

BHARATIYA VIDYA BHAVAN, KOCHI KENDRA			
Subject: AI		CLASS: XII	
MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH/ APRIL	<b>PART B: Unit 2: Data Science Methodology: An Analytic Approach to Capstone Project</b>	INTRODUCTION TO DATA SCIENCE METHODOLOGY MODEL VALIDATION MODEL PERFORMANCE - EVALUATION METRICS PRACTICAL ACTIVITIES	Introduction to Data Science Methodology Steps for Data Science Methodology Model Validation Techniques Model Performance- Evaluation Metrics
	<b>PART A: Unit 1 : Communication Skills- IV</b>	<ul style="list-style-type: none"> <li>• Active Listening</li> <li>• Parts of Speech</li> <li>• Writing Sentences</li> </ul>	1. Importance of active listening at workplace 2. Steps to active listening 3. Writing skills to the following: <ul style="list-style-type: none"> <li>• Sentence</li> <li>• Phrase</li> <li>• Kinds of Sentences</li> <li>• Parts of Sentence</li> <li>• Parts of Speech</li> <li>• Articles</li> <li>• Construction of a Paragraph</li> </ul>
JUNE	<b>PART B: Unit 3: Making Machines See</b>	HOW MACHINES SEE? WORKING OF COMPUTER VISION COMPUTER VISION – PROCESS APPLICATIONS OF COMPUTER VISION CHALLENGES OF COMPUTER VISION THE FUTURE OF COMPUTER VISION Working with OpenCV:(**For Advanced Learners)	How Machines See Working of Computer Vision Computer Vision Process Applications of Computer Vision Challenges of Computer Vision The Future of Computer Vision Working with OpenCV (**For Advanced Learners)

	<b>PART B: Unit 1: Python Programming – II</b>	Python Libraries Import and Export Data between CSV Files and DataFrames Handling Missing Values	Recap of NumPy library Recap of Pandas Library Importing and Exporting Data between CSV Files and DataFrames Handling missing value Linear Regression algorithm (**For Advanced Learners) PRACTICAL ACTIVITY - Linear Regression algorithm
<b>Unit Test I : 08/06/2026 to 16/06/2026</b>			
<b>JULY</b>	<b>PART A: Unit 2: Self-management Skills - IV</b>	<ul style="list-style-type: none"> <li>• Motivation and Positive Attitude</li> <li>• Result Orientation</li> <li>• Self-awareness</li> </ul>	<ol style="list-style-type: none"> <li>1. Finding and listing motives(needs and desires);</li> <li>2. Finding sources of motivation and inspiration (music, books, activities);</li> </ol> expansive thoughts; living fully in the present moment; dreaming big  Personality <ol style="list-style-type: none"> <li>1. Describe the meaning of personality</li> <li>2. Describe how personality influence others</li> <li>3. Describe basic personality traits</li> <li>4. Describe common personality disordersparanoid, antisocial,schizoid, borderline, narcissistic, avoidant, dependent and obsessive</li> </ol>
	<b>PART B: Unit 5: Introduction to Big Data and Data Analytics</b>	What is Big Data? Types of Big Data Advantages and Disadvantages of Big Data Characteristics of Big Data Big Data Analytics Working on Big Data Analytics Mining Data Streams Future of Big Data Analytics	Introduction to Big Data Types of Big Data Advantages and Disadvantages of Big Data Characteristics of Big Data Big Data Analytics Working on Big Data Analytics Mining Data Streams Future of Big Data Analytics
<b>Unit Test II : 27/07/2026 to 03/08/2026</b>			

