

**BHARATIYA VIDYA BHAVAN, KOCHI**

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

MONTH	TOPIC / SUB-TOPIC		GRAMMAR	WRITING
	<b>HORNBILL</b>	<b>SNAPSHOTS</b>		
JUNE (21 days)	L1. The Portrait of a Lady P1. A Photograph P2. The Laburnum Top	L1. The Summer of the Beautiful White Horse	G1 Tenses	W1 Poster
JULY (24 days)	L2. We're Not Afraid to Die.... if We Can All Be Together (Not included for Mid Term Evaluation 1)		G2. Sentence Reordering	
<b>UNIT TEST I ( 31/07/2024 - 07/08/2024)</b>				
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
OCTOBER (22 days)	P4. Childhood	L3. Mother's Day	G3. IF Clauses	
<b>TERM END EVALUATION ( 18/10/2024 - 30/10/2024)</b>				
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
<b>UNIT TEST II ( 03/01/2025 - 10/01/2025)</b>				
JANUARY (24 days)	L5. Silk Road	L5. The Tale of Melon City	G4. Transformation of Sentences	
FEBRUARY (22 days)	<b>Revision FINAL EXAMINATION (17/02/2025 - 28/02/2025)</b>			

**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 <p style="text-align: center;"><b>UNIT TEST -I (JULY 31<sup>st</sup>-AUGUST 7<sup>th</sup>)</b>  <b>CHAPTER 4 ANIMAL KINGDOM AND CHAPTER 7 STRUCTURAL ORGANIZATION IN ANIMALS</b></p>
AUGUST	CHAPTER 8 CELL- THE UNIT OF LIFE
SEPTEMBER	CHAPTER 9 BIOMOLECULES
OCTOBER	CHAPTER 14 BREATHING AND EXCHANGE OF GASES <p style="text-align: center;"><b>TERM END EVALUATION 1 (OCT 18<sup>th</sup>-30<sup>th</sup>) CHAPTER 4,7 AND 8</b></p>
NOVEMBER	CHAPTER 15-BODY FLUIDS AND CIRCULATION CHAPTER -16-EXCRETORY PRODUCTS AND THEIR ELIMINATION
DECEMBER	CHAPTER 16-EXCRETORY PRODUCTS AND THEIR ELIMINATION CONTINUED.. CHAPTER 17-LOCOMOTION AND MOVEMENT

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

**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA**

**STD XI – BOTANY – YEAR PLAN**

**2024-2025**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB TOPICS</b>	<b>CONCEPTS</b>
<b>JUNE</b>	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 <b>[ Taxonomical Aids not included ]</b>  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.
<b>JULY</b>	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.
<b>AUGUST</b>	3. PLANT KINGDOM CONTD.... <b>(Angiosperms, Plant life cycle,Alternation of generation NOT included)</b>  5.MORHOLOGY OF FLOWERING PLANTS. <b>Description of one family Solanaceae (To be dealt along with the relevant experiments of the practical syllabus</b>	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.
<b>UNIT TEST I (JULY 31st TO AUGUST 7th) Portions Living world , Biological classification , Plant Kingdom CHAPTERS 1,2 &amp; 3</b>			

<b>SEPTEMBER</b>	5.MORHOLOGY OF FLOWERING PLANTS.CONTD.....  6.ANATOMY OF FLOWERING PLANTS.	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 ]  6.1 The Tissues 6.2 The Tissue System	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 Permanent tissues Simple tissues
<b>OCTOBER</b>	6.ANATOMY OF FLOWERING PLANTS.CONTD..  10.CELL CYCLE AND CELL DIVISION.	6.3 Anatomy of Dicotyledonous and monocotyledonous Plants. [ 6.4 Secondary Growth not included]  10.1 Cell Cycle 10.2 M Phase 10.3 Significance of Mitosis	Epidermal tissue system Ground tissue system Vascular tissue system  Various stages of mitosis and its significance.
<b>TERM END EVALUATION I [OCTOBER 18th TO OCTOBER 30th] Portions Living world , Biological classification , Plant Kingdom, Morphology of flowering plants. CHAPTERS 1,2,3 &amp; 5</b>			
<b>NOVEMBER</b>	10.CELL CYCLE AND CELL DIVISION.CONTD...  11. PHOTOSYNTHESIS IN HIGHER PLANTS.	10.4 Meiosis 10.5 Significance of Meiosis  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?	Various stages of meiosis and its significance.  *Early experiments in Photosynthesis. Structure of chloroplast. Action and Absorption spectrum in Photosynthesis. Light Reaction-Cyclic and Non cyclic photophosphorylation

