BHARATIYA VIDYA BHAVAN, KOCHI				
STD XI ENGLISH - YEAR PLAN FOR THE ACADEMIC YEAR 2023-24				
MONTH	**TOPIC / SUB-TOPIC**		**GRAMMAR**	**WRITING**
	HORNBILL	**SNAPSHOTS**		
JUNE (23 days)	L1. The Portrait of a Lady P1. A Photograph	L1. The Summer of the Beautiful White Horse	G1 Tenses	W1 Poster
JULY (22 days)	L2. We're Not Afraid to Die…. if We Can All Be Together P2. The Laburnum Top		G2. Sentence Reordering	
AUGUST (19 days)	L3. Discovering Tut: the Saga Continues (Not included for Mid Term Evaluation 1)			R1. Note Making W2. Speech
MID TERM EVALUATION I (07/08/2023 - 11/08/2023)				
SEPTEMBER (19 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 (05/10/2023 - 13/10/2023)				
OCTOBER (21 days)	P4. Childhood	L3. Mother's Day	G3. 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 (18 days)	L4. The Adventure P5. Father to Son			W4. Debate
MID TERM EVALUATION II (08/01/2024 - 12/01/2024)				
JANUARY (22 days)	L5. Silk Road	L5. The Tale of Melon City	G4. Transformation of Sentences	
FEBRUARY (23 days)	**Revision**			
FINAL EXAMINATION (19/02/2024 - 28/02/2024)				

NAME OF THE TEACHER	**NAME OF THE SCHOOL**	**SIGNATURE**
1. Mini M	Bhavan's Vidya Mandir, Elamakkara	
2. Devi P S	Bhavan's Vidya Mandir, Girinagar	
3. Nisha Peethambaran	Bhavan's Newsprint Vidyalaya, Velloor	
4. Sini K Jacob	Bhavan's Adarsha Vidyalaya, Kakkanad	
5. Haritha Vikraman	Bhavan's Munshi Vidyashram, Tripunithura	
6. Lakshmy Gopinath	Bhavan's Varuna Vidyalaya, Thrikkakara	
7. Sangeetha E K	Bhavan's Vidya Mandir, Eroor	

BHARATIYA VIDYA BHAVAN ,KOCHI
YEAR PLAN FOR THE ACADEMIC YEAR 2023-24

SUBJECT: HOME SCIENCE			CLASS: XI
MONTH	**TOPIC**	**SUB-TOPICS**	**CONCEPTS**
JUNE	Chapter 1 Introduction to Home Science Chapter 2 - Understanding the Self.	1. Concept of Home Science 2. Field of Home Science 3. Relevance of study of Home Science and career options 1. Who am I? 2. Development and Characteristics of the Self (Development characteristics and needs of adolescents) 3. Influences on Identity	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. 1. Definition and characteristics of adolescent 2. Biological and physical changes, Socio-cultural context, Emotional changes, Cognitive changes
JULY	Chapter 3 - Food, Nutrition, Health and Fitness Chapter 4 - Management of Resources	1. Definitions 2. Using Basic food Groups for planning Balanced Diets 3. Dietary patterns in Adolescence 1. Classification and chaaracteristics of resources 2. Management Process	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 1. Human and non-human resources 2. Process - Planning, Organising, Implementing, Controlling and Evaluation
AUGUST	**MID TERM EVALUATION 1- CHAPTERS 1,2,3&4**		
AUGUST - SEPTEMBER	Chapter 5- Fabric Around us	1. Definitions 2. Classification of fibres 3. Yarn processing 4. Properties of fibre 5. Fabric production 6. Textile finish	1. Fibre, yarn 2. Length - staple, filament; Origin - natural and manmade 3. Spinning 4. Physical, thermal, chemical and biological. 5. Weaving, Knitting, felting, Braiding 6. Basic and special finishes
SEPTEMBER	Chapter 6 - Media and Communication Technology	1. Definition 2. Classification 3. Functions of media 4. Classification of communication technology	1. Communication 2. Interpersonal and intrapersonal; Group and mass communication 3. Modern communication technologies
OCTOBER	**TERM END EVALUATION - CHAPTERS 1,2,3,4,5&6**		
OCTOBER	Chapter 7- Concerns and needs in diverse contexts	1. Nutrition, Health and Hygiene 2. Resources Availability and Management	1. Dimensions and indicators of health 2. Factors affecting nutritional well being 3. Malnutrition, Hygiene and Sanitation 4. Time management 5. Space management
NOVEMBER	Chapter 8 -Survival, Growth and Development Chapter 9 - Nutrition, Health and Wellbeing	1. Growth and development 2. Aspects of development 1. Nutrition, Health and Well-being during infancy (birth – 12 months) 2. Nutrition, Health and well-being of preschool children (1-6 years) 3. Nutrition, Health and well-being of school-age children (7-12 years)	1. Difference and meaning of growth and development 2. Physical, Social, Emotional, Cognitive, Language and Motor Development 1. Immunity, Immunization, importance of breast feeding, weaning,nutritional problems (0-1year) 2. Planning of balanced meal (1-6 years) 3. Diet planning and healthy habits (7-12 years)
DECEMBER	Chapter 10 - Our Apparel Chapter 11 - Health and Wellness	1. Clothing functions and the selection of clothes 2. Factors affecting selection of clothing in India 3. Understanding children"s basic clothing needs 4. Clothing requirements at different childhood stages 1. Fitness and benefits of physical activity 2. Categories of exercises 3. Dimensions of wellness 4. Coping with stress	1. Modesty, Protection, Status and prestige,Adornment 2. Age, Climate and season, Occasion, Fashion, Income 3. Comfort, Safety, Self help, Appearance, Allowance for growth, Easy care, Fabrics 4. Infancy, Childhood, Adolescents, CWSN 1. Exercise - Aerobic, strength building, flexibility 2. Dimensions of wellness - Social aspect, Physical aspect, Intellectual aspect, Occupational aspect, Emotional aspect, Spiritual aspect, Environmental aspect, Financial aspect, 3. Simple techniques to cope with stress - Relaxation, Talking with friends/family, Reading, Spirituality, Music, Hobby, Yoga
JANUARY	**MID TERM EVALUATION 2- CHAPTERS 7,8,&9**		
JANUARY	Chapter 12 - Financial Management and planning Chapter 13 - Care and Maintenance of fabrics	1. Types of family income 2. Expenditure 3. Budget making 4. Savings 5. Investment 6. Credit 1. Need for care of clothes 2. Laundering and storage of different types of clothes 3. Stain removal 4. Care label	1. Money, real and psychic income and factors affecting income. 2. Definition and factors affecting expenditure 3. Investment - Bank, PO, LIC,PF 4. Credit - 4Cs 1. Soaps and detergents, General rules for storage 2. Techniques and reagents for stain removal, Principles of stain removal 3. Washing instructions on care label
FEBRUARY	**REVISION AND ANNUAL EXAMINATION**		