<b>August</b>	<b>PART B: Unit 6: Understanding Neural Networks</b>	<ul style="list-style-type: none"> <li>● Parts of a Neural Network</li> <li>● Components of a Neural Network</li> <li>● Working of a Neural Network</li> <li>● Types of Neural Networks</li> <li>● Future of Neural Networks and Societal Impact</li> </ul>	<ol style="list-style-type: none"> <li>1. Parts of a neural network.</li> <li>2. Components of a neural network.</li> <li>3. Working of a neural network.</li> <li>4. Types of neural networks, such as feedforward, convolutional, and recurrent.</li> <li>5. Impact of neural network on society.</li> </ol>
	<b>PART A: Unit 4: Entrepreneurial Skills</b>	<p>Entrepreneurship and Entrepreneur Barriers to Entrepreneurship Entrepreneurial Attitudes Entrepreneurial Competencies</p>	<ol style="list-style-type: none"> <li>1. Barriers to becoming entrepreneur</li> <li>2. Behavioral and entrepreneurial competencies– adaptability/ decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity</li> <li>3. Entrepreneurial competencies in particular: self - confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building</li> </ol>
	<b>PART B: Unit 4: AI with Orange Data Mining Tool</b>	<ul style="list-style-type: none"> <li>● What is Data Mining?</li> <li>● Introduction to Orange Data Mining Tool</li> <li>● Beneficiaries of Orange data mining</li> <li>● Getting started with Orange tool</li> <li>● Components of Orange</li> <li>● Default Widget Catalogue</li> <li>● Key domains of AI with ORANGE DATA MINING TOOL</li> </ul>	<ol style="list-style-type: none"> <li>1. Introduction to Orange Data Mining Tool</li> <li>2. Components of Orange Data Mining Tool</li> <li>3. Key domains of AI with Orange data mining tool – Data Science, Computer Vision, NLP</li> </ol>

September	<b>PART B: Unit 7: Generative AI</b>	<ul style="list-style-type: none"> <li>● Introduction to Generative AI</li> <li>● Working of Generative AI</li> <li>● Generative and Discriminative models</li> <li>● Applications of Generative AI</li> <li>● LLM- Large Language Model</li> <li>● Future of Generative AI</li> <li>● Ethical and Social Implications of Generative AI</li> </ul>	<ol style="list-style-type: none"> <li>1. Introduction to Generative AI</li> <li>2. Working of Generative AI</li> <li>3. Generative and Discriminative models</li> <li>4. Applications of Generative AI</li> <li>5. LLM- Large Language Model</li> <li>6. Future of Generative AI</li> <li>7. Ethical and Social Implications of Generative AI</li> </ol>
	<b>PART A: Unit 5: Green Skills</b>	Green Jobs Importance of Green Jobs	<ol style="list-style-type: none"> <li>1. Role of green jobs in toxin-free homes,</li> <li>2. Green organic gardening, public transport and energy conservation,</li> <li>3. Green jobs in water conservation</li> <li>4. Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes,</li> <li>5. Green jobs in green tourism</li> <li>6. Green jobs in building and construction</li> <li>7. Green jobs in appropriate technology</li> <li>8. Role of green jobs in Improving energy and raw materials use</li> <li>9. Role of green jobs in limiting greenhouse gas emissions</li> <li>10. Role of green jobs minimizing waste and pollution</li> <li>11. Role of green jobs in protecting and restoring ecosystems</li> <li>12. Role of green jobs in support adaptation to the effects of climate change</li> </ol>
<b>Skills-IV (3 marks) PART B Subject Specific Skills (40 marks) Unit 2: Data Science Methodology: An Analytic Approach to Capstone Proje</b>			