<b>DECEMBER</b>	11.PHOTOSYNTHESIS IN HIGHER PLANTS.CONTD...  12..RESPIRATION IN PLANTS	11.7 Where are the ATP and NADPH Used? 11.8 The C4 Pathway 11.9 Photorespiration 11.10 Factors affecting Photosynthesis  12.1 Do Plants Breathe? 12.2 Glycolysis 12.3 Fermentation 12.4 Aerobic Respiration	Kranz Anatomy-C4Pathway Photorespiration Factors affecting Photosynthesis-Law of limiting factors  Cellular respiration Steps of glycolysis. Major pathways of anaerobic respiration The citric acid cycle.
<b>JANUARY</b>	12..RESPIRATION IN PLANTS. CONTD...  13. PLANT GROWTH AND DEVELOPMENT.	12.5 The Respiratory Balance Sheet 12.6 Amphibolic Pathway 12.7 Respiratory Quotient  13.1 Growth 13.2 Differentiation, Dedifferentiation and Redifferentiation 13.3 Development  [ 13.5 & 13.6 Photoperiodism & Vernalisation not included]	The Respiratory Balance Sheet Amphibolic Pathway Respiratory Quotient  Characteristics of growth. Phases of growth. Growth Rates. Conditions of Growth Plant Growth Regulators.
<b>JANUARY</b>	<b>UNIT TEST II [JANUARY 3rd TO JANUARY 10 th] PORTIONS CHAPTERS 6 &amp;10 Anatomy of flowering plants and Cell cycle and Cell division</b>		
<b>FEBRUARY</b>	13. PLANT GROWTH AND DEVELOPMENT.	13.4 Plant Growth Regulators	Role of various Growth Regulators - Auxin,Gibberlin,Cytokinin,Ethylene and Abscissic acid
<b>FINAL EXAMINATION [FEBRUARY 17 th TO FEBRUARY 28 th]FULL PORTIONS CHAPTERS 1,2,3,5,6,10,11,12&amp;13</b>			

YEAR PLAN FOR THE ACADEMIC YEAR 2024-25		STD XI ECONOMICS	
MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	<b>1. Introduction to Statistics</b>	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.
	<b>1. Introduction</b>	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	<b>2. Collection of data</b>	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.
	<b>2. Consumer's Equilibrium and Demand</b>	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	<b>3. Organization of data</b>	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.

	<b>2. Consumer's Equilibrium and Demand</b>	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.
<b>SEPTEMBER</b>	<b>4. Presentation of data</b>	Diagrammatic Presentation of Data: (i) Geometric 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
	<b>2. Consumer's Equilibrium and Demand</b>	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
<b>OCTOBER/ NOVEMBER</b>	<b>5. Measures of central tendency: mean (simple), median and mode</b>	Mean, Median & Mode	Mean (simple), Median and Mode
	<b>3. Producer Behaviour and Supply</b>	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.	
<b>NOVEMBER/ DECEMBER</b>	<b>6. Correlatation</b>	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
<b>JANUARY</b>	<b>7. Introduction to Index numbers</b>	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.
	<b>4. Perfect Competition - Price Determination and simple applications.</b>	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.
<b>FEBRUARY</b>	<b>REVISION/FINAL EXAM</b>		

**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA****YEAR PLAN FOR THE ACADEMIC YEAR 2024-2025****STD XI - MATHEMATICS (041)**

<b>MONTH</b>	<b>UNIT</b>	<b>TOPIC</b>	<b>SUB TOPICS</b>	<b>CONCEPTS</b>
JUNE	1	<b>SETS</b>	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	<b>RELATIONS AND FUNCTIONS</b>	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 ( $R \times R \times R$ ). 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	<b>COMPLEX NUMBERS &amp; QUADRATIC EQUATIONS</b>	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.
<b>MID TERM EVALUATION I (Chapters - 1, 2 &amp; 4)</b>				
AUGUST	8	<b>SEQUENCES AND SERIES</b>	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	<b>TRIGONOMETRIC FUNCTIONS</b>	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 $\sin^2x + \cos^2x = 1$ , 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 $\tan(x+y)$ , $\tan(x-y)$ $\cot(x+y)$ , $\cot(x-y)$ , $\sin x + \sin y$ , $\sin x - \sin y$ , $\cos x + \cos y$ , $\cos x - \cos y$ . Identities related to $\sin 2x, \cos 2x, \tan 2x, \sin 3x, \cos 3x$ and $\tan 3x$ .

