principles of Perceptual Organisation,Perceptual Constancies, Illusions,Socio-Cultural Influences on Perception	Functional limitation of sense organs, Selective Attention, Sustained Attention,Processing Approaches in Perception, Monocular Cues and Binocular Cues
OCTOBER - REVISION **TERM END EVALUATION- 18.10.2024 (70 marks)**		
NOVEMBER	**Chapter 5** **Learning**	Nature of Learning, Paradigms of Learning, Classical Conditioning, Operant/Instrumental Conditioning, Observational Learning, Cognitive Learning, Verbal Learning,Skill Learning, Factors Facilitating Learning,Learning Disabilities	Determinants of Classical Conditioning, Determinants of Operant Conditioning Key Learning Processes
DECEMBER	**Chapter 6 Human Memory**	Information Processing Approach Memory Systems ,Levels of Processing, Types of Long-term Memory, Nature and Causes of Forgetting, Enhancing Memory	The Stage Model Memory Systems : Sensory, Short-term and Longterm Memories, Declarative and Procedural; Episodic and Semantic, Forgetting due to Trace Decay, Interference and Retrieval Failure, Mnemonics using Images and Organisation
DEC/JANUARY	**Chapter 7 - Thinking**	Nature of Thinking, The Processes of Thinking, Problem Solving, Reasoning, Decision-making, Nature and Process of Creative Thinking, Thought and Language, Development of Language and Language Use	Building Blocks of Thought,Nature of Creative Thinking Process of Creative Thinking
UNIT TEST-2 - 03.01.2025 (25 marks)		

		Nature of Motivation, Types of Motives Maslow's Hierarchy of Needs, Nature of Emotions,Expression of Emotions, Managing Negative Emotions, Enhancing Positive Emotions	Biological Motives Psychosocial Motives, Culture and Emotional Expression Culture and Emotional Labelling
JAN/FEBRUARY	**Chapter 8 - Motivation and Emotion**		
FINAL EXAMINATION- 17.02.2025 (70+30=100 marks)			

SEEN AND SIGNED BY:

BAV, KAKKANAD	**R SRUTHI**	
BVM, GIRINAGAR	**KRISHNA PRIYA S PRABHU**	
BMV, TRIPUNITHURA	**GEETHA S PRABHU**	

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

CLASS: XI			
MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	Unit: 2 Introduction to Python	Basics of Python programming, execution modes: - interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants, variables, types of operator, precedence of operators, data types, mutable and immutable data types, statements, expression evaluation. comments, input and output statements, data type conversion, debugging.	Python IDE, Python Tokens, Data types, Expressions, Statements,Input and Output, Debugging
JULY	Unit: 2 Introduction to Python	Control Statements: if-else, if-elif-else, while loop, for loop	Concept of conditional statement Concept of Iteration
AUGUST	Unit: 2 Introduction to Python	Control Statements: for loop Lists: list operations - creating, initializing, traversing and manipulating lists	Concept of Iteration Concept of List

SEPTEMBER	Unit: 2 Introduction to Python	list methods and built-in functions – len(),list(),append(),insert(), count(),index(),remove(), pop(), reverse(), sort(), min(),max(),sum()	Concept of List
OCTOBER	Unit: 2 Introduction to Python	Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements. Dictionary: dictionary methods and built-in functions – dict(), len(), keys(), values(), items(), update(), del(), clear()	Concepts of Dictionary : Key-value pair Concept of Dictionary methods and built-in functions.
NOVEMBER	Unit 1 Introduction to Computer System	Introduction to computer and computing: evolution of computing devices, components of a computer system and their interconnections, Input/output devices. Computer Memory: Units of memory, types of memory – primary and secondary, data deletion, its recovery and related security concerns. Software: purpose and types – system and application software, generic and specific purpose software.	Concepts of Computer System

DECEMBER	Unit 3: Database concepts and the Structured Query Language	Database Concepts: Introduction to database concepts and its need, Database Management System. Relational data model: Concept of domain, tuple, relation, candidate key, primary key, alternate key, Advantages of using Structured Query Language, Data Definition Language, Data Query Language and Data Manipulation Language Introduction to MySQL, creating a database using MySQL, Data Types Data Definition: CREATE DATABASE, CREATE TABLE, DROP, ALTER	Concept of Database and Structured query language,Data types in MySQL, SQL for data definition
JANUARY	Unit 3: Database concepts and the Structured Query Language	Data Query: INSERT,SELECT, FROM, WHERE with relational operators, BETWEEN, logical operators, IS NULL, IS NOT NULL Data Manipulation: DELETE, UPDATE	Data insertion, Data Updation and Deletion

FEBRUARY	Unit 4: Introduction to the Emerging Trends	Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology.	Artificial Intelligence,Big data and its characteristics,IOT, Cloud Computing and Cloud Services
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 KENDRA
COMPUTER SCIENCE
YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

CLASS: XI

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	Unit II: Computational Thinking and Programming - 1 (Getting Started with Python)	Getting Started with Python	Introduction to problem solving and basics of Python programming Different Types of data
JULY	Unit II: Computational Thinking and Programming - 1 (SEQUENTIAL,CONDITIONAL STATEMENTS)	Sequentail Staement and Conditional staements)	Decision making based on boolean values
UNIT TEST 1 -31/07/2024 (GETTING STARTED WITH PYTHON, SEQUENTIAL,CONDITIONAL STATEMENTS)			
AUGUST	Unit II: Computational Thinking and Programming - 1 (WHILE LOOP)	While Loop	Looping / repetition
SEPTEMBER	Unit II: Computational Thinking and Programming - 1 (FOR LOOP,LISTS)	For loop,List	Looping / repetitionIntroduction to List and List Operations - collection of heterogeneous objects - mutable data type
TERM END EVALUATION -18/10/2024 (GETTING STARTED WITH PYTHON, SEQUENTIAL,CONDITIONAL STATEMENTS,ITERATIVE STATEMENT,LISTS IN PYTHON)			
OCTOBER	Unit II: Computational Thinking and Programming - 1 (TUPLE,DICTIONARY)	Tuple Dictionary	Introduction to tuple and tuple operations - collection of heterogeneous data - immutable data type Introduction to dictionary and dictionary operations - mapping of key-value pair
NOVEMBER	Unit II: Computational Thinking and Programming - 1 (STRINGS)	Strings	String operations

DECEMBER	Unit 1: Computer Systems and Organisation	Boolean Logic, Number System	Components of Computer System, Processor fundamentals, Storage Concept of Boolean logicConcept od Data and Data
UNIT TEST 2 -03/01/2025 (TUPLE,DICTIONARY,STRING,BOOLEAN LOGIC, NUMBER SYSYTEM)			
JANUARY	Unit 2: Computational Thinking and Programming - I Unit 3: Society, Law and Ethics	Python Modules Digital Footprint, Data protection, Malware	Digital Society, Etiquettes in digital society, Data Protection
FEBRUARY	Unit 3: Society, Law and Ethics	Ewaste management	Environment Protection
FINAL EXAMINATTION (17/02/2025)			
MARCH			