TEACHER'S NAME	NAME OF THE SCHOOL	SIGNATURE
BRIJULA CHANDRAN	BVM, EROOR	
C K VINEETHA	BMV,TRIPUNITHURA	
KARTHIKA V MENON	BVM, ELAMAKKARA	

Physical Education Year plan-class XI & XII -2023-2024

MONTH	TOPIC	SUB-TOPIC	CONCEPT
June	Physical Fitness	Introduction of HPE tests, KHELO-India Fitness test, Fitness awareness, Training of physical fitness, General Discipline, Training of Sports and games.	IMPORTANCE OF GENERAL FITNESS AND TEST BATTERIES
July	Selection For Competitions, HPE Test And Khelo India Fitness Test.	HPE tests, KHELO-India Fitness test, Selection of External competition, Intramural competitions, Training of physical fitness and various sports and games, Health education and sports injuries, Doping.	It Provides students with the knowledge and skills that will enable them to achieve and maintain a physically active and healthful life.
August	Selection For Annual Sports Meet.	March past training, KHELO-India test, Selection for Annual sports meet, Planning for organizing sports and games events, Training for external competitions, March past Training.	Planning For Organizing Sports And Games.
September	Selections For Different Competitions.	Selections for annual sports Meet, HPE fitness tests, KHELO -India fitness	Children Learn Best Through Play- Through

		tests, Selection and training for external competitions, Health education and sports injuries, Importance of physical education and sports related courses, Intramural competitions.	activity and doing.
October	HPE Test And Types of Training.	Selections for annual sports Meet, HPE Test, KHELO - India - fitness test, Selection and training for external competitions, Body fitness components, Intramural competitions, Type of Training(Fartlek training, interval training.	Children Develop a Fit and flexible Body.
November	Body posture,Health Education	HPE Test, KHELO - India - fitness test, Body posture, Preparation for annual spots meet, Intramural extramural competitions, Health education.	It Develops Strength And Endurance.
December	Health Education and First Aid	HPE test, KHELO-India-fitness tests, Health education and first aid, Maintenance of Physical fitness.	Students learn about the connection between physical activity with health.

| January | Personality Development. | HPE tests, KHELO-India fitness tests, Personality development, Maintenance of physical fitness, Assessment of grading continue. | Students learn to assess their body, its needs and its relationship with physical activity.

To make students understand Personality

*To make students understand motivation and its techniques. *To make students about Exercise Adherence and Strategies for enhancing Adherence to Exercise. *To make them aware of Aggression in sports and types. *To make students |

			understand Psychological Attributes in Sports.
February	Assessment Of Grading.	Assessment of grading continue, Personal hygiene, HPE Test	Assesses Their Progress in terms of Efforts , Processes and Outcomes.
March	Assessment	Physical Test assessment	Assesses Their Overall Performance.

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
YEAR PLAN FOR THE ACADEMIC YEAR 2023-2024
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 $\tan(x+y)$, $\tan(x-y)$ $\cot(x+y)$, $\cot(x-y)$, $\sin x + \sin y$, $\sin x - \sin y$, $\cos x + \cos y$, $\cos x - \cos y$. Identities related to $\sin 2x, \cos 2x, \tan 2x, \sin 3x, \cos 3x$ and $\tan 3x$.

	13	**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

BHARATIYA VIDYA BHAVAN, KOCHI

STD XI- APPLIED MATHEMATICS (241)

YEAR PLAN 2023 -24

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.