	13	<b>STATISTICS (NOT FOR TERM END EVALUATION)</b>	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
<b>TERM END EVALUATION (Chapters - 1, 2, 4, 8 &amp; 3)</b>				
OCTOBER	9	<b>STRAIGHT LINES</b>	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	<b>STRAIGHT LINES (CONTD)</b>	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	<b>INTRODUCTION TO THREE DIMENSIONAL GEOMETRY</b>	Introduction Coordinate axes and coordinate planes in 3-dimensional 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	<b>PERMUTATIONS &amp; COMBINATIONS</b>	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	<b>BINOMIAL THEOREM</b>	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	<b>CONIC SECTIONS (NOT FOR MID TERM EVALUATION II)</b>	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.
<b>MID TERM EVALUATION II (Chapters - 13, 9, 11, 6 &amp; 7)</b>				
JANUARY	12	<b>LIMITS AND DERIVATIVES</b>	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	<b>LINEAR INEQUALITIES</b>	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	<b>PROBABILITY</b>	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.
<b>FINAL EXAMINATION</b>				

**BHARATIYA VIDYA BHAVAN, KOCHI**

**YEAR PLAN FOR THE ACADEMIC YEAR 2024-25**

**SUBJECT: HOME SCIENCE**

**CLASS: XI**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB-TOPICS</b>	<b>CONCEPTS</b>
<b>JUNE</b>	<p>Chapter 1 Introduction to Home Science</p> <p>Chapter 2 - Understanding the Self.</p>	<p>1. Concept of Home Science 2. Field of Home Science 3. Relevance of study of Home Science and career options</p> <p>1. Who am I? 2. Development and Characteristics of the Self(Development characteristics and needs of adolescents) 3. Influences on Identity</p>	<p>1. Definition of Home Science 2. Branches - Food and Nutrition, Human Development, Textiles and Clothing, Resource Management, Community and Extension 3. Importance and scope 4. Multidisciplinary - Combination of Science and Art.</p> <p>1. Definition and characteristics of adolescent 2. Biological and physical changes, Socio-cultural context, Emotional changes, Cognitive changes</p>
<b>JULY</b>	<p>Chapter 3 - Food, Nutrition, Health and Fitness</p> <p>Chapter 4 - Management of Resources</p>	<p>1. Definitions 2. Using Basic food Groups for planning Balanced Diets 3. Dietary patterns in Adolescence</p> <p>1. Classification and characteristics of resources 2. Management Process</p>	<p>1. Definition of Food, Nutrition, Nutrients, Balanced diet, RDA 2. Food Pyramid 3. Factors influencing eating behaviour 4. Eating disorders - Anorexia Nervosa and Bulimia Nervosa</p> <p>1. Human and non-human resources 2. Process - Planning, Organising, Implementing, Controlling and Evaluation</p>
<b>JULY</b>	<b>UNIT TEST 1- CHAPTERS 1,2 &amp; 3</b>		

AUGUST	Chapter 5- Fabric Around us	<ol style="list-style-type: none"> <li>1. Definitions</li> <li>2. Classification of fibres</li> <li>3. Yarn processing</li> <li>4. Properties of fibre</li> <li>5. Fabric production</li> <li>6. Textile finish</li> </ol>	<ol style="list-style-type: none"> <li>1. Fibre, yarn</li> <li>2. Length - staple, filament; Origin - natural and manmade</li> <li>3. Spinning</li> <li>4. Physical, thermal, chemical and biological.</li> <li>5. Weaving, Knitting, felting, Braiding</li> <li>6. Basic and special finishes</li> </ol>
	Chapter 6 - Media and Communication Technology	<ol style="list-style-type: none"> <li>1. Definition</li> <li>2. Classification</li> <li>3. Functions of media</li> <li>4. Classification of communication technology</li> </ol>	<ol style="list-style-type: none"> <li>1. Communication</li> <li>2. Interpersonal and intrapersonal; Group and mass communication</li> <li>3. Modern communication technologies</li> </ol>
SEPTEMBER - OCTOBER	Chapter 7- Concerns and needs in diverse contexts	<ol style="list-style-type: none"> <li>1. Nutrition, Health and Hygiene</li> <li>2. Resources Availability and Management</li> </ol>	<ol style="list-style-type: none"> <li>1. Dimensions and indicators of health</li> <li>2. Factors affecting nutritional well being</li> <li>3. Malnutrition, Hygiene and Sanitation</li> <li>4. Time management</li> <li>5. Space management</li> </ol>
OCTOBER	TERM END EVALUATION - CHAPTERS 1,2,3,4,5&6		
NOVEMBER	Chapter 8 -Survival, Growth and Development	<ol style="list-style-type: none"> <li>1. Growth and development</li> <li>2. Aspects of development</li> </ol>	<ol style="list-style-type: none"> <li>1. Difference and meaning of growth and development</li> <li>2. Physical, Social, Emotional, Cognitive, Language and Motor Development</li> </ol>
	Chapter 9 - Nutrition, Health and Wellbeing	<ol style="list-style-type: none"> <li>1. Nutrition, Health and Well-being during infancy (birth – 12 months)</li> <li>2. Nutrition, Health and well-being of preschool children (1-6 years)</li> <li>3. Nutrition, Health and well-being of school-age children (7-12 years)</li> </ol>	<ol style="list-style-type: none"> <li>1. Immunity, Immunization, importance of breast feeding, weaning,nutritional problems (0-1year)</li> <li>2. Planning of balanced meal (1-6 years)</li> <li>3. Diet planning and healthy habits (7-12 years)</li> </ol>