S.No	NAME OF SCHOOL	NAME OF TEACHERS	SIGNATURE
1	BVM, ELAMAKKARA	Bindu T C	
2	BVM, EROOR	Anupama Usha	
3	BVV, THRIKKAKARA	Aleyamma Gerge	
4	BVM, GIRINAGAR	Girija Pillai	
5	BAV, KAKKANAD	Seema C	
6	BMV, TRIPUNITHURA	Susmitha S Shenoy	
7	BNV, VELLOOR	Anoop M A	

BHARATIYA VIDYA BHAVAN, KOCHI
STD XI ZOOLOGY YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

MONTH	TOPIC
JUNE	CHAPTER 4 ANIMAL KINGDOM
JULY	CHAPTER 4 ANIMAL KINGDOM CONTD.. CHAPTER 7 STRUCTURAL ORGANISATION IN ANIMALS **UNIT TEST -I (JULY 31st-AUGUST 7th)** **CHAPTER 4 ANIMAL KINGDOM AND CHAPTER 7 STRUCTURAL ORGANIZATION IN ANIMALS**
AUGUST	CHAPTER 8 CELL- THE UNIT OF LIFE
SEPTEMBER	CHAPTER 9 BIOMOLECULES
OCTOBER	CHAPTER 14 BREATHING AND EXCHANGE OF GASES **TERM END EVALUATION 1 (OCT 18th-30th) CHAPTER 4,7 AND 8**
NOVEMBER	CHAPTER15-BODY FLUIDS AND CIRCULATION CHAPTER -16-EXCRETORY PRODUCTS AND THEIR ELIMINATION
DECEMBER	CHAPTER16-EXCRETORY PRODUCTS AND THEIR ELIMINATION CONTINUED.. CHAPTER 17-LOCOMOTION AND MOVEMENT

JANUARY	UNIT TEST II -JANUARY (3rd-10th) (CHAPTER 9 - BIOMOLECULES, CHAPTER- 14 BREATHING AND EXCHANGE OF GASES CHAPTER 18 - NEURAL CONTROL AND COORDINATION CHAPTER-19 CHEMICAL COORDINATION AND INTEGRATION
FEBRUARY	REVISION FINAL EXAMINATION FEB 17th - 28th , FULL PORTIONS

NAME OF THE SCHOOL	NAME OF THE TEACHER AND SIGNATURE	
BVM, ELAMAKKARA	GEETHA SHYAMSUNDER	
BVM, GIRINAGAR	INDU P	Indu
BVM, EROOR	SINI MOL P	
BAV, KAKKANAD	SOUMYA K S	
BVV, THRIKKAKARA	SREEKALA KRISHNADAS	Snekele
BNV, VELLOR	DHANYA K C	
BMV, TRIPUNITHURA	NIVYA MOL	

	BHARATIYA VIDYA BHAVAN, KOCHI KENDRA		
	YEAR PLAN -2024-2025		
	Std :XI PHYSICS		
MONTH	**TOPIC**	**SUB-TOPICS**	**CONCEPTS**
JUNE	**CHAPTER 1-** **UNITS AND MEASUREMENT** **CHAPTER 2-** **MOTION IN A STRAIGHT LINE**	Need for measurement: significant figures. Dimensions of physical quantities Describing motion, Relations for uniformly accelerated motion (graphical treatment).	Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. significant figures, Rounding off(Mathematical Operations using significant figures).Dimensions of physical quantities, dimensional analysis and its applications. Frame of reference, Motion in a straight line, uniform and non-uniform motion, Uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical treatment).
JULY	**MOTION IN A STRAIGHT LINE (CONTD....)** **CHAPTER 3-** **MOTION IN A PLANE** **CHAPTER 4-** **LAWS OF MOTION(UPTO FRICTION)**	Instantaneous velocity Scalar and vector quantities; Vector operations Resolution of vectors Motion in a plane, cases of uniform velocity and uniform acceleration projectile motion uniform circular motion Newtons first law of motion,Newton second law of motion,Newtons third law of motion,conservation of linear momentum ,Equilibrium of concurrent forces	Elementary concepts of differentiation and integration for describing motion, instantaneous velocity. Scalar and vector quantities,position and displacement vectors,general vectors and notations ,equality of vectors,multiplication of vectors by a real number,unit vector,Addition and subtraction of vectors,Resolution of a vector in a plane, rectangular components, Scalar and vector product of vectors, Motion in a plane,cases of uniform velocity and uniform acceleration, Projectile motion,Uniform circular motion. Intuitive concept of force, Inertia, Newton's first law of motion. Momentum and Newton's second law of motion; impulse.Newton's third law of motion. Law of conservation of linear momentum and its applications.Equilibrium of concurrent forces.

<div align="center" style="color:red">

UNIT TEST 1 -
UNITS AND MEASUREMENT(10 Marks),
MOTION IN A STRAIGHT LINE (8 Marks),
MOTION IN A PLANE UPTO PROJECTILE MOTION
PROJECTILE MOTION NOT INCLUDED (7 Marks).

</div>

AUGUST	**LAWS OF MOTION (CONT..)** **CHAPTER 5-WORK ENERGY AND POWER**	Friction Work Energy Collision	Static and kinetic friction,laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion:Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road). Work done by a constant force and a variable force ,kinetic energy, work-energy theorem,power,Notion of potential energy,potential energy of a spring, conservative forces: non-conservative forces, motion in a vertical circle. Elastic and inelastic collisions in one and two dimensions.