MID TERM 1 EXAMINATION (7/8/23 to 14/8/23)				
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 $n!$

				$n1!n2!…nk!$ 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 (5/10/2023-16/10/2023 - 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 $E1,E2 , …,En$ 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 $E1, E2, … , En$ 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.
		MID TERM 2 EXAMINATION (CALCULUS NOT INCLUDED) 8/1/24 TO 12/1/24		
FEBRUARY		REVISION		
		ANNUAL EXAMINATION 19/2/24 TO 28/2/24		

BAV , KAKKANAD – ANURAJ N

BNV, VELLOOR – LALITHA, K

BVM, GIRINAGAR – SOUMYA MENON

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

YEAR PLAN FOR THE ACADEMIC YEAR 2023-24
STD : XI   ARTIFICIAL INTELLIGENCE

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
June	PART B: Unit 1: Introduction To AI PART A:Unit 1 : Communication Skills-III	**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	**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
July	PART B: Unit 2: AI Applications & Methodologies PART A: Unit 1 : Communication Skills-III	**PART B Unit 2: AI Applications & Methodologies:** Present day AI and Applications Key Fields of Application in AI Characteristics and types of AI Cognitive Computing (Perception, Learning, Reasoning) Recommended deep-dive in NLP, CV AI and Society The Future with AI, and AI in Action Non-technical explanation of deep learning **PART A Unit 1 : Communication Skills-III** Session 7: Writing Skills — Parts of Speech Session 8: Writing Skills — Sentences Session 9: Greetings and Introduction Session 10: Talking about Self Session 11: Asking Questions Session 12: Talking about Family Session 13: Describing Habits and Routines Session 14: Asking for Directions	**Unit 2: AI Applications & Methodologies:** AI applications, cognitive computing, Impact of AI on society **Unit 1 : Communication Skills-III** Writing skills, communication skills.

Mid Evaluation I: 7/8/23 - 11/8/23

August	**PART A: Unit 2 : Self-Management Skills-III** **PART B: Unit 3: Maths for AI** (To be assessed through Practical only)	<u>**Unit 2 : Self-Management Skills-III**</u> **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** <u>**Unit 3: Maths for AI**</u> **Introduction to matrices (Recap)** **Introduction to set theory (Recap)** **Simple statistical concepts** **Visual representation of data, bar graph, histogram, frequency bins, scatter plots, etc. With co-ordinates and graphs introduction to dimensionality of data** **Simple linear equation**	<u>**Unit 2 : Self-Management Skills-III**</u> **Self Awareness, Importance of working in team** <u>**Unit 3: Maths for AI**</u> **Matrices, Statistics, Set theory, Data representations**
September	**PART B: Unit 4: AI Values (Ethical Decision Making)** **PART B: Unit 6: Critical & Creative Thinking** (To be assessed through Practical only) **PART A: Unit 3: Information and Communication Technology Skills-III**	<u>**PART B: Unit 4: AI Values (Ethical Decision Making)**</u> **AI: Issues, Concerns and Ethical Considerations** <u>**PART B: Unit 6: Critical & Creative Thinking (To be assessed through Practical only)**</u> **Design thinking framework** <u>**PART A: Unit 3: Information and Communication Technology Skills-III**</u> **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**	<u>**Unit 4: AI Values (Ethical Decision Making)**</u> **AI applications, Ethics , Bias , Jobs in AI age** <u>**Unit 6: Critical & Creative Thinking (To be assessed through Practical only)**</u> **Design Thinking framework, Prototype, Ideate** <u>**Unit 3: Information and Communication Technology Skills-III**</u> **Basic operations in Libre Office Writer**
Term End Evaluation I : 5/10/23 to 13/10/23			

Month			
October	PART B: Unit 5: Introduction To Storytelling PART A: Unit 4 : Entrepreneurial Skills-III	<u>PART B: Unit 5: Introduction To Storytelling</u> • **Storytelling: communication across the ages** • **The Need for Storytelling** • **Story telling with data** • **Conflict and Resolution** • **Storytelling for audience** • **Insights from storytelling** <u>PART A: Unit 4 : Entrepreneurial Skills-III</u> • **Session 1: Introduction to Entrepreneurship** • **Session 2: Values of an Entrepreneur** • **Session 3: Attitude of an Entrepreneur** • **Session 4: Thinking Like an Entrepreneur** • **Session 5: Coming Up with a Business Idea** • **Session 6: Understanding the Market** • **Session 7: Business Planning**	<u>Unit 5: Introduction To Storytelling</u> **Data visualisation and storytelling.** <u>Unit 4 : Entrepreneurial Skills-III</u> **Functions and qualities of an entrepreneur**
November	PART B: Unit 8: Regression PART A: Unit 5 : Green Skills-III	<u>PART B: Unit 8: Regression</u> •**Correlation and Regression** <u>PART A: Unit 5 : Green Skills-III</u> • **Session 1: Sectors of Green Economy** • **Session 2: Policies for a Green Economy** • **Session 3: Stakeholders in Green Economy** • **Session 4: Government and Private Agencies**	<u>Unit 8: Regression</u> • **Regression, Correlation, Pearson's coefficient** <u>Unit 5 : Green Skills-III</u> • **Green economy initiatives** • **Importance of green economy**
December	PART B: Unit 7: Data Analysis (Computational Thinking)**(To be assessed through Practical only)** PART A: Unit 9: Classification & Clustering(To be assessed through Practical only)	<u>PART B: Unit 7: Data Analysis (To be assessed through Practical only)</u> •**Types of structured data** • **Representation of data** • **Exploring Data** <u>PART A: Unit 9: Classification & Clustering(To be assessed through Practical only)</u> • **What is a classification problem?** • **Introduction to binary classification with logistic regression** • **True positives, true negatives, false positives and false negatives** • **Practice exercise on simple Binary Classification model**	<u>Unit 7: Data Analysis (To be assessed through Practical only)</u> **Data Analysis, Structured Data, Statistical terms and concepts** <u>Unit 9: Classification & Clustering(To be assessed through Practical only)</u> • **Machine learning and artificial intelligence.** • **Understanding of supervised and unsupervised learning and Regression Analysis.** • **Classification & Clustering** • **Clustering algorithms in Machine learning**
			Mid Evaluation II : 8/1/24 to 12/1/24