	<p><b>PART B: Unit 8: Data Storytelling</b></p>	<ul style="list-style-type: none"> <li>● Introduction to Storytelling</li> <li>● Elements of a Story</li> <li>● Introduction to Data Storytelling</li> <li>● Why is Data Storytelling Powerful?</li> <li>● Essential Elements of Data Storytelling</li> <li>● Narrative Structure of a Data Story (Freytag's Pyramid)</li> <li>● Types of Data and Visualizations for Different Data</li> <li>● Steps to Create a Story Through Data</li> <li>● Ethics in Data Storytelling</li> </ul>	<ol style="list-style-type: none"> <li>1. Introduction to Storytelling</li> <li>2. Elements of a Story</li> <li>3. Introduction to Data Storytelling</li> <li>4. Why is Data Storytelling Powerful?</li> <li>5. Essential Elements of Data Storytelling</li> <li>6. Narrative Structure of a Data Story (Freytag's Pyramid)</li> <li>7. Types of Data and Visualizations for Different Data</li> <li>8. Steps to Create a Story Through Data</li> <li>9. Ethics in Data Storytelling</li> </ol>
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<p><b>October</b></p>	<p><b>PART A: Unit 3: Information and Communication Technology Skills</b></p>	<p>Getting Started with Spreadsheet Performing Basic Operations in a Spreadsheet Working with Data and Formatting Text Advanced Features in Spreadsheet Presentation Software Opening, Closing, Saving and Printing a Presentation Working with Slides and Text in a Presentation Advanced Features used in Presentation</p>	<p><b>Spreadsheet Software</b> 1. Introduction to spreadsheet application 2. Spreadsheet applications 3. Creating a new worksheet 4. Opening workbook and entering text 5. Resizing fonts and styles 6. Copying and moving 7. Filter and sorting 8. Formulas and functions 9. Password protection. 10. Printing a spreadsheet. 11. Saving a spreadsheet in various formats. <b>Presentation Software</b> <b><i>(Saving a spreadsheet in various formats)</i></b> 1. Introduction to presentation 2. Software packages for presentation 3. Creating a new presentation 4. Adding a slide 5. Deleting a slide 6. Entering and editing text 7. Formatting text 8. Inserting clipart and images 9. Slide layout 10. Saving a presentation 11. Printing a presentation document</p>
<p>Communication Skills-IV (2 marks) Unit 2 : Self Management Skills-IV</p>		<p><b>PART B Subject Specific Skills</b> <b>Unit 2: Data Science Methodology: An Analytic Approach to Capstone Project</b> <b>Unit 3: Making Machines See</b> <b>Unit 5: Introduction to Big Data and Data Analytics</b> <b>Unit 6 : Understanding Neural Networks</b> <b>Unit 7: Generative AI</b> <b>Unit 8 : Data Story Telling</b></p>	

**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA****STD XII – BOTANY – YEAR PLAN (2026-2027)**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB TOPICS</b>	<b>CONCEPTS</b>
MARCH/ APRIL	1. Sexual Reproduction in Flowering Plants 4.Principles of Inheritance and Variation	1.1 Flower – A Fascinating Organ of Angiosperms 1.2 Pre-fertilisation : Structures and Events 1.3 Double Fertilisation 1.4 Post-fertilisation: Structures and Events  1.5 Apomixis and Polyembryony	Stamen, Microsporangium, and Pollen Grain The Pistil, Megasporangium, and Embryo Sac Pollination Double Fertilization Post-Fertilization: Structures and Events Apomixis and polyembryony
JUNE/JULY	4.Principles of Inheritance and variation contd....	4.1 Mendel's Laws of Inheritance 4.2 Inheritance of One Gene 4.3 Inheritance of Two Genes 4.4 Polygenic Inheritance 4.5 Pleiotropy 4.6 Sex Determination 4.7 Mutation 4.8 Genetic Disorders"	Hybridization experiments-Monohybrid cross and Dihybrid cross Law of segregation, Law of Dominance, Independent assortment Deviations from Mendelian pattern of inheritance Chromosomal theory of inheritance Sex determination mechanisms, Pedigree Analysis, Mendelian disorders, Chromosomal disorders.