SEPTEMBER	**CHAPTER 6-** **SYSTEM OF PARTICLES AND ROTATIONAL MOTION**	Center of mass Moment of a force and angular momentum Equilibrium of rigid bodies Moment of inertia.	Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod. Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).
	CHAPTER 7- **GRAVITATION**	Kepler's laws of planetary motion Universal law of gravitation Gravitational potential energy Escape speed, orbital velocity of a satellite	Kepler's laws of planetary motion universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential Escape speed, orbital velocity of a satellite.
OCTOBER	**CHAPTER 8-** **MECHANICAL PROPERTIES OF SOLIDS**	Elastic behaviour of solids, Modulus of Elasticity Elastic Energy	Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity(qualitative idea only), Poisson's ratio; elastic energy

<p style="color:red; text-align:center">**TERM END EXAMINATION I - UNITS AND MEASUREMENT(9 Marks),**
MOTION IN A STRAIGHT LINE (9 Marks),
MOTION IN A PLANE (12 Marks), LAWS OF MOTION (12 Marks),
WORK ENERGY AND POWER (12Marks) & SYSTEM OF PARTICLES AND ROTATIONAL MOTION (16 Marks)</p>

NOVEMBER	**CHAPTER 9-** **MECHANICAL PROPERTIES OF FLUIDS**	Pressure, Viscosity Surface tension, Capillary rise.	Pressure due to a fluid column; Pascal's law and its applications, (hydraulic lift and hydraulic brakes), Effect of gravity on fluid pressure. Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications. Surface energy and surface tension, Angle of contact, excess of pressure across a curved surface, Application of surface tension, Ideas to drops, bubbles, Capillary rise
	CHAPTER 10 - **THERMAL PROPERTIES OF MATTER**	Heat, heat transfer, blackbody radiation	Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity. Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law.
	CHAPTER 13 - **OSCILLATIONS**	Periodic motion, simple harmonic motion energy in SHM	Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their applications. Simple harmonic motion (S.H.M) and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M. Kinetic and potential energies; simple pendulum derivation of expression for its time period.

DECEMBER	**CHAPTER 14-WAVES**	Wave motion,reflection of waves	Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, Reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats.
JANUARY	**CHAPTER 11-THERMODYNAMICS CHAPTER 12-KINETIC THEORY OF GASES**	Zeroth law ,first law,Second law and thermodynamical process. Equation of state of a perfect gas,Kinetic theory of gases,degrees of freedom	Thermal equilibrium and definition of temperature, zeroth law of thermodynamics Heat, work and internal energy.First law of thermodynamics,Second law of thermodynamics:gaseous state of matter, changeof condition of gaseous state - isothermal, adiabatic,reversible, irreversible, and cyclic processes. Equation of state of a perfect gas,work done in compressinga gas.Kinetic theory of gases assumptions, concept of pressure.Kinetic interpretation of temperature; rms speed of gas molecules; Degrees of freedom,Law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path,Avogadro's number.

FEBRAURY			
	Name of the teacher	**School**	**Signature**
	Indira Devi K K	**BMV,Thripunithura**	
	Gayathri R	**BVM,Girinagar**	
	Sreejith C K	**BVV, Thrikkakara**	
	Lovely K N	**BNV ,Vellore**	
	Kalpana B N	**BAV , Kakkanad**	
	Bindu S Nair	**BVM, Elamakkara**	
	Kala S Pillai	**BVM, Eroor**	

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA				
YEAR PLAN FOR THE ACADEMIC YEAR 2024-2025				
STD XI - MATHEMATICS (041)				
MONTH	UNIT	TOPIC	SUB TOPICS	CONCEPTS
JUNE	1	**SETS**	Introduction Sets and their representations Empty set Finite and Infinite sets Equal Sets Subsets Intervals as subsets of R Universal set Operations on sets Complement of a set	Sets and their representations. Empty set, Finite and Infinite sets, Equal sets, Subsets, Subsets of a set of real numbers especially intervals (with notations), Universal set, Venn diagrams, Union and Intersection of sets, difference of sets, complement of sets, properties of complement.
	2	**RELATIONS AND FUNCTIONS**	Introduction Cartesian product of sets Relations Functions	Ordered pairs , Cartesian product of the sets, Number of elements in the cartesian product of two finite sets, Cartesian product of the set of reals with itself (RxRxR). Definition of relation, pictorial diagrams, domain, co-domain and range of a relation.Function as a special type of relation. Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions with their graphs. Sum, difference, product and quotient of functions.

JULY	4	**COMPLEX NUMBERS & QUADRATIC EQUATIONS**	Introduction Complex numbers Algebra of complex numbers Argand plane	Need for complex numbers, especially $\sqrt{-1}$ to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Argand plane.
MID TERM EVALUATION I **(Chapters - 1, 2 & 4)**				
AUGUST	8	**SEQUENCES AND SERIES**	Introduction Sequences Series Arithmetic Mean Geometric progression Relationship between AM and GM	Sequences & Series, Arithmetic Mean (A.M.) Geometric Progression (GP), general term of a G.P, sum of first n terms of a G.P., infinite G.P. and its sum, geometric mean (G.M.), relation between A.M. and G.M.
SEPTEMBER	3	**TRIGONOMETRIC FUNCTIONS**	Introduction Angles Trigonometric functions Trigonometric functions of sum and diffence of some angles	Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the trigonometric identity $\sin^2 x + \cos^2 x = 1$, for all x. Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing $\sin(x\pm y)$ and $\cos(x\pm y)$ in terms of sin x, sin y, cos x & cos y and their simple applications. Deducing the identities of $\tan(x+y)$, $\tan(x-y)$ $\cot(x+y)$, $\cot(x-y)$, sinx + siny, sinx – siny, cos x+ cos y, cos x – cos y. Identities related to sin2x, cos2x, tan2x, sin3x, cos3x and tan3x.

	13	**STATISTICS (NOT FOR TERM END EVALUATION)**	Introduction Measures of dispersion Range Mean deviation Variance and Standard deviation	Measures of dispersion: Range, mean deviation, variance and standard deviation of ungrouped/grouped data
		TERM END EVALUATION **(Chapters - 1, 2, 4, 8 & 3)**		
OCTOBER	9	**STRAIGHT LINES**	Introduction Slope of a Line	Brief recall of two dimensional geometry from earlier classes, Slope of a line and angle between two lines.
NOVEMBER	9	**STRAIGHT LINES (CONTD)**	Various forms of the equation of a line Distance of a point from a line	Various forms of equations of a line: parallel to axis, point-slope form, slope intercept form, two-point form, intercept form. Distance of a point from a line.
	11	**INTRODUCTION TO THREE DIMENSIONAL GEOMETRY**	Introduction Coordinate axes and coordinate planes in 3-demensional space Coordinates of a point in space Distance between two points Section formula	Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points
DECEMBER	6	**PERMUTATIONS & COMBINATIONS**	Introduction Fundamental principle of counting	Fundamental principle of counting. Factorial n. (n!) Permutations and combinations, derivation of formula for npr and ncr and their connections, simple applications.
	7	**BINOMIAL THEOREM**	Introduction Binomial theorem for positive integral indices	Historical perspective, statement and proof of the binomial theorem for positive integral indices., Pascal's triangle, simple applications.