January	PART B: Unit 10: AI Values (Bias Awareness)(To be assessed through Practical only)	PART B: Unit 10: AI Values • **AI working for good** • **Principles for ethical AI** • **Types of bias (personal /cultural/societal)** • **How bias influences AI based decisions** • **How data driven decisions can be debiased** • **Hands on exercise to Detect the Bias**	Unit 10: AI Values • **Data, Bias, Data Bias, Types of Bias**
			Final Examination: 19/2/24 to 28/2/24

Name of the School	Name of the teacher(s)	Signature
1. BVM, ELAMAKKARA	Bindhu T C	
2. BVM, EROOR	Aneesha M R	
3. BVV, THRIKKAKARA	Sindhu Gopakumar	
4. BVM, GIRINAGAR	Saritha Vijayachandran	
5. BAV, KAKKANAD	Vidya Mohan	
6. BMV, TRIPUNITHURA	Srilekshmi M	
7. BNV, VELLOOR	Shybee Thomas	

BHARATIYA VIDYA BHAVAN, KOCHI			
YEAR PLAN FOR THE ACADEMIC YEAR 2023-24			
STD: XI		**SUB: COMPUTER SCIENCE**	
MONTH	TOPIC	SUB-TOPICS	CONCEPTS
June	**Unit II: Computational Thinking and Programming - 1**	Getting started with Python	Familiarization with the basics of Python programming, Knowledge of data types, Operators, Expressions, statement, type conversion & input/output, Errors
July	**Unit II: Computational Thinking and Programming - 2**	Flow of control	Flow of control, Conditional Statements
August	**Unit II: Computational Thinking and Programming - 3**	Flow of control	Iterative Statements (while loop only)
Mid Term Evaluation - 1 (7.8.2023 to 11.8.2023)			
September	**Unit II: Computational Thinking and Programming - 1**	Flow of control List	Iterative Statements (for loop) List
October	**Unit II: Computational Thinking and Programming - 1**	Tuple Dictionary	Tuple Dictionary
Term End Evaluation (5.10.2023 to 13.10.2023)			
November	**Unit II: Computational Thinking and Programming - 1**	String	String

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
December	**Unit I: Computer Systems and Organisation**	**Basic Computer Organization** **Number System** **Boolean Algebra**	Basic Computer Organization Number System Boolean Algebra
January & February	**Unit III: Society, Law and Ethics**	**Societal Impacts**	Societal Impacts
Mid Term Evaluation - 2 (8.1.2023 to 12.1.2023) **Final Examination (19.2.2023 to 28.2.2023)**			

BHARATIYA VIDYA BHAVAN, KOCHI
CLASS XI - INFORMATICS PRACTICES (065)
YEAR PLAN (2023 -'24)

MONTH	TOPIC	SUB TOPIC	CONCEPTS
June	Unit 2 **Introduction to Python**	Introduction to Python Programming – Basics of Python programming, Python interpreter - interactive and script mode, the structure of a program, indentation, identifiers, keywords, constants, variables, types of operators, precedence of operators, data types, mutable and immutable data types, statements, expressions, evaluation of expressions, 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**	Introduction to Python Programming - Control Statements: if-else, if-elif-else, while loop	Concept of conditional statement Concept of Iteration
August	Unit 2 **Introduction to Python**	**Mid Term Evaluation I (7thAug - 11th Aug)** Introduction to Python Programming - Control Statements : for loop	Concept of Iteration
September	Unit 2 **Introduction to Python**	Introduction to Python Programming - Lists: list operations - creating, initializing, traversing and manipulating lists, 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** Unit 1 **Introduction to Computer System**	**Term End Evaluation (5th Oct – 13th Oct)** Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements. 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. (**Project**)	Concepts of Dictionary : Key-value pair

November	Unit 2 **Introduction to Python** Unit 3**: Database concepts and the Structured Query Language**	Introduction to Python Programming - Dictionary methods and built-in functions – dict(), len(), keys(), values(), items(), update(), del(), clear() 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.	Concept of Dictionary methods and built-in functions. Concept of Database and Structured query language
December	Unit **3: Database concepts and the Structured Query Language**	Introduction to MySQL, creating a database using MySQL, Data Types Data Definition: CREATE DATABASE, CREATE TABLE, DROP, ALTER Data Query: SELECT, FROM, WHERE with relational operators, BETWEEN, logical operators, IS NULL, IS NOT NULL	Data types in MySQL SQL for data definition
January	Unit **3: Database concepts and the Structured Query Language**	Data Manipulation: INSERT, DELETE, UPDATE **Mid Term Evaluation II (8th Jan to 12th Jan)**	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. REVISION **Final Examination (19th Feb - 28th Feb)**	Artificial Intelligence,Big data and its characteristics, IOT, Cloud Computing and Cloud Services