**FIRST UNIT TEST [JUNE 8th TO 16 th]**  
**CHAPTER 1: SEXUAL REPRODUCTION IN FLOWERING PLANTS.**

<p>JULY/AUGUST</p>	<p>5.Molecular basis of inheritance</p>	<p>5.1 The DNA  5.2 The Search for Genetic Material  5.3 RNA World  5.4 Replication  5.5 Transcription  5.6 Genetic Code</p>	<p>Structure of Polynucleotide Chain  Packaging of DNA Helix  Transforming Principle,Biochemical  Characterisation of Transforming Principle  The Genetic Material is DNA  Properties of Genetic Material (DNA versus RNA)  The Experimental Proof for Replication  The Machinery and the Enzymes  Transcription Unit  Mutations and Genetic Code  tRNA– the Adapter Molecule  The Lac operon  Goals of HGP,Methodologies,Salient  Features of Human Genome and Rice  Genome Project  Applications and Future Challenges  Repetitive DNA,Satellite DNA,  Polymorphism,Variable Number of Tandem  Repeats</p>
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<p>AUGUST/SEPTEMBER</p>	<p>5.Molecular basis of inheritance contd..... 9-Biotechnology Principles and Processes</p>	<p>5.7 Translation 5.8 Regulation of Gene Expression 5.9 Human Genome Project,Rice Genome Proect 5.10 DNA Fingerprinting</p>	<p>Mutations and Genetic Code tRNA– the Adapter Molecule The Lac operon  Goals of HGP,Methodologies,Salient Features of Human Genome and Rice Genome Project  Applications and Future Challenges Repetitive DNA,Satellite DNA, Polymorphism,Variable Number of Tandem Repeats</p>
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		<p>9.1 Principles of Biotechnology  9.2 Tools of Recombinant DNA Technology  9.3 Processes of Recombinant DNA Technology</p>	<p>Genetic engineering, Bioprocess engineering, recombinant DNA, gene cloning and gene transfer, restriction endonuclease</p> <p>Gel electrophoresis Cloning Vectors</p> <p>Competent Host (For Transformation with Recombinant DNA)</p> <p>Processes of Recombinant DNA Technology</p>
<p><b>SECOND UNIT TEST [JULY 27th TO AUGUST 3rd ]</b>  <b>CHAPTER 4</b>  <b>4. Principles of Inheritance and Variation(Full Chapter)</b></p>			

<p>SEPTEMBER</p>	<p>9-Biotechnology Principles and Processes contd..... 10- Biotechnology and its Applications</p>	<p>9.3 Processes of Recombinant DNA Technology Contd..... 10.1 Biotechnological Applications in Agriculture</p>	<p>Processes of Recombinant DNA Technology contd....  Green Revolution,tissue culture,somatic hybridisationPest Resistant Plants Genetically Engineered Insulin Gene Therapy Transgenic Animals Ethical Issues Regarding Transgenic Animals Molecular Diagnosis</p>
<p>OCTOBER/NOVEMBER</p>	<p>10.Biotechnology and its Applications contd...</p>	<p>10.2 Biotechnological Applications in Medicine 10.3 Transgenic Animals 10.4 Ethical Issues</p>	<p>Genetically Engineered Insulin Gene Therapy Transgenic Animals Ethical Issues Regarding Transgenic Animals Molecular Diagnosis</p>
<p>OCTOBER/NOVEMBER</p>	<p>12. Ecosystem</p>	<p>12.1 Ecosystem - structure and function 12.2 Productivity 12.3 Decomposition 12.4 Energy flow 12.5 Ecological pyramids</p>	<p>Stratification NPP, GPP, Primary production and secondary production PAR, GFC, DFC and standing crop Types of ecological pyramids</p>

**TERM END EVALUATION [SEPTEMBER 28th TO OCTOBER 9th]**

**CHAPTERS 1,4, 5 and 9**

**1. Sexual Reproduction in Flowering Plants.**

**4.Principles of Inheritance and Variation**

**5.Molecular Basis of Inheritance**

**9.Biotechnology : Principles and processes.**

**FIRST MODEL EXAMINATION [NOVEMBER 23rd TO DECEMBER 14th]**

**CHAPTERS 1,4,5,9 ,10 and 12**

**SECOND MODEL EXAMINATION [ JANUARY 4th TO 22 nd]**

**CHAPTERS 1,4,5,9, 10 and 12**

**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA**

**STD XII – ZOOLOGY – YEAR PLAN**

**2026-2027**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB TOPICS</b>	<b>CONCEPTS</b>
MARCH	CHAPTER 2 HUMAN REPRODUCTION	2.1 Male reproductive system 2.2 Female reproductive system 2.3 Gametogenesis 2.4 Menstrual cycle 2.5 Fertilization and implantation 2.6 Pregnancy and embryonic development 2.7 Parturition and lactation	Structure and functions of male reproductive organs Structure and functions of female reproductive organs Spermatogenesis and oogenesis, Hormonal control, structure of sperm , structure of ovary Various events during menstrual cycle,