	10	**CONIC SECTIONS** **(NOT FOR MID TERM EVALUATION II)**	Introduction Sections of a cone Circle Parabola Ellipse	Sections of a cone: circle, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.
		MID TERM EVALUATION II **(Chapters - 13, 9, 11, 6 & 7)**		
JANUARY	12	**LIMITS AND DERIVATIVES**	Introduction Intuitive idea of derivatives Limits Limits of Trigonometric functions Derivatives	Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit. Limits of polynomials and rational functions trigonometric, exponential and logarithmic functions.Definition of derivative, relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.
	5	**LINEAR INEQUALITIES**	Introduction Inequalities Algebraic solutions of linear inequalities in one variable	Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line.
FEBRUARY	14	**PROBABILITY**	Introduction Random experiments Event Axiomatic approach to probability	Events, occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with other theories of earlier classes, probability of an event , probability of 'not' ,'and' and 'or' events.
		FINAL EXAMINATION		

BAV KAKKANAD	VARSHA R, PRIYA S
BVM ELAMAKKARA	BINDHU VISHAL, SMISHA C S
BVM GIRINAGAR	BEENA V NAIR, DINI CHANDRAN
BVV THRIKKAKARA	SINDHU AYYAPPAN, ANUJA R
BVM EROOR	MINI S NAIR, RENUKA GOPINATH
BMV TRIPUNITHURA	REKHA R NAICK, MINU K JOY
BNV VELLOOR	LALITHA K, ABHILASH G NAIR

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	**1. Introduction to Statistics**	What is Economics?Meaning, scope and importance of statistics in Economics	Consumer, Producer, Seller, Employer, employee, Economic activity, Consumption, Production and Distribution, Market, Economics, Statistics, Economic policy, Economic data.
	1. Introduction	Meaning of microeconomics and macroeconomics; positive and normative economics What is an economy? Central problems of an economy: what, how and for whom to produce; concepts of Production Possibility Frontier and Opportunity Cost.	Micro & Macroeconomics, Normative & Positive economics, Economy, Central problems, PPC, Opportunity cost
JULY	**2. Collection of data**	Sources of data - primary and secondary; how basic data is collected, with concepts of Sampling; methods of collecting data; some important sources of secondary data: Census of India and National Sample Survey Organization.	Sources of data, Primary data, Secondary data, Methods of data collection, Questionnaire and preparation, Modes of data collection, Personal interview, Mailing questionnaire, Telephonic interview, Pilot survey, Census, Population & Sample, Random & non-random sampling, Sampling & non-sampling errors, NSO.
	2. Consumer's Equilibrium and Demand	Consumer's equilibrium - meaning of Utility, Marginal Utility, Law of Diminishing Marginal Utility, conditions of consumer's equilibrium using marginal utility analysis	Consumers equilibrium, Utility, MU, DMU
AUGUST	**3. Organization of data**	Meaning and types of variables; Frequency Distribution. frequency array, exclusive and inclusive series.	Raw data, classification of data, Types of classification, Variables & attributes, Continuous & Discrete variables, Frequency distribution, Equal & Unequal classes, Inclusive & Exclusive classes, Adjustments in class intervals, Loss of information, Frequency distribution with unequal classes, Frequency array, Bivariate frequency distribution.

	2. Consumer's Equilibrium and Demand	Indifference curve analysis of consumer's equilibrium-the consumer's budget (budget set and budget line), preferences of the consumer (indifference curve, indifference map) and conditions of consumer's equilibrium.	Indifference curve, IC map, Budget line, Budget set.
SEPTEMBER	**4. Presentation of data**	Diagrammatic Presentation of Data: (i) ❏eome¹ric forms (bar diagrams – Simple and Multiple, Pie diagram) (ii) Frequency diagrams (histogram, Polygon and ogive)	Textual presentation of data, tabular presentation, Parts of a table, Diagrammatic presentation, Bar diagrams &Pie diagrams, Frequency diagrams-Histogram, Polygon , Ogives, Arithmetic line graphs
	2. Consumer's Equilibrium and Demand	Demand, market demand, determinants of demand, demand schedule, demand curve and its slope, movement along and shifts in the demand curve; price elasticity of demand - factors affecting price elasticity of demand; measurement	Demand, Market demand, Demand schedule, Demand curve, Price elasticity
OCTOBER/ NOVEMBER	**5. Measures of central tendency: mean (simple), median and mode**	Mean, Median & Mode	Mean (simple), Median and Mode
	3. Producer Behaviour and Supply	Meaning of Production Function – Short-Run and Long-Run Total Product, Average Product and Marginal Product. Returns to a Factor Cost – Short run costs - Total Cost, Total Fixed Cost, Total Variable Cost; Average Cost; Average Fixed Cost, Average Variable Cost and Marginal Cost - meaning and their relationships. Revenue – Total Revenue, Average Revenue and Marginal Revenue - meaning and their relationship. Producer's Equilibrium - meaning and its conditions in terms of Marginal Revenue Marginal Cost. Supply, market supply, determinants of supply, supply schedule, supply curve and its slope, movements along and shifts in supply curve, price	Production function, TP, AP, MP,TR,AR,MR,TC,AC,MC, Price elasticity, Supply

		elasticity of supply; measurement of price elasticity of supply - percentage-change method.	
NOVEMBER/ DECEMBER	**6.Correlatation**	meaning and properties, scatter diagram; measures of correlation - Karl Pearson's method (two variables ungrouped data) Spearman's rank correlation (Non-Repeated Ranks and Repeated Ranks).	Correlation, Scatter diagram, Ungrouped data, Repeated and non-repeated ranks
JANUARY	**7. Introduction to Index numbers**	meaning, types - Wholesale Price Index, Consumer Price Index and index of industrial production, uses of index numbers; Inflation and Index Numbers, Simple Aggregative Method.	Wholesale Price Index, Consumer Price Index and index of industrial production, uses of index numbers; Inflation and Index Numbers, Simple Aggregative Method.
	4. Perfect Competition - Price Determination and simple applications.	Perfect competition - Features; Determination of market equilibrium and effects of shifts in demand and supply. (Short Run Only) Simple Applications of Demand and Supply: Price ceiling, Price floor.	Perfect competition, Price ceiling, Price floor.
FEBRUARY	**REVISION/FINAL EXAM**		

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

YEAR PLAN FOR THE ACADEMIC YEAR 2024-25

CLASS XI - BUSINESS STUDIES

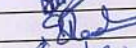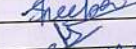| MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	EVOLUTION AND FUNDAMENTALS OF BUSINESS	1.1 Introduction	History of Trade and Commerce in India,Indigenous Banking System, Rise of Intermediaries,Transport, Trading Communities: Merchant Corporations, Major Trade Centres, Major Imports and Exports, Position of Indian Sub-Continent in the World Economy.
		1.2 Business	Meaning of business with special reference to economic and non- economic activities,characteristics of business, comparison of business, profession and employment.
		1.3 Classification of business activities	Industry and commerce, Industry- types: Primary, secondary, tertiary: Meaning and subgroups , Commerce - Trade and Auxiliaries to trade.
		1.4 Objectives of business	Objectives of business- Economic & Social, Examine role of profit in business.
		1.5 Business Risk	Concept, nature and causes
JUNE/ JULY	FORMS OF BUSINESS ORGANISATION	2.1 Introduction	Introduction
		2.2 Sole proprietorship	Concept, merits and limitation
		2.3 Joint Hindu Family Business	Concept
		2.4 Partnership	Concept, types, merits and limitation of partnership, Registration of a partnership firm, Partnership Deed.Types of partners .