DECEMBER	Chapter 10 - Our Apparel	<ol style="list-style-type: none"> <li>1. Clothing functions and the selection of clothes</li> <li>2. Factors affecting selection of clothing in India</li> <li>3. Understanding children"s basic clothing needs</li> <li>4. Clothing requirements at different childhood stages</li> </ol>	<ol style="list-style-type: none"> <li>1. Modesty, Protection, Status and prestige,Adornment</li> <li>2. Age, Climate and season, Occasion, Fashion, Income</li> <li>3. Comfort, Safety, Self help, Appearance, Allowance for growth, Easy care, Fabrics</li> <li>4. Infancy, Childhood, Adolescents, CWSN</li> </ol>
	Chapter 11 - Health and Wellness	<ol style="list-style-type: none"> <li>1. Fitness and benefits of physical activity</li> <li>2. Categories of exercises</li> <li>3. Dimensions of wellness</li> <li>4. Coping with stress</li> </ol>	<ol style="list-style-type: none"> <li>1. Exercise - Aerobic, strength building, flexibility</li> <li>2. Dimensions of wellness - Social aspect, Physical aspect, Intellectual aspect, Occupational aspect, Emotional aspect, Spiritual aspect, Environmental aspect, Financial aspect,</li> <li>3. Simple techniques to cope with stress - Relaxation, Talking with friends/family, Reading, Spirituality, Music, Hobby, Yoga</li> </ol>
JANUARY	UNIT TEST 2- CHAPTERS 7,8,&9		
JANUARY	Chapter 12 - Financial Management and planning	<ol style="list-style-type: none"> <li>1. Types of family income</li> <li>2. Expenditure</li> <li>3. Budget making</li> <li>4. Savings</li> <li>5. Investment</li> <li>6. Credit</li> </ol>	<ol style="list-style-type: none"> <li>1. Money, real and psychic income and factors affecting income.</li> <li>2. Definition and factors affecting expenditure</li> <li>3. Investment - Bank, PO, LIC,PF</li> <li>4. Credit - 4Cs</li> </ol>
	Chapter 13 - Care and Maintenance of fabrics	<ol style="list-style-type: none"> <li>1. Need for care of clothes</li> <li>2. Laundering and storage of different types of clothes</li> <li>3. Stain removal</li> <li>4. Care label</li> </ol>	<ol style="list-style-type: none"> <li>1. Soaps and detergents, General rules for storage</li> <li>2. Techniques and reagents for stain removal, Principles of stain removal</li> <li>3. Washing instructions on care label</li> </ol>
FEBRUARY	REVISION AND ANNUAL EXAMINATION		



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

**CLASS: XI**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB-TOPICS</b>	<b>CONCEPTS</b>
<b>JUNE</b>	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
<b>JULY</b>	Unit II: Computational Thinking and Programming - 1 (SEQUENTIAL,CONDITIONAL STATEMENTS)	Sequential Statement and Conditional statements)	Decision making based on boolean values
<b>UNIT TEST 1 -31/07/2024 (GETTING STARTED WITH PYTHON, SEQUENTIAL,CONDITIONAL STATEMENTS)</b>			
<b>AUGUST</b>	Unit II: Computational Thinking and Programming - 1 (WHILE LOOP)	While Loop	Looping / repetition
<b>SEPTEMBER</b>	Unit II: Computational Thinking and Programming - 1 (FOR LOOP,LISTS)	For loop,List	Looping / repetition Introduction to List and List Operations - collection of heterogeneous objects - mutable data type
<b>TERM END EVALUATION -18/10/2024 (GETTING STARTED WITH PYTHON, SEQUENTIAL,CONDITIONAL STATEMENTS,ITERATIVE STATEMENT,LISTS IN PYTHON)</b>			
<b>OCTOBER</b>	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
<b>NOVEMBER</b>	Unit II: Computational Thinking and Programming - 1 (STRINGS)	Strings	String operations

<b>DECEMBER</b>	Unit 1: Computer Systems and Organisation	Boolean Logic, Number System	Components of Computer System, Processor fundamentals, Storage Concept of Boolean logic Concept of Data and Data
<b>UNIT TEST 2 -03/01/2025 (TUPLE,DICTIONARY,STRING,BOOLEAN LOGIC, NUMBER SYSTEM)</b>			
<b>JANUARY</b>	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
<b>FEBRUARY</b>	Unit 3: Society, Law and Ethics	E-waste management	Environment Protection
<b>FINAL EXAMINATION (17/02/2025)</b>			
<b>MARCH</b>			

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

**CLASS: XI**

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
<b>JUNE</b>	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
<b>JULY</b>	Unit: 2 Introduction to Python	Control Statements: if-else, if-elif-else, while loop, for loop	Concept of conditional statement Concept of Iteration

**UNIT TEST 1 ( 31/07/2024 - 07/08/2024)**

**TOPICS- Basics of Python programming, Selection statements(loops not included for the exam)**

<b>AUGUST</b>	Unit: 2 Introduction to Python	Control Statements: for loop Lists: list operations - creating, initializing, traversing and manipulating lists	Concept of Iteration  Concept of List
<b>SEPTEMBER</b>	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
<b>OCTOBER</b>	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.