BHARATIYA VIDYA BHAVAN,KOCHI KENDRA

YEAR PLAN –2023-'24

Std :XI			PHYSICS
MONTH	**TOPIC**	**SUB-TOPICS**	**CONCEPTS**
JUNE	**PHYSICAL WORLD AND MEASUREMENT KINEMATICS 1**	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. 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).
		Instantaneous velocity Scalar and vector quantities; Vector operations	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 areal number,unit

JULY	**KINEMATICS 1 (CONT....)** **KINEMATICS 2** **LAWS OF MOTION(UPTO FRICTION)**	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	vectors,multiplication of vectors by usual numbers,unit vector,Addition and subtraction of vectors,Resolution of a vector in a plane, rectangular components,Motion in a plane,cases of uniform velocity and uniform accelerationprojectile motion, uniform circular motion,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.
AUGUST	**LAWS OF MOTION (CONT..)** **WORK ENERGY AND POWER** **MIDTERM 1 EXAMINATION** **(UNIT I,UNIT II(CHAPTER 3 UPTO PROJECTILE MOTION))** **(10+8+7)**	Friction Uniform circular motion work energy collision	Static and kinetic friction,laws of friction, rollingfriction, 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	SYSTEM OF PARTICLES AND ROTATIONAL MOTION GRAVITATION	Center of mass Moment of a force and angular momentum Equilibrium of rigid bodies Moment of inertia, Kepler's laws of planetary motion Universal law of gravitation Gravitational potential energy Escape speed, orbital velocity of a satellite	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 motion, comparison of linear and rotational motions." Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation). 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
			Elasticity, Stress-strain relationship, Hooke's law,Young's modulus,

OCTOBER	**TERM END EXAMINATION** **UNIT I,UNIT II,UNIT III,UNIT IV** **AND UNIT V** **(5+15+8+7+15)** **MECHANICAL PROPERTIES OF SOLIDS** **MECHANICAL PROPERTIES OF LIQUIDS**	Elastic behaviour of solids, Modulus of Elasticity Elastic Energy, Pressure,Viscosity Surface tension, Capillary rise.	bulk modulus, shear modulus of rigidity(qualitative idea only), Poisson's ratio; elastic energy 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
NOVEMBER	**THERMAL PROPERTIES OF MATTER** **OSCILLATIONS**	Heat ,heat transfer blackbody radiation ,periodic motion,simple harmonic motion energy in SHM	Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; C_p, C_v - 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

DECEMBER	**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	**MIDTERM 2** **UNIT VI,UNIT VII(CHAPTER 7 ,CHAPTER 8 INCLUDING BERNOULLI'S THEOREM** **(12+13)** **THERMODYNAMICS** **KINETIC THEORY OF GASES**	Zeroth law ,fist 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 oftemperature; 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	**REVISION** **FINAL EXAMINATION** **UNIT I -5, UNIT 2 -8, UNIT 3-5, UNIT 4-4, UNIT 5 -6, UNIT 6-5, UNIT 7-9, UNIT 8-7, UNIT 9-6, UNIT 10-15**		

	Name of the teacher	School	Signature
	Asha A S	BMV,Thripunithura	
	Swapna Pillai	BVM,Girinagar	
	Sreejith C K	BVV, Thrikkakara	
	Lovely K N	BNV ,Vellore	

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 informationand 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 ,BusinessTransaction, 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
JUNE -JULY	Theory Base of Accounting	2.1 Generally Accepted Accounting Principles	Fundamental accounting assumptions:GAAP: Concept
		2.2 Basic Accounting Concepts	Business Entity, Money Measurement, Going Concern,Accounting Period, Cost Concept, DualAspect, Revenue Recognition, Matching, Full Disclosure. Consistency, Conservatism, Materiality and
		2.3 Systems of Accounting	Meaning
		2.4 Basis of Accounting	Cash basis and Accural 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 Apporach	Meaning and Analysis.
		MID TERM EVALUATION AUGUST 7-11	
AUGUST	Recording of Business Transactions	3.3 Rules of Debit andCredit.	Traditional and Modern Apporach
		3.4 Books of Original Entry	Journal with GST
		4.1 Cash Book	Simple cash book, cash book with bank column and petty cashbook
SEPTEMBER	Recording of Business Transactions	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.
		TERM END EVALUATION OCTOBER 5-13	
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)
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

		iii. General reserve iv. Specific reserve v. Secret Reserve Difference between capital and revenue reserve

MID TERM EVALUATION JAN 8-12

JANUARY -FEBUARY	Financial Statements	8.1 Preparation of financial statements without adjust	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 adjustmer	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 managers commission. Preparation of Trading and Profit and Loss account and
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 FEB 19-28			

SEEN AND SIGNED

NAME OF THE SCHOOL	NAME OF THE TEACHER	SIGNATURE
BVM,ELAMAKKARA	Shilaja T.R, Akhila Lal	
BVM, EROOR	Sangeeta Pai,Renuka	
BVM,GIRINAGAR	Ashmi M.R	
BVV, THRIKAKKARA	Mini Menon	
BMV,THIRUVAMKULAM	Nirmala V.K,	
BNV,VELLOOR	Manju Balan	
BAV,KAKKAND	Sudha Varma	
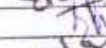
BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

STD XI – BOTANY – YEAR PLAN

2023-2024

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 Livig 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] TI he 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.