		2.5 Cooperative society	Concept, merit and limitation and types of co-operatives.
		2.6 Joint Stock Company	Concept, merits, and limitations, types- private, public and One person company. Comparison of types of companies. Formation of a company - stages, important documents to be used in formation of a company.
		2.7 Choice of form of business organisation	Distinguish between various forms of business organisations. Choice of form of business organisation
MID TERM EVALUATION - I (25 MARKS)

		MID TERM EVALUATION - I (25 MARKS)	
AUGUST	**PUBLIC, PRIVATE AND GLOBAL ENTERPRISES**	3.1 Introduction	Introduction
		3.2 Private Sector and Public sector	Concept
		3.3 Forms of Public Sector Enterprises.	Departmental Undertakings, Statutory Corporations and Government Company.Features, merits and limitations of different forms of public sector enterprises
		3.5 Global Enterprises	Meaning and features.
		3.6 Joint Ventures	Meaning and features.
		3.7 Public,Private partnership	Meaning and features.
SEPTEMBER	**BUSINESS SERVICES**	4.1 Introduction	Introduction
		4.2 Nature of Services	Nature of services
		4.3 Types of business services	Meaning and types
		4.4 Banking	Types of bank accounts, banking services - Bank Draft, Bank overdraft, cash credit, E- banking.
		4.5 Insurance	Principles and types- Life, Health, Fire and Marine - Meaning.
	EMERGING MODES OF BUSINESS	4.6 Communication services	Postal services- Mail,Registered post, parcel, speed post, courier.
		5.1 Introduction	Introduction

		5.2 E-business	Concept and scope.Distinguish between E-business and Traditional business
		5.3 Benefits of E-Business	Benefits of E-business
OCTOBER	**SOCIAL RESPONSIBILITIES OF BUSINESS AND BUSINESS ETHICS**	6.1 Introduction	Introduction
		6.2 Concept of Social Responsibility	Concept
		6.3 Arguments for social responsibility	Case of social responsibilty
		6.4 Social responsibilty towards different interest groups	Social responsibilty towards different interest groups
		6.5 Business and environmental protection	Role of business in environment protection
		6.6 Business Ethics	Concept and elements
TERM END EVALUATION (25 MARKS)			
NOVEMBER	**SOURCES OF BUSINESS FINANCE**	7.1 Introduction	Introduction
		7.2 Meaning, nature and significance of business finance	Meaning, nature and significance of business finance
		7.3 Sources of finance	Owners' funds- equity shares, preference share, retained earnings. Borrowed funds: debentures and bonds, loan from financial institution and commercial banks, public deposits, trade credit, Inter Corporate Deposits (ICD) (meaning only).Distinguish between owner's funds and borrowed funds
	SMALL BUSINESS AND ENTERPRISES	8.1 Entrepreneurship Development	Concept, Characteristics and Need. Process of Entrepreneurship Development: Start-up India Scheme, ways to fund start-up. Intellectual Property Rights and Entrepreneurship.
		8.2 Small scale enterprises	Meaning,MSMED Act 2006 (Micro, Small and Medium Enterprise Development Act)

		8.3 Role of small business in India with special reference to rural areas	Role of small business in India with special reference to rural areas
		8.4 Government schemes and agencies for small scale industries	National Small Industries Corporation (NSIC) and District Industrial Centre (DIC) with special reference to rural, backward areas
DECEMBER	**INTERNAL TRADE**	9.1 Internal trade	Meaning and types
		9.2 wholesale trade	Services rendered by a wholesaler.
		9.3 Retail Trade	Services rendered by a retailer, Types of retail-trade-Itinerant and small scale fixed shops retailers, Large scale retailers-Departmental stores, chain stores and Mail order business – concept and features.
		9.4 Goods and Services Tax	Concept and features.
MID TERM EVALUATION- II (25 MARKS)			
JANUARY/ FEBRUARY	**INTERNATIONAL TRADE**	10.1 International Trade	Concept, benefits and scope.
		10.2 Export Trade	Meaning, Procedure and objectives.
		10.3 Import Trade	Meaning, Procedure and objectives.
		10.4 Documents involved in International Trade	Indent, letter of credit, shipping order, shipping bills, mate's receipt (DA/DP)
		10.5 World Trade Organisation	Meaning and objective
FINAL EVALUATION (80 MARKS)			

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA			
STD XI – BOTANY – YEAR PLAN			
2024-2025			
MONTH	TOPIC	SUB TOPICS	CONCEPTS
JUNE	1.DIVERSITY IN THE LIVING WORLD 2.BIOLOGICAL CLASSIFICATION	1.1 What is 'Living'? 1.2 Diversity in the Living World 1.3 Taxonomic Categories [Taxonomical Aids not included] 2.1 Kingdom Monera 2.2 Kingdom Protista 2.3 Kingdom Fungi	Characteristics of Living things. Taxonomic Hierarchy Binomial nomenclature. * Salient features of five kingdom classification *Salient features of five major kindom with examples.
JULY	2.BIOLOGICAL CLASSIFICATION CONTD ..... 3. PLANT KINGDOM	2.4 Kingdom Plantae 2.5 Kingdom Animalia 2.6 Viruses, Viroids and Lichens 3.1 Algae 3.2 Bryophytes 3.3 Pteridophytes	*Salient features of plant kingdom. *Salient features of various divisions of plant kingdom with examples.
AUGUST	3. PLANT KINGDOM CONTD.... (Angiosperms, Plant life cycle,Alternation of generation NOT included) 5.MORHOLOGY OF FLOWERING PLANTS. Description of one family Solanaceae (To be dealt along with the relevant experiments of the practical syllabus	3.4 Gymnosperm 3.5 Angiosperm [upto Dicotyledons and Monocotyledons] 5.1 The Root 5.2 The Stem 5.3 The Leaf 5.4 The Inflorescence 5.5 The Flower	Taproot and fibrous root system. Parts of root.
UNIT TEST I (JULY 31st TO AUGUST 7th] Portions Living world , Biological classification , Plant Kingdom CHAPTERS 1,2 & 3			