			hormonal control, menstrual hygiene Structure of ovum , sex determination, cleavage Formation of placenta , placental hormones , milestones of embryonic development Foetal ejection reflex , significance of colostrum
APRIL	CHAPTER 3 REPRODUCTIVE HEALTH	3.1 Reproductive health - problems and strategies 3.2 Population explosion and birth control 3.3 Medical termination of pregnancy 3.4 Sexually transmitted diseases 3.5 Infertility	Need for reproductive health IMR, MMR, contraceptive methods Why MTP is legalised? Types of STDs, symptoms and preventive measures ART - IVF, ZIFT, GIFT
JUNE	CHAPTER 11 ORGANISMS AND POPULATIONS	11.1 Populations	Population attributes, growth, growth models, life history variation, population interactions
	CHAPTER 6 EVOLUTION	6.1 Origin of life 6.2 Evolution of life forms - a theory 6.3 What are the evidences of evolution ? 6.4 What is adaptive radiation ?	Big bang theory, formation of universe Different theories on origin of life Paleontology, comparative anatomy, embryology, molecular evidences Darwin's finches , placental mammals and marsupials of australia
<b>FIRST UNIT TEST (JUNE 8-16 ) CHAPTER 2. HUMAN REPRODUCTION</b>			

JULY	CHAPTER 6 EVOLUTION CONTINUES..	6.5 Biological evolution 6.6 Mechanism of evolution 6.7 Hardy-weinberg 6.8 A brief account of evolution principle 6.9 Origin and evolution of man	Branching descent and natural selection Hugo de Vries theory and Darwin's theory on evolution Hardy Weinberg equilibrium, founder effect, operational techniques of natural selection Evolution of plants and animals through geological periods Different evolutionary stages of man
<b>SECOND UNIT TEST (JULY 27 - AUGUST 3) CHAPTER 3 REPRODUCTIVE HEALTH &amp; CHAPTER 11 ORGANISMS AND POPULATIONS</b>			
JULY	CHAPTER 7 HUMAN HEALTH AND DISEASE	7.1 Common Diseases in Humans 7.2 Immunity 7.3 AIDS 7.4 Cancer	Source, symptoms, target site and mode of transmission of common diseases in humans Innate and acquired, active and passive, vaccination, allergies, auto immunity and immune system Replication of retro virus, its transmission and prevention

			Types, causes, detection, diagnosis and treatment
AUGUST	CHAPTER 7 HUMAN HEALTH AND DISEASE CONTINUES.....	7.5 Drugs and Alcohol Abuse	Classification of drugs, their source, target site and effect on our body Adolescence and drug abuse, addiction and dependence, effects of drug, alcohol abuse, prevention and control
	CHAPTER 8 MICROBES IN HUMAN WELFARE	8.1 Microbes in Household Products 8.2 Microbes in Industrial Products 8.3 Microbes in Sewage Treatment 8.4 Microbes in Production of Biogas	Microbes in food processing Fermented beverages, antibiotics, bioactive molecules Primary and secondary treatment of sewage Study of biogas plant and biogas production
SEPTEMBER	CHAPTER 8 MICROBES IN HUMAN WELFARE CONTINUES....  CHAPTER 13 BIODIVERSITY AND ITS CONSERVATION	8.5 Microbes as Biocontrol Agents 8.6 Microbes as Biofertilisers  13.1 Biodiversity	Biological control of pests and diseases Organic farming , role of mycorrhizae and cyano bacteria  Types of biodiversity, representation of global biodiversity, patterns of biodiversity, loss of biodiversity,

OCTOBER	CHAPTER 13 BIODIVERSITY AND ITS CONSERVATION	13.2 Biodiversity Conservation	Why and How should we conserve biodiversity? In situ and Ex-situ
<b>PREMODEL EXAMINATION (SEPTEMBER 28 -OCTOBER 9) CH 2, 3, 6 , 7, 8 AND 11</b>			
NOVEMBER	<b>REVISION</b>		
<b>FIRST MODEL EXAMINATION (NOVEMBER 23 - DECEMBER 14) FULL PORTIONS</b>			
<b>SECOND MODEL EXAMINATION ( JANUARY 4 - 22 ) FULL PORTIONS</b>			