MID TERM EVALUATION I [AUGUST 7th TO AUGUST 11th] Portions Living world , Biological classification , Plant Kingdom CHAPTERS 1,2 & 3

Month	Chapter	Sub-topics	Details
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 "
	6.ANATOMY OF FLOWERING PLANTS.	6.1 The Tissues 6.2 The Tissue System	"Meristematic tissues 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 5th TO OCTOBER 13th] Portions Living world , Biological classification , Plant Kingdom, Morphology of flowering plants.
CHAPTERS 1,2,3 & 5

Month	Chapter	Sub-topics	Details
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.

		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
DECEMBER	11.PHOTOSYNTHESIS IN HIGHER PLANTS. CONTD...		
	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 DEVELOMENT.	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	MID TERM EVALUATION II [JANUARY 8 th TO JANUARY 12 th] PORTIONS CHAPTERS 6 &10 Anatomy of flowering plants and Cell cycle and Cell division		
FEBRUARY	13. PLANT GROWTH AND DEVELOMENT.	13.4 Plant Growth Regulators	Role of various Growth Regulators -Auxin,Gibberlin, Cytokinin,Ethylene and Abscissic acid

FINAL EXAMINATION [FEBRUARY 19 th TO FEBRUARY 28 th]
FULL PORTIONS   CHATERS 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 ZOOLOGY YEAR PLAN FOR THE ACADEMIC YEAR 2023-24

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
JUNE	CHAPTER 4 ANIMAL KINGDOM	4.1 Basis of classification	4.1.1 Levels of Organisation
			4.1.2 Symmetry
			4.1.3 Diploblastic and Triploblastic Organisation
			4.1.4 Coelom
			4.1.5 Segmentation
			4.1.6 Notochord
		4.2 Classification of animals	4.2.1 Phylum – Porifera
			4.2.2 Phylum – Coelenterata (Cnidaria)
			4.2.3 Phylum – Ctenophora
			4.2.4 Phylum – Platyhelminthes
			4.2.5 Phylum – Aschelminthes
			4.2.6 Phylum – Annelida
			4.2.7 Phylum – Arthropoda
			4.2.8 Phylum – Mollusca
			4.2.9 Phylum – Echinodermata
			4.2.10 Phylum – Hemichordata
JULY	CHAPTER 4 ANIMAL KINGDOM CONTD		4.2.11 Phylum – Chordata
	CHAPTER 7 STRUCTRAL ORGANISATION OF ANIMALS	7.1 Organ and organ system	Morphology and Anatomy
		7.2 Frog	7.2.1 Morphology
			7.2.2 Anatomy
AUGUST	CHAPTER 8 CELL- THE UNIT OF LIFE	8.1 What is a cell?	Cell
		8.2 Cell theory	Statements of cell theory
		8.3 An overview of cell	Difference between prokaryotic and eukaryotic cell
		8.4 Prokaryotic cells	8.4.1 Cell Envelope and its Modifications
			8.4.2 Ribosomes and Inclusion Bodies
		8.5 Eukaryotic cells	8.5.1 Cell Membrane
			8.5.2 Cell Wall
			8.5.3 Endomembrane System
			8.5.4 Mitochondria
			8.5.5 Plastids
			8.5.6 Ribosomes
			8.5.7 Cytoskeleton

			8.5.8 Cilia and Flagella
			8.5.9 Centrosome and Centrioles
			8.5.10 Nucleus
			8.5.11 Microbodies

(AUGUST 7 - 11) CHAPTER 4 ANIMAL KINGDOM AND CHAPTER 7 STRUCTURAL ORGANIZATION IN ANIMALS

SEPTEMBER	CHAPTER 9 BIOMOLECULES	9.1 How to Analyse Chemical Composition?	Chemical composition of living tissues
		9.2 Primary and Secondary Metabolites	Primary and Secondary Metabolites
		9.3 Biomacromolecules	Biomacromolecules and micromolecules
		9.4 Proteins	Structure of proteins
		9.5 Polysaccharides	Homo and hetero polysaccharides
		9.6 Nucleic Acids	Nucleosides and Nucleotides
		9.7 Structure of Proteins	Types of proteins
		9.8 Enzymes	Types, properties and enzyme action.
OCTOBER	TERM END EVALUATION 1 (OCT 5-13) CHAPTER 4,7		
	CHAPTER 14 BREATHING AND EXCHANGE OF GASES	14.1 Respiratory Organs	Respiratory Organs in animals
			14.1.1 Human Respiratory System
		14.2 Mechanism of Breathing	14.2.1 Respiratory Volumes and Capacities
		14.3 Exchange of Gases	Partil pressure of Oxygen , Carbondioxide and pressure gradient
		14.4 Transport of Gases	14.4.1 Transport of Oxygen
			14.4.2 Transport of Carbon dioxide
		14.5 Regulation of Respiration	Role of respiratory rhythm centre
		14.6 Disorders of Respiratory System	Asthma , Emphysema and Occupational respiratory disorders
NOVEMBER	15-BODY FLUIDS AND CIRCULATION	15.1 Blood	15.1.1 Plasma
			15.1.2 Formed Elements
			15.1.3 Blood Groups
			15.1.4 Coagulation of Blood
		15.2 Lymph (Tissue Fluid)	Components of lymph and its role
		15.3 Circulatory Pathways	15.3.1 Human Circulatory System
			15.3.2 Cardiac Cycle
			15.3.3 Electrocardiograph (ECG)
		15.4 Double Circulation	Pulmonary and Systemic circulation
		15.5 Regulation of Cardiac Activity	Role of ANS
		15.6 Disorders of Circulatory System	Hypertension , Angina Pectoris , CAD, Heart failure
DECEMBER	16-EXCRETORY PRODUCTS AND THEIR ELIMINATION	16.1 Human Excretory System	Structure of kidneys and nephron