SEPTEMBER	5.MORHOLOGY OF FLOWERING PLANTS. CONTD.....	5.6 The Fruit 5.7 The Seed 5.8 Semi-technical Description of a Typical Flowering Plant. 5.9 Description of Some Important Families.5.9.2 SOLANACEAE Included **[5.9.1 & 5.9.3 not included]**	Parts of fruits Drupe Parthenocarpic fruits Monocotyledonous and Dicotyledonous seed Floral symbols , diagram and Floral formula "Description of Vegetative and floral features of Plant Family SOLANACEAE " "Meristematic tissues
	6.ANATOMY OF FLOWERING PLANTS.	6.1 The Tissues 6.2 The Tissue System	Permanent tissues Simple tissues Complex tissues "
OCTOBER	6.ANATOMY OF FLOWERING PLANTS.CONTD..	6.3 Anatomy of Dicotyledonous and Monocotyledonous Plants. **[6.4 Secondary Growth not included]**	Epidermal tissue system Ground tissue system Vascular tissue system
	10.CELL CYCLE AND CELL DIVISION.	10.1 Cell Cycle 10.2 M Phase 10.3 Significance of Mitosis	Various stages of mitosis and its significance.
TERM END EVALUATION I [OCTOBER 18th TO OCTOBER 30th] Portions Living world , Biological classification , Plant Kingdom, Morphology of flowering plants. **CHAPTERS 1,2,3 & 5**			
NOVEMBER	10.CELL CYCLE AND CELL DIVISION.CONTD...	10.4 Meiosis 10.5 Significance of Meiosis	Various stages of meiosis and its significance.
	11. PHOTOSYNTHESIS IN HIGHER PLANTS.	11.1 What do we Know? 11.2 Early Experiments 11.3 Where does Photosynthesis take place? 11.4 How many Pigments are involved in Photosynthesis? 11.5 What is Light Reaction? 11.6 The Electron Transport	*Early experiments in Photosynthesis. Structure of chloroplast. Action and Absorption spectrum in Photosynthesis. Light Reaction-Cyclic and Non cyclic photophosphorylation. Chemiosmotic hypothesis.
DECEMBER	11.PHOTOSYNTHESIS IN HIGHER PLANTS. CONTD...	11.7 Where are the ATP and NADPH Used? 11.8 The C4 Pathway 11.9 Photorespiration 11.10 Factors affecting Photosynthesis	Kranz Anatomy-C4Pathway Photorespiration Factors affecting Photosynthesis-Law of limiting factors
	12..RESPIRATION IN PLANTS	12.1 Do Plants Breathe? 12.2 Glycolysis 12.3 Fermentation 12.4 Aerobic Respiration	Cellular respiration Steps of glycolysis. Major pathways of anaerobic respiration The citric acid cycle.

JANUARY	12..RESPIRATION IN PLANTS. CONTD...	12.5 The Respiratory Balance Sheet 12.6 Amphibolic Pathway 12.7 Respiratory Quotient	The Respiratory Balance Sheet Amphibolic Pathway Respiratory Quotient
	13. PLANT GROWTH AND DEVELOPMENT.	13.1 Growth 13.2 Differentiation, Dedifferentiation and Redifferentiation 13.3 Development [13.5 & 13.6 Photoperiodism & Vernalisation not included]	Characteristics of growth. Phases of growth. Growth Rates. Conditions of Growth Plant Growth Regulators.
JANUARY	UNIT TEST II [JANUARY 3rd TO JANUARY 10 th] PORTIONS CHAPTERS 6 &10 Anatomy of flowering plants and Cell cycle and Cell division		
FEBRUARY	13. PLANT GROWTH AND DEVELOPMENT.	13.4 Plant Growth Regulators	Role of various Growth Regulators -Auxin,Gibberlin, Cytokinin,Ethylene and Abscissic acid

FINAL EXAMINATION [FEBRUARY 17 th TO FEBRUARY 28 th]
FULL PORTIONS   CHAPTERS 1,2,3,5,6,10,11,12&13

NAME OF THE SCHOOL	NAME OF THE TEACHER	SIGNATURE
BVM, ELAMAKKARA	SUMI U MENON	
BVM, GIRINAGAR	SAVITRI VISWAKUMAR	
BVM, EROOR	RADHIKA R	
BAV, KAKKANAD	SHEEBA GEORGE	
BVV, THRIKKAKARA	MAYA DEVI	
BNV, VELLOOR	SEEMA C	
BMV, TRILPUNITHURA	MEERA VENUGOPAL	

BHARATIYA VIDYA BHAVAN, KOCHI

STD XI- APPLIED MATHEMATICS (241)

YEAR PLAN 2024 -25

MONTH	UNIT	TOPIC	SUB-TOPIC	CONCEPTS
JUNE	2	ALGEBRA-SETS AND RELATIONS	Introduction to sets – definition, Representation of set, Types of sets and their notations, Subsets, Intervals, Venn diagrams, Operations on sets, Ordered pairs Cartesian product of two sets, Relations.	Definition of a Set, Examples and Non-examples of Set, Write elements of a set in Set Builder form and Roster Form , Convert a set given in Roster form into Set builder form and vice-versa, Types of Sets: Finite Set, Infinite Set, Empty Set, Singleton Set, Subset of a given set, Familiarity with terms like Superset, Improper subset, Universal set, Power set, Open interval, closed interval, semi open interval and semi closed interval, Venn diagrams as the pictorial representation of relationship between sets , Practical Problems based on Venn Diagrams. Operations on sets – Union, Intersection, Difference, Complement, De Morgan's laws, Ordered pair, order of elements in an ordered pair and equality of ordered pairs , Cartesian product of two non-empty sets, Definition of Relation, examples pertaining to relations in the real number system
JULY	2	ALGEBRA-SETS AND RELATIONS (contd…)		
JULY	2	ALGEBRA-SEQUENCE AND SERIES	Sequence and series, Arithmetic Progression, Geometric Progression, Applications of AP and GP	Sequence $a_1, a_2, a_3 \ldots\ldots a_n$, Series $a_1 + a_2 + a_3 + \ldots\ldots\ldots + a_n$, General term of AP: $t_n = a + (n-1)d$, Sum of n terms of AP : $S_n = n/2 [2a + (n-1)d]$,AM of a and $b = a+b /2$, General term of GP: $t_n = ar^{n-1}$ Sum of n terms of a GP: $S_n = a(r^{n-1})/r-1$,Sum of infinite term of GP $= a/1-r$, where $-1 < r < 1$, Geometric mean of a and b $= \sqrt{ab}$, For two positive numbers a and b, AM $\geq$ GM i.e., $a+b/2 \geq \sqrt{ab}$, Applications based on Economy Stimulation , The Virus spread etc.