**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA****YEAR PLAN FOR THE ACADEMIC YEAR 2026-'27****STD: XII FINANCIAL MARKETS MANAGEMENT (805)**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB-TOPICS</b>	<b>CONCEPTS</b>
<b>MARCH/ APRIL</b>	<b>PART - B UNIT -1 INTRODUCTION TO INDIAN SECURITIES MARKET AND TRADING MEMBERSHIP</b>	Securities Market segments and products Market Reforms Trading memberships	1 Market segments 1.2 key indicators of Securities Markets 1.3 Products and Participants 1.4 Market segments and their products 1.5 Reforms in Indian Securities Markets 1.6 Stock Brokers 1.7 NSE Membership 1.8 Surrender of Trading membership 1.9 Suspension and Expulsion of Membership 1.10 Declaration of Defaulter 1.11 Authorized Persons 1.12 Sub-brokers 1.13 Broker-Clients Relations 1.14 Sub-broker client Relations 1.15 Investors Service Cell and Arbitration 1.16 Code of Advertisement Activity
<b>UNIT TEST – 1 08/06/2026 – 15/06/2026</b>			
<b>JUNE</b>	<b>PART - A UNIT 1 COMMUNICATION SKILLS – IV PART - A UNIT: 2 SELF MANAGEMENT SKILLS – IV</b>	Session 1 Active Listening Session 2 Parts of Speech Session 3 Writing Sentences  Session 1 Motivation and Positive Attitude Session 2 Result Orientation Session 3 Self-awareness	<ul style="list-style-type: none"><li>• Importance of active listening</li><li>• Steps to active listening</li> <li>• Sources of motivation and inspiration</li><li>• Personality</li></ul>

<p style="text-align: center;"><b><u>JUNE</u></b></p>	<p style="text-align: center;"><b>PART - B UNIT 2 TRADING</b></p>	<p>Over view of Trading network and NEAT screen</p> <p>Inquiry Screens</p> <p>Order Management</p>	<p>2.1 introduction 2.2 NEAT system 2.3 Market Type 2.4 Trading System Users' Hierarchy 2.5 local database 2.6 Market phases 2.7 logging on 2.8 logging off/exit from the application 2.9 NEAT Screen 2.10 Invoking an Inquiry Screen 2.11 Order managed on NEAT 2.12 Internet Broking 2.13 Co-location 2.14 Wireless Application Protocol</p>
<p style="text-align: center;"><b><u>JULY</u></b></p>	<p style="text-align: center;"><b>PART-B- UNIT 3: CLEARING AND SETTLEMENT, LEGAL FRAMEWORK</b></p>	<p>Clearing and Settlement Risk Management and Reports Legal Framework</p>	<p>3.1 Introduction 3.2 Key Technologies used in Clearing and Settlement Process 3.3 Transaction Cycle 3.4 Settlement Agencies 3.5 Clearing and Settlement Process 3.6 Securities and Funds Settlement 3.7 Shortages Handling 3.9 Risk management 3.10 International Securities Identification number 3.11 SEBI Regulations 2008 3.12 SEBI (Prohibition of Insider Trading) 3.13 SEBI (Prohibition of fraudulent and Unfair Trade Practices regulating to securities market) 3.14 The Depositories Act, 1996</p>
<p><b>UNIT TEST II 27/07/2026 - 03/08/2026</b></p>			