		16.2 Urine Formation	Glomerular filtration , selective reabsorption and tubular secretion
		16.3 Function of the Tubules	Role of PCT , Henle's loop, DCT and Collecting duct
		16.4 Mechanism of Concentration of the Filtrate	Countercurrent mechanism
		16.5 Regulation of Kidney Function	Role of ADH , Renin-Angiotensin mechanism , ANF
		16.6 Micturition	Process of urination
		16.7 Role of other Organs in Excretion	Expulsion of Co2 and sweat through lungs and skin respectively
		16.8 Disorders of the Excretory System	Renal caliculi , Uremia, Nephritis , Dialysis and Artificial kidney , Kidney transplant
DECEMBER	CHAPTER 17 - LOCOMOTION AND MOVEMENT	17.1 Types of Movement	Ciliary , flagellar, amoeboid and muscular
		17.2 Muscle	Types of muscles
			17.2.1 Structure of Contractile Proteins
			17.2.2 Mechanism of Muscle Contraction
		17.3 Skeletal System	Axial and Appendicular
		17.4 Joints	Types of joints
		17.5 Disorders of Muscular and Skeletal System	Gout , Myasthenia gravis , Tetany , Muscular dysthrophy , Arthritis , Osteoporosis
JANUARY	CHAPTER 18 - NEURAL CONTROL AND COORDINATION	18.1 Neural System	Neuron and nerves
		18.2 Human Neural System	CNS, PNS , VNS
		18.3 Neuron as Structural and Functional Unit of Neural System	Types of neurons
			18.3.1 Generation and Conduction of Nerve Impulse
JANUARY	CHAPTER 19 - CHEMICAL COORDINATION AND INTEGRATION	19.1 Endocrine Glands and Hormones	Endocrine Glands and Hormones
		19.2 Human Endocrine System	19.2.1 The Hypothalamus
			19.2.2 The Pituitary Gland
			19.2.3 The Pineal Gland
			19.2.4 Thyroid Gland
			19.2.5 Parathyroid Gland
			19.2.6 Thymus
			19.2.7 Adrenal Gland
			19.2.8 Pancreas
			19.2.9 Testis
			19.2.10 Ovary

		19.3 Hormones of Heart, Kidney and Gastrointestinal Tract	Hormones of Heart, Kidney and Gastrointestinal Tract
		19.4 Mechanism of Hormone Action	Mechanism of action of lipid soluble and insoluble
FEBRUARY	REVISION		
	FINAL EXAMINATION FEB 19 - 28 , FULL PORTIONS		
NAME OF THE SCHOOL	NAME OF THE TEACHER	SIGNATURE	
BVM ELAMAKKARA	GEETHA SHYAMSUNDER		
BVM GIRINAGAR	INDU P		
BVM EROOR	SINIMOL P		
BVV THRIKKAKARA	SREEKALA KRISHNADAS		
BMV THRIPUNITHURA	NIVYAMOL C		
BNV VELLORE	DHANYA K C		
BAV KAKKANAD	SOUMYA K S		

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA
YEAR PLAN FOR THE ACADEMIC YEAR 2023-24
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 Business	Concept, merits and limitation
			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 AUGUST 7 - 11 (25 MARKS)			
AUGUST	PUBLIC, PRIVATE AND GLOBAL ENTERPRISES	3.1 Introduction	Introduction
		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	Meaning.
		4.6 Communication services	Postal services- Mail,Registered post, parcel, speed post, courier.
TERM END EVALUATION OCTOBER 5 - 13 (80 MARKS)			
OCTOBER	EMERGING MODES OF BUSINESS	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
	SOCIAL RESPONSIBILITIES OF BUSINESS AND BUSINESS ETHICS	6.1 Introduction	Introduction
		Responsibility	Concept
		responsibility	Case of social responsibilty
		different interest groups	Social responsibilty towards different interest groups
		protection	Role of business in environment protection
		6.6 Business Ethics	Concept and elements
		7.1 Introduction	Introduction
		significance of business finance	Meaning ,nature and significance of business finance

NOVEMBER	**SOURCES 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
DECEMBER	**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 enterrprises	Meaning,MSMED Act 2006 (Micro, Small and Medium Enterprise Development Act)
		8.3 Role of small business in India with special	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
MID TERM EVALUATION JANUARY 8 - 12 (25 MARKS)		
JANUARY	**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.
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 EXAMINATION FEBRUARY 19 - 28 (OUT OF 80)			
	SEEN AND SIGNED		
	BVM, ELAMAKKARA MARAR, SHAILAJA T R	: ARCHANA	*Archana M*
	BVM, GIRINAGAR MENON	: DEEPA V	*29/05/23*
	BVM, EROOR RENUKA BAIJU	: ANITHA V,	*Renukabai*
	BAV, KAKKANAD VARGHESE	: DEEPA	
	BVV, THRIKKAKARA	: MINI MENON	*Mini Menon*
	BMV, THIRUVANKULAM	: SAJITH S	
	BNV, VELLOOR DEEPAK	: SHERRY	