**TERM END EVALUATION (18/10/2024 - 30/10/2024)**

**TOPICS- Basics of Python programming, Control statements, Lists, Dictionary(built functions of dictionary are not included)**

<p><b>NOVEMBER</b></p>	<p>Unit 1 Introduction to Computer System</p>	<p>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.</p>	<p>Concepts of Computer System</p>
<p><b>DECEMBER</b></p>	<p>Unit 3: Database concepts and the Structured Query Language</p>	<p>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</p>	<p>Concept of Database and Structured query language, Data types in MySQL, SQL for data definition</p>

<b>JANUARY</b>	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
<b>UNIT TEST 2 ( 03/01/2025 - 10/01/2025)</b> <b>TOPICS- Dictionary built in functions, Database concepts and the Structured Query Language , Introduction to creating database, creating tables, drop , alter)</b>			
<b>FEBRUARY</b>	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
<b>FINAL EVALUATION (17/02/2025 - 28/02/2025)</b> <b>TOPICS- Introduction to Python programming, Database concepts and the Structured Query, Introduction to the emerging trends</b>			

**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,law of multiple proportion,Avogadro's law,Lussac's law of gaseous volumes Dalton's atomic theory: concept of elements, atoms and molecules. Atomic and molecular masses, average atomic mass,mole 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,orbitals,principal quantum number,azimuthal quantum number,magnetic quantum number,spin quantum number, n + 1 rule, nodes, nodal planes,electronic configuration of atoms,ions,stable configurations
	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.	Dobereiner'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 -Periodicity in valence or oxidation state, Anomalous properties of second period elements, Periodic trends in chemical reactivity
<b>UNIT TEST - I</b> <b>31/07/2024 TO 07/08/2024</b> <b>PORTIONS- Some Basic Concepts of Chemistry, Structure of atom [Upto 2.6 - Quantum mechanical model of atom excluded.]</b>			
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, ionic bond, 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 H <sub>2</sub> molecule formation, Nonexistence of He <sub>2</sub> molecule, Types of hybridization sp, sp <sup>2</sup> , sp <sup>3</sup> , dsp <sup>2</sup> , d <sup>2</sup> sp <sup>3</sup> , 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, surroundings, work, heat, energy, extensive and intensive properties, state functions, Reversible, Irreversible process, Isothermal, adiabatic, 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

<b>TERM END EVALUATION</b> <b>18/10/2024 TO 30/10/2024</b> <b>Portions - Some Basic Concepts of Chemistry, Structure of atom, Classification of Elements and Periodicity in Properties, Chemical Bonding and Molecular Structure</b>			
<b>NOVEMBER</b>	<b>Equilibrium</b>	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. Le Chatelier's principle Electrolyte, strong and weak electrolyte, Ostwald's dilution law, degree of ionisation, poly basic acids, $K_a$ value acid strength, pH, pOH, $K_w$ , hydrolysis of salts, buffer solution, buffer action, Henderson equation, solubility, solubility product, common ion effect
<b>DECEMBER</b>	<b>Redox reactions</b>	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.
<b>JANUARY</b>	<b>Organic Chemistry -Some Basic Principles and Techniques</b>	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, Stability of carbocations, free radicals, classification of intermediates into electrophiles and nucleophiles, Purification methods - crystallisation, sublimation, distillation, fractional distillation, distillation under reduced pressure, steam distillation, Lassaigne's test, Dumas method, Kjeldahl's method
<b>UNIT TEST -II</b> <b>3/01/2025 TO 10/01/2025</b> <b>Portions - Chemical Thermodynamics, Equilibrium</b>			
<b>FEBRUARY</b>	<b>Hydrocarbons</b>	Classification of Hydrocarbons Aliphatic Hydrocarbons: Alkanes - Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis. Alkenes - Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition. Alkynes - Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of - hydrogen, halogens, hydrogen halides and water. Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.	Hydrocarbons, classification of hydrocarbons, IUPAC nomenclature, physical and chemical properties, catalytic reduction, free radical halogenation, combustion, reforming, aromatisations, pyrolysis, Markovnikov's law, peroxide effect, ozonolysis, polymerisation, acidic character of alkynes, addition reactions, resonance, aromaticity, Huckel's rule, electrophilic substitution, Arenium ion, addition reactions by benzene, directing influence, Carcinogenicity and toxicity
<b>FINAL EXAMINATION</b> <b>17/02/2025 TO 28/02/2025</b> <b>Some basic concepts of chemistry, Structure of atom, Classification of elements and periodicity in properties, Chemical bonding and molecular structure, Chemical thermodynamics, Equilibrium, Redox reactions, Organic chemistry - Some basic principles and techniques &amp; Hydrocarbons</b>			