<p style="text-align: center;"><b><u>AUGUST</u></b></p>	<p><b>PART - A UNIT 3: ICT SKILLS – IV</b></p>	<p>Session 1 Getting Started with Spreadsheet Session 2 Performing Basic Operations in a Spreadsheet Session 3 Working with Data and Formatting Text Session 4 Advanced Features in Spreadsheet Session 5 Presentation Software Session 6 Opening, Closing, Saving and Printing a Presentation Session 7 Working with Slides and Text in a Presentation Session 8 Advanced Features used in Presentation</p>	<p><b>Spreadsheet Software</b> 1. Introduction to spreadsheet application 2. Spreadsheet applications 3. Creating a new worksheet 4. Opening workbook and entering text 5. Resizing fonts and styles 6. Copying and moving 7. Filter and sorting 8. Formulas and functions 9. Password protection. 10. Printing a spreadsheet.</p> <p><b>Presentation Software</b> <i>(Saving a spreadsheet in various formats)</i> 1. Introduction to presentation 2. Software packages for presentation 3. Creating a new presentation 4. Adding a slide 5. Deleting a slide 6. Entering and editing text 7. Formatting text 8. Inserting clipart and images 9. Slide layout 10. Saving a presentation 11. Printing a presentation document</p>
<p style="text-align: center;"><b><u>AUGUST</u></b></p>	<p><b>PART-B- UNIT 4 FINANCIAL STATEMENT ANALYSIS</b></p>	<p>Overview on Financial Statement Analysis Ratio Analysis and its types</p>	<p>4.1 CONCEPTS &amp; MODES OF ANALYSIS 4.1 .1 What is Simple Interest? 4.1.2 What is Compound Interest 4.1.3 What is meant by the Time Value of Money? 4.1.4 How to go about systematically analyzing a company?</p> <p>4.2 Ratio Analysis 4.2.1 Liquidity ratios 4.2.2 Leverage/Capital structure Ratios 4.2.3 Profitability Ratio</p>

<p><b><u>SEPTEMBER</u></b></p>	<p><b>PART-A UNIT-4 ENTREPRENEURIAL SKILLS - IV</b></p>	<p>Session 1 Entrepreneurship and Entrepreneur Session 2 Barriers to Entrepreneurship Session 3 Entrepreneurial Attitudes Session 4 Entrepreneurial Competencies</p>	<ol style="list-style-type: none"> <li>1. Barriers to becoming entrepreneur</li> <li>2. Behavioral and entrepreneurial competencies– adaptability/ decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity</li> <li>3. Entrepreneurial competencies in particular: self - confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building</li> </ol>
<p><b><u>SEPTEMBER</u></b></p>	<p><b>PART-A UNIT-5 GREEN SKILLS</b></p>	<p>Session 1 Green Jobs Session 2 Importance of Green Jobs</p>	<ol style="list-style-type: none"> <li>1. Role of green jobs in toxin-free homes,</li> <li>2. Green organic gardening, public transport and energy conservation,</li> <li>3. Green jobs in water conservation</li> <li>4. Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes,</li> <li>5. Green jobs in green tourism</li> <li>6. Green jobs in building and construction</li> <li>7. Green jobs in appropriate technology</li> <li>8. Role of green jobs in Improving energy and raw materials use</li> <li>9. Role of green jobs in limiting greenhouse gas emissions</li> <li>10. Role of green jobs minimizing waste and pollution</li> <li>11. Role of green jobs in protecting and restoring ecosystems</li> <li>12. Role of green jobs in support adaptation to the effects of climate change</li> </ol>

<b><u>SEPTEMBER</u></b>	<b>PART-B UNIT-5 INTRODUCTION TO DERIVATIVES</b>	Overview on Derivatives Understanding Interest Rates and Index significance	5.1 Types of Derivative Contracts 5.2 Basic Derivatives 5.3 History of Financial Derivatives Markets 5.4 Participants in a Derivatives Markets 5.5 Economic Function of the Derivative 5.6 Understanding Interest Rates 5.7 Understanding the Stock Index 5.8 Economic significance of Index Movements 5.9 Index Construction 5.10 Desirable Attributes of An Index 5.11 Applications of index
<b>PRE MODEL EXAMINATION: 28/09/2026- 09/10/2026</b>			
<b><u>OCTOBER</u></b>	<b>PART-B UNIT-6 FUTURE OPTION CONTRACTS MECHANISM AND PRICING</b>	Forward Vs Futures Contracts  Option Terminology	6.1 Forward 6.2 limitations of Forward Markets 6.3 Introduction to Futures 6.4 Distinction between Futures and Forwards Contracts 6.5 Futures terminologies 6.6 Trading Underlying Vs Trading Single Stock Futures 6.7 Futures Payoffs 6.8 Pricing Futures 6.9 Understanding Beta 6.10 Numerical Illustration of Applications of Stock Futures 6.11 Hedging using Stock Index Futures 6.12 Difference between Future and Option 6.13 Option payoff 6.14 Payoff profile for buyers and sellers 6.15 Application of Option
<b>MODEL EXAMINATION