UNIT TEST-1 (31/7/24 to 07/8/24)				
AUGUST	3	MATHEMATICAL AND LOGICAL REASONING	Logical reasoning	Odd man out, Syllogism, Blood relations, Coding Decoding
	1	NUMBERS, QUANTIFICATION & NUMERICAL APPLICATION	Binary Numbers, Indices, Logarithm and Antilogarithm, Laws and properties of logarithms, Simple applications of logarithm and antilogarithm, Averages, Clock, Calendar, Time, Work and Distance, Mensuration, Seating arrangement.	Definition of number system (decimal and binary), Conversion from decimal to binary system and vice – versa, Applications of rules of indices , Introduction of logarithm and antilogarithm , Common and Natural logarithm, Fundamental laws of logarithm , Express the problem in the form of an equation and apply logarithm/ antilogarithm, Definition and meaning , Problems on average, weighted average, Number of rotations of minute hand / hour hand of a clock in a day , Number of times minute hand and hour hand coincides in a day, Definition of odd days ,Odd days in a year/ century, Day corresponding to a given date, Basic concept of time and work, Problems on time taken / distance covered / work done, Comparison between 2D and 3D shapes ,Combination of solids ,Transforming one solid shape to another, Linear and circular seating arrangement ,Position of a person in a seating arrangement.
SEPTEMBER	1	NUMBERS, QUANTIFICATION & NUMERICAL APPLICATION (CONTD)		
	2	PERMUTATION & COMBINATIONS	Factorial, Fundamental Principle of Counting, Permutations, Combinations	Definition of factorial: n! = n(n-1)(n-2)…3.2.1 , Usage of factorial in counting principles, Fundamental Principle of Addition , Fundamental Principle of Multiplication, Permutation as arrangement of objects in a definite order taken some or all at a time , Theorems under different conditions resulting in n Pr = $n!\,/(n-r)!$ or $n\,r$ or $n!$

				$n1!n2!\dots nk!$ arrangements, The number of combinations of n different objects taken r at a time is given by nCr= $n! / r!.(n-r)!$ Some results on combinations: $nC_0 = 1 = nCn$, $nCa = nCb \Rightarrow a=b$ or $a+ b=n$, $nCr = nCn-r$, $nCr + nCr-1 = n+1Cr$
TERM END EVALUATION -1 (18/10/2024-30/10/2024 - PERMUTATION & COMBINATIONS NOT INCLUDED)				
OCTOBER	2	PERMUTATION & COMBINATIONS(CONTD)		
NOVEMBER	6	DESCRIPTIVE STATISTICS	Data Interpretation, Measure of Dispersion, Skewness and Kurtosis, Percentile rank and Quartile rank, Correlation	Mean deviation around mean and median , Standard deviation and variance , Examples of different kinds of data helping students to choose and compare different measures of dispersion, Examples of symmetrical and asymmetrical data, Visualization of graphical representation of data using Excel Spreadsheet or any other computer assisted tool, Emphasis on visualizing, analysing and interpreting percentile and quartile rank scores, Emphasis on application, analysis and interpreting the results of coefficient of correlation using practical examples.
	5	PROBABILITY	Introduction, Random experiment and sample space, Random experiment and sample space, Conditional Probability, Total Probability, Bayes' Theorem	Probability as quantitative measure of uncertainty , Use of probability in determining the insurance premium, weather forecasts etc, Sample space as set of all possible outcomes, Types of Event: Impossible and sure event, Independent and dependent event, mutually exclusive and exhaustive event, Conditional Probability of event E given that F has occurred is: $P(E|F) = P(E\cap F)/ P(F)$, $P(F) \neq 0$, Total Probability: Let $E1,E2 , \dots,En$ be a partition of the sample space S, then probability of an event A associated with S is: $P(A) = \sum P(Ej)P(A|Ej)$, Bayes' Theorem: If $E1, E2, \dots , En$ be n non empty events which constitute a partition of a sample space S and A be any event with non-zero probability, then: $P(Ei |A) = P(Ei)P(A|Ei) / (\sum P(Ej)P(A|Ej \ n \ j=1)$
DECEMBER	8	CO- ORDINATE GEOMETRY	Straight lines, Circle, Parabola,	Gradient of a line, Equation of line: Parallel to axes, point-slope form, two-points form, slope intercept form, intercept form,

				Application of the straight line in demand curve related to economics problems, Circle as a locus of a point in a plane Equation of a circle in standard form, central form, diameter form and general form, Parabola as a locus of a point in a plane. Equation of a parabola in standard form: Focus, Directrix, Axis, Latus rectum, Eccentricity , Application in parabolic reflector, beam supported by wires at the end of the support, girder of a railway bridge, etc.
	4	CALCULUS	Functions, Domain and Range of a function, Types of functions, Graphical representation of functions, Concepts of limits and continuity of a function, Instantaneous rate of change, Differentiation as a process of finding derivative, Derivatives of algebraic functions using Chain Rule	Dependent variable and independent variable , Function as a rule or law that defines a relationship between one variable (the independent variable) and another variable (the dependent variable), Domain as a set of all values of independent variable , Co-domain as a set of all values of dependent variable , Range of a function as set of all possible resulting values of dependent variable, Following types of functions with definitions and characteristics Constant function, Identity function, Polynomial function, Rational function, Composite function, Logarithm function, Exponential function, Modulus function, Greatest integer function, Signum function, Algebraic function, Graph of some polynomial functions, Logarithm function, Exponential Function, Modulus function, Greatest integer function, Signum function, Left hand limit, Right hand limit, Limit of a function, Continuity of a function, The ratio $\Delta y /\Delta x = f(x+\Delta x) - f(x)/\Delta x$ as instantaneous rate of change, where Δy is change in y and Δx is change in x at any instant, Derivatives of functions (non-trigonometric only), If $y = f(u)$ where $u = g(x)$ then differential coefficient of y w.r.t x is $dy /dx = dy/ du . du /dx$
JANUARY	4 7	CALCULUS (CONTD) FINANCIAL MATHS	Interest and Interest Rates, Accumulation with simple and compound interest,	Impact of high interest rates and low interest rates on the business, Meaning and significance of simple and compound interest ,Compound interest rates applications on various financial products,