**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA**

**YEAR PLAN FOR THE ACADEMIC YEAR 2024-'25**

**STD : XI ARTIFICIAL INTELLIGENCE**

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
June	PART B: Unit 1: Introduction: Artificial Intelligence for Everyone PART A: Unit 1 : Communication Skills-III PART B Unit 2: Unlocking your Future in AI:	Unit 1: Introduction To AI: What is AI? History of AI What is Machine Learning What is data? Terminology and Related Concepts What machine learning can and cannot do More examples of what machine learning can and cannot do Jobs in AI Unit 1 : Communication Skills-III: Session 1: Introduction to Communication Session 2: Verbal Communication Session 3: Non-verbal Communication Session 4: Pronunciation Basics Session 5: Communication Styles — Assertiveness Session 6: Saying No — Refusal Skills  PART B Unit 2: Unlocking your Future in AI: • The Global Demand • Some Common Job Roles In AI • Essential Skills and Tools for Prospective AI Careers	Unit 1: Introduction To AI: Artificial Intelligence (AI) , Machine Learning (ML) and Deep Learning (DL)  Unit 1 : Communication Skills-III: Types of communication, Communication styles  Unit 2: Unlocking your Future in AI:  • Common Job Roles In AI • AI Careers • Opportunities in AI

July	<p>PART B : UNIT 3 - PYTHON PROGRAMMING ( Level 1 )</p> <p>Level 1 : Basics of python programming, character sets, tokens, modes, operators, datatypes, Control Statements</p> <p>PART A: Unit 1 : Communication Skills-III</p>	<p>PART B Unit 2: AI Applications &amp; Methodologies:</p> <p>Present day AI and Applications</p> <p>Key Fields of Application in AI</p> <p>Characteristics and types of AI</p> <p>Cognitive Computing (Perception, Learning, Reasoning)</p> <p>Recommended deep-dive in NLP, CV</p> <p>AI and Society</p> <p>The Future with AI, and AI in Action</p> <p>Non-technical explanation of deep learning</p> <p>PART A Unit 1 : Communication Skills-III</p> <p>Session 7: Writing Skills — Parts of Speech</p> <p>Session 8: Writing Skills — Sentences</p> <p>Session 9: Greetings and Introduction</p> <p>Session 10: Talking about Self</p> <p>Session 11: Asking Questions</p> <p>Session 12: Talking about Family</p> <p>Session 13: Describing Habits and Routines</p> <p>Session 14: Asking for Directions</p>	<p>Unit 2: AI Applications &amp; Methodologies: AI applications, cognitive computing, Impact of AI on society</p> <p>Unit 1 : Communication Skills-III</p> <p>Writing skills, communication skills.</p> <p>UNIT 3 - PYTHON PROGRAMMING ( Level 1 )</p> <p>Level 1 : Basics of python programming, character sets, tokens, modes, operators, datatypes, Control Statements</p>
<p><b>"Unit Test I Starts: 31/07/2024</b></p> <p><b>Introduction To AI -</b></p> <p><b>Unlocking your Future in AI -</b></p> <p><b>Python Programming (Level 1) -</b></p> <p><b>Communication Skills-III -</b></p>			