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	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 & Macro economics, Normative & Positive economics, Economy, Cental 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.
Mid Term Evaluation-1 (August 7th)	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) Geometric forms (bar diagrams – Simple and Multiple, Pie diagram) (ii) Frequency diagrams (histogram, Polygon and ogive)	Textual presentation of data, taqbular presentation, Parts of a table, Diagramatic presentation, Bar diagrams &Pie diagrams,Frequency diagrams-Histogram, Polygon , Ogives, Arithmatic line graphs
Term end evaluation-I (5/10/2023)	**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 of price elasticity of demand – percentage-change method and total expenditure method.	Demand, Market demand, Demand schedule, Demand curve, Price elasticity
	5. Measures of central tendency:	Mean, Median & Mode	Mean (simple), Median and Mode
	3. Production	Meaning of Production Function – Short-Run and Long-Run Total Product, Average Product and Marginal Product. Returns to a Factor-	Production function, TP,AP,MP
OCTOBER	**3. Producer Behaviour and Supply**	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 elasticity of supply; measurement of price elasticity of supply - percentage-change method.	TR,AR,MR,TC,AC,MC, Price elasticity,Supply
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

Mid Term Evaluation-2 (8/1/2024)

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 Examination (19/2/2024)

STATISTICS

LESSON	ACTIVITY
UNIT -1-Introduction	1. Discuss the functions and importance of statistics in Economics.
	2. Flow chart on consumption, production and distribution.
UNIT 2-Collection, Organization & Presentation of data	1. Prepare a questionnaire about a product, movie, or channels
	2. Conduct a survey about the popularity of IPL.
	Organization of data
	3. Prepare a frequency distribution on X th standard results.
UNIT-3-Statistical Tools and Interpretation	1. Games to find out Mean Median and Mode
	2. Find out averages of changes in trends and popularity

MICRO ECONOMICS

LESSON	ACTIVITY
UNIT -4	1. Prepare a flow chart on production consumption and distribution (Economic activities in day-to-day life.)
Introduction	2. Diagrammatic presentation of production possibility curve.
	3. Discussion on Normative and positive economics.
UNIT-5 Consumer's equilibrium and Demand	1. Diagramatic presentation of Law of diminishing marginal utility.
	2. Compare the utility of different products.
	3. Construct curves shows consumer equilibrium.
	4. Explain the law of diminishing marginal utility with the use of chocolates.
	5. Cartoons on Law of Demand

Suggestive list of Projects

Class XI

• Effect on PPC due to various government policies	• Invisible Hand (Adam Smith)
• Opportunity Cost as an Economic Tool (taking real life situations)	• Effect of Price Change on a Substitute Good (taking prices from real life visiting local market)
• Effect on Equilibrium Prices in Local Market (taking real life situation or recent news)	• Effect of Price Change on a Complementary Good (taking prices from real life visiting local market)
• Solar Energy, a Cost-Effective Comparison with Conventional Energy Sources	• Bumper Production- Boon or Bane for the Farmer
• Any other newspaper article and its evaluation on basis of economic principles	• Any other topic

YEAR PLAN FOR THE ACADEMIC YEAR 2023-24 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 proportion Avogadro'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 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,	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, $n + 1$ 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.	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

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
MID TERM EVALUTION - I **AUGUST 7 - 11** **PORTIONS- Some Basic Concepts of Chemistry(13),Structure of atom(12)Numericals(5)**			
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_2 molecule formation, Nonexistence of He_2molecule, 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

TERM END EVALUATION - I
OCTOBER 5 - 13
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)

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

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	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	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
MID TERM EVALUATION -IIJANUARY 8 T0 12Portions - Chemical Thermodynamics(12),Equilibrium(13)			

| FEBRUARY | Hydrocarbons | 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 | Hydrocarbons,classification of hydrocarbons,IUPAC nomenclature,physical and chemical properties,catalytic reduction,free radical halogenation,combustion,reforming ,aromatisations,pyrolysis,Markovnikov's law,peroxide effect,ozonlysis,polymerisation,acidic character of alkynes,addition reactions,resonance,aromticity,Huckel's rule,electrophilic substitution,Arenium ion,adddtion reactions by benzene,directing influence,Carcinogenicity and toxicity |

FINAL EXAMINATION
FEBRUARY 19 - 28 (ALL PORTIONS :40% of TERM I & 60% of TERM II)
UNIT 1 - 6 marks,UNIT 2 - 7 marks,UNIT 3 - 7 marks,UNIT 4 - 8 marks,UNIT 6 - 5 marks,UNIT 7 - 6 marks,UNIT 8- 7 marks,UNIT 12 -
11 marks &
UNIT 13- 13 marks

NAME OF THE SCHOOL	NAME OF THE TEACHER	SIGNATURE
BVM,GIRINAGAR	SREEVIDHYA M B	
BVM,EROOR	K R SINDHU	
BAV,KAKKANAD	KARTHIKA NANDAKUMAR	
BVV,THRIKKAKAKRA	BISMI S NAIR	
BMV,THIRUVANKULAM	SREEJA SREEDHAR	
BNV,VELOOR	LEKHA VENU	
BVM,ELAMAKKARA	HELEN EARNEST	