			Simple and compound interest rates with equivalency, Effective rate of interest, Present value, net present value and future value, Annuities, Calculating value of Regular Annuity, Simple applications of regular annuities (upto 3 period), Tax, calculation of tax, simple applications of tax calculation in Goods and service tax, Income Tax, Bills, tariff rates, fixed charge, surcharge, service charge, Calculation and interpretation of electricity bill, water supply bill and other supply bills	Concept of Equivalency ,Annual Equivalency Rate, Effective Annual Interest Rate = $(1 + i/n)^n - 1$ where: i = Nominal Interest Rate n = No. of Periods, Formula for Present Value: PV = $CF/(1 + r)^n$ Where: CF = Cash Flow in Future Period r = Periodic Rate of return or Interest (also called the discount rate or the required rate of return) n = no. of periods , Use of PVAF, FVAF tables for practical purposes ,Solve problems based on Application of net present value, Definition, Formulae and Examples, Examples of regular annuity: Mortgage Payment, Car Loan Payments, Leases, Rent Payment, Insurance payouts etc. Computation of income tax Add Income from Salary, house property, business or profession, capital gain, other sources, etc. Less deduction Assess the Individuals under Income Tax Act Formula for GST Different Tax heads under GSTs PF, PPF, LIC, Housing loan, FD, NSC etc., Tariff rates- its basis of determination Concept of fixed charge service charge and their applications in various sectors of Indian economy, Components of electricity bill/water supply and other supply bills: i) overcharging of electricity ii) water supply bills iii) units consumed in electricity bills.
		UNIT TEST-2 (CALCULUS NOT INCLUDED) 03/1/25 TO 10/1/25		
FEBRUARY		REVISION		
		FINAL EXAMINATION 17/2/25 TO 28/2/25		

BAV , KAKKANAD – ANURAJ N

BNV, VELLOOR – LALITHA, K

YEAR PLAN FOR THE ACADEMIC YEAR 2024-25
CLASS XI CHEMISTRY 043

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	**Some Basic Concepts of Chemistry**	General Introduction: Importance and scope of Chemistry. Nature of matter, laws of chemical combination, Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry	Laws of chemical combination- law of conservation of mass,law of definite proportion,lae of multiple proportionAvogadro's law,gay Lussac's law of gaseous volumes Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses, average atomic massmole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry - concentration terms
JULY	**Structure of atom**	Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations, Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms, stability of half-filled and completely filled orbitals.	Subatomic particles, atomic number,mass number,isotopes,isobars, Nucleus,Electromagnetic theory of radiations,particle nature of radiation,black body radiations,photo electric effect,spectra,Bohr's postulates for hydrogen atom,negative energy of electron Dual nature of matter,orbits,orbitals,principal quantum number,azhimuthal quantum number,magnetic quantum number,spin quantum number, $n + l$ rule, nodes, nodal planes,electronic configuration of atoms,ions,stable configurations

Month	Chapter	Content	Details
JULY	**Classification of Elements and Periodicity in Properties**	Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements -atomic radii, ionic radii, inert gas radii, Ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100.	Dobererier's triads,Law of octaves, Medeleev's law,Mendeleev's periodic table,Modern periodic law.Nomenclature of elements with atomic number greater than 100,Electronic configurations and types of elements-s,p,d,f blocks,Periodic trends in properties -Physical properties-atomic radii,ionic radii,inert gas radii, Ionization enthalpy,electron gain enthalpy,electronegativity,valency.Periodic trends in chemical properties -Periodictiy in valence or oxidation state,Anomalous propeeties of second period elements,Peridic trends in chemical reactivity

<div align="center">

UNIT TEST - I
31/07/2024 TO 07/08/2024
PORTIONS- Some Basic Concepts of Chemistry(13),Structure of atom [Upto 2.6 - Quantum mechanical model of atom excluded.](12)Numericals(5)

</div>

Month	Chapter	Content	Details
AUGUST	**Chemical Bonding and Molecular Structure**	Valence electrons, ionic bond, covalent bond, bond parameters, Lewis structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules,	Valence bond,Lewis structure,Octet rule,limitations of octet rule,formal charge,ioinc bod,factors affecting ionic bond,lattice enthalpy,bond parameters-bond length,bond angle,bond energy,bond enthalpy,bond order,Resonance,canonical structures,resonance energy,resonance hybrid

SEPTEMBER	**Chemical Bonding and Molecular Structure**	VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules(qualitative idea only), Hydrogen bond.	Repulsion between electron pairs,shapes-linear, trigonal planar, tetrahedral, trigonal bipyramid, octahedral,bent, seesaw, square pyramidal, square planar, PE curve for the H2 molecule formation, Nonexistence of He2molecule, Types of hybridization sp,sp2,sp3,dsp2,d2sp3,atomic and molecular orbitals MO energy level diagram, Hydrogen bonding- definition, reason, consequences
SEPTEMBER	**Chemical Thermodynamics**	Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH, Hess's law of constant heat summation,	System,Surrounding,Open,Closed,Isolated system,urroundings, work, heat, energy, extensive and intensive properties, state functions,Reversible,Irrevrsible process,Isothermal,abdiabatic,isobaric,isochoric processes,First law of thermodynamics -internal energy and enthalpy, heat capacity and specific heat, measurement of ΔU and ΔH, Hess's law of constant heat summation
OCTOBER	**Chemical Thermodynamics**	Enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction)Introduction of entropy as a state function, Gibb's energy change for spontaneous and nonspontaneous processes, criteria for equilibrium.Third law of thermodynamics (brief introduction).	Enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution.Entropy,Second law of Thermodynamics,Gibb's energy change for spontaneous and non- spontaneous processes, criteria for equilibrium. Third law of thermodynamics

TERM END EVALUATION **18/10/2024 TO 30/10/2024** **Portions - Some Basic Concepts of Chemistry(15),Structure of atom(18),Classification of Elements and** **Periodicity in Properties(17),Chemical Bonding and Molecular Structure(20)Numericals(7)**
NOVEMBER	**Equilibrium**	Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle, ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization,ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, Henderson Equation, solubility product, common ion effect (with illustrative examples).	Reversible process,physical and chemical equilibrium,law of mass action,law of equilibrium,expression of equilibrium constant,characteristics of equilibrium constant,factors affecting equilibrium constant - pressure,temperature,concentration,presence of catalyst.Lechatelier's principle Electrolyte,strong and weak electrolyte,Ostwald's dilution law,degree of ionisation,poly basic acids,ka value acid strength,pH,pOH,Pkw,hydrolysis of salts,buffer solution,buffer action,Henderson equation,solubility, solubility product,common ion effect
DECEMBER	**Redox reactions**	Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, applications of redox reactions.	Concept of oxidation and reduction, redox reactions, oxidation number, types of redox reaction,layer test,balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number,applications of redox reactions.

JANUARY	**Organic Chemistry -Some Basic Principles and Techniques**	General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electromeric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.	Tetravalency of carbon,classification of organic compounds,IUPAC naming, functional group,homologous series,inductive effect, electromeric effect, resonance and hyper conjugation or no bond resonance,Stabilty of cabocations,free radicals,classification of intermediates ito electrophiles and nucleophiles,Purification methods - crystallisation,sublimation,distillation,fractional distillation,distillation under reduced pressure,steam distillation,Lassaigne's test,Dumas method,Kjeldahl's method
UNIT TEST -II **3/01/2025 TO 10/01/2025** **Portions - Chemical Thermodynamics(10),Equilibrium(13)**			