<p>August</p>	<p>PART A: Unit 2 : Self-Management Skills-III  PART B :UNIT 3 - PYTHON PROGRAMMING (Level 2)  PART B: Unit 5: DATA LITERACY – DATA COLLECTION TO DATA ANALYSIS</p>	<p>Unit 2 : Self-Management Skills-III  Session 1: Strength and Weakness Analysis  Session 2: Grooming  Session 3: Personal Hygiene  Session 4: Team Work  Session 5: Networking Skills  Session 6: Self-motivation  Session 7: Goal Setting  Session 8: Time Management</p> <p>Unit 5: Data Literacy – Data Collection to Data Analysis</p> <ul style="list-style-type: none"> <li>• What is Data Literacy?</li> <li>• Data Collection</li> <li>• Exploring Data</li> <li>• Statistical Analysis of data</li> <li>• Representation of data, Python Programs for Statistical Analysis and Data Visualization</li> <li>• Introduction to Matrices</li> <li>• Data Pre-processing</li> <li>• Data in Modelling and Evaluation</li> </ul>	<p>Unit 2 : Self-Management Skills-III  Self Awareness, Importance of working in team</p> <p>UNIT 3 - PYTHON PROGRAMMING (Level 2)</p> <p>Unit 5: DATA LITERACY – DATA COLLECTION TO DATA ANALYSIS</p>
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September	<p>PART B: UNIT 8 – AI ETHICS AND VALUES</p> <p>PART A: Unit 3: Information and Communication Technology Skills-III</p>	<p>PART B: Unit 8: AI Values (Ethical Decision Making) AI: Issues, Concerns and Ethical Considerations</p> <p>PART A: Unit 3: Information and Communication Technology Skills-III Session 1: Introduction to ICT Session 2: Basic Interface of LibreOffice Writer Session 3: Saving, Closing, Opening and Printing Document Session 4: Formatting Text in a Word Document Session 5: Checking Spelling and Grammar Session 6: Inserting Lists, Tables, Pictures, and Shapes Session 7: Header, Footer and Page Number Session 8: Tracking Changes in LibreOffice Writer</p>	<p>Unit 8: AI Values (Ethical Decision Making) AI applications, Ethics , Bias , Jobs in AI age</p> <p>Unit 3: Information and Communication Technology Skills-III Basic operations in Libre Office Writer</p>
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**"Term End Evaluation 1 Starts: 18/10/2024**  
**Introduction To AI - 1**  
**Unlocking your Future in AI .**  
**Python Programming -**  
**DATA LITERACY – DATA COLLECTION TO DATA ANALYSIS .**  
**Communication Skills-III -**  
**Self-Management Skills-III -**

<p>October</p>	<p>PART B: Unit 5: INTRODUCTION TO CAPSTONE PROJECT(PRACTICAL only) - ( Theory questions can be asked only for Annual exam) PART A: Unit 4 : : Entrepreneurial Skills-III</p>	<p>PART B: Unit 5: INTRODUCTION TO CAPSTONE PROJECT(PRACTICAL only) Design Thinking Empathy Map Sustainable Development Goals Capstone Project</p> <p>PART A: Unit 4 : Entrepreneurial Skills-III</p> <ul style="list-style-type: none"> <li>• Session 1: Introduction to Entrepreneurship</li> <li>• Session 2: Values of an Entrepreneur</li> <li>• Session 3: Attitude of an Entrepreneur</li> <li>• Session 4: Thinking Like an Entrepreneur</li> <li>• Session 5: Coming Up with a Business Idea</li> <li>• Session 6: Understanding the Market</li> <li>• Session 7: Business Planning</li> </ul>	<p>PART B: Unit 5: INTRODUCTION TO CAPSTONE PROJECT(PRACTICAL only)</p> <p>Unit 4 : Entrepreneurial Skills-III Functions and qualities of an entrepreneur</p>
<p>November</p>	<p>PART B: UNIT 7 – LEVERAGING LINGUISTICS AND COMPUTER SCIENCE PART A: Unit 5 : Green Skills-III</p>	<p>PART B: UNIT 7 – LEVERAGING LINGUISTICS AND COMPUTER SCIENCE</p> <p>PART A: Unit 5 : Green Skills-III</p> <ul style="list-style-type: none"> <li>• Session 1: Sectors of Green Economy</li> <li>• Session 2: Policies for a Green Economy</li> <li>• Session 3: Stakeholders in Green Economy</li> <li>• Session 4: Government and Private Agencies</li> </ul>	<p>PART B: UNIT 7 – LEVERAGING LINGUISTICS AND COMPUTER SCIENCE</p> <p>Unit 5 : Green Skills-III</p> <ul style="list-style-type: none"> <li>• Green economy initiatives</li> <li>• Importance of green economy</li> </ul>

December	PART B - UNIT 6 – MACHINE LEARNING ALGORITHMS	PART B: UNIT 6 – MACHINE LEARNING ALGORITHMS <ul style="list-style-type: none"> <li>• Machine Learning in a nutshell</li> <li>• Types of Machine Learning</li> <li>• Supervised Learning</li> <li>• Understanding Correlation, Regression, Finding the line, Linear Regression algorithm</li> </ul>	UNIT 6 – MACHINE LEARNING ALGORITHMS
<p><b>Unit Test II : 03/01/2024</b></p> <p><b>Leveraging Linguistics and Computer Science -</b></p> <p><b>Green skills -</b></p> <p><b>Entrepreneurial Skills-III -</b></p> <p><b>Machine Learning Algorithms -</b></p>			
February	Capstone Project / Practical and Revision  Practical Exam ( Before February 15 )	Capstone Project / Practical and Revision Practical Exam ( Before February 15 )	Capstone Project / Practical and Revision Practical Exam ( Before February 15 )

**"Final Examination : 17/02/2025**

**Communication Skills-III 2**

**Self-Management Skills-III 2**

**ICT Skills-III 2**

**Entrepreneurial Skills-III 2**

**Green Skills-III 2**

**Introduction: Artificial Intelligence for Everyone - 4**

**Unlocking your Future in AI**

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**Python Programming -**

**Introduction to Capstone Project - 2**

**Data Literacy – Data Collection to Data Analysis - 4**

**Machine Learning Algorithms - 4**

**Leveraging Linguistics and Computer Science - 4**

**AI Ethics and Values - 4**

**BHARATIYA VIDYA BHAVAN,KOCHI KENDRA**

**YEAR PLAN -2024-2025**

**Std :XI PHYSICS**

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	<p><b>CHAPTER 1- UNITS AND MEASUREMENT</b></p> <p><b>CHAPTER 2- MOTION IN A STRAIGHT LINE</b></p>	<p>Need for measurement: significant figures. Dimensions of physical quantities</p> <p>Describing motion, Relations for uniformly accelerated motion (graphical treatment).</p>	<p>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).</p>
JULY	<p><b>MOTION IN A STRAIGHT LINE (CONTD....)</b></p> <p><b>CHAPTER 3- MOTION IN A PLANE</b></p> <p><b>CHAPTER 4- LAWS OF MOTION(UPTO FRICTION)</b></p>	<p>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</p> <p>Newtons first law of motion,Newton second law of motion,Newtons third law of motion,conservation of linear momentum ,Equilibrium of concurrent forces</p>	<p>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.</p> <p>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.</p>

**UNIT TEST 1 -  
UNITS AND MEASUREMENT, MOTION  
IN A STRAIGHT LINE ,  
MOTION IN A PLANE UPTO PROJECTILE MOTION  
PROJECTILE MOTION NOT INCLUDED .**

AUGUST	<p><b>LAWS OF MOTION (CONT..)</b></p> <p><b>CHAPTER 5-WORK ENERGY AND POWER</b></p>	<p>Friction</p> <p>Work</p> <p>Energy</p> <p>Collision</p>	<p>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).</p> <p>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.</p>
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<p><b>SEPTEMBER</b></p>	<p><b>CHAPTER 6- SYSTEM OF PARTICLES AND ROTATIONAL MOTION</b></p> <p><b>CHAPTER 7- GRAVITATION</b></p>	<p>Center of mass Moment of a force and angular momentum Equilibrium of rigid bodies Moment of inertia.</p> <p>Kepler's laws of planetary motion Universal law of gravitation Gravitational potential energy Escape speed, orbital velocity of a satellite</p>	<p>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).</p> <p>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.</p>
<p><b>OCTOBER</b></p>	<p><b>CHAPTER 8- MECHANICAL PROPERTIES OF SOLIDS</b></p>	<p>Elastic behaviour of solids, Modulus of Elasticity Elastic Energy</p>	<p>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>
<p><b>TERM END EXAMINATION I - UNITS AND MEASUREMENT,MOTION IN A STRAIGHT LINE , MOTION IN A PLANE , LAWS OF MOTION , WORK ENERGY AND POWER &amp; SYSTEM OF PARTICLES AND ROTATIONAL MOTION</b></p>			

<p><b>NOVEMBER</b></p>	<p><b>CHAPTER 9- MECHANICAL PROPERTIES OF FLUIDS</b></p> <p><b>CHAPTER 10 - THERMAL PROPERTIES OF MATTER</b></p> <p><b>CHAPTER 13 - OSCILLATIONS</b></p>	<p>Pressure,Viscosity Surface tension, Capillary rise.</p> <p>Heat ,heat transfer, blackbody radiation</p> <p>Periodic motion,simple harmonic motion energy in SHM</p>	<p>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 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 . 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.</p>
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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.
<b>UNIT TEST II GRAVITATION, MECHANICAL PROPERTIES OF SOLIDS &amp; MECHANICAL PROPERTIES OF FLUIDS INCLUDING BERNOULLI'S THEOREM</b>			
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, change of condition of gaseous state - isothermal, adiabatic, reversible, irreversible, and cyclic processes. Equation of state of a perfect gas, work done in compressing a 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.

FEBRUARY	<b>REVISION FINAL EXAMINATION UNITS AND MEASUREMENT, MOTION IN A STRAIGHT LINE &amp; MOTION IN A PLANE, LAWS OF MOTION, WORK ENERGY AND POWER, SYSTEM OF PARTICLES AND ROTATIONAL MOTION, GRAVITATION, MECHANICAL PROPERTIES OF SOLIDS &amp; FLUIDS, THERMAL PROPERTIES OF MATTER &amp; THERMODYNAMICS, KINETIC THEORY OF GASES, OSCILLATIONS &amp; WAVES.</b>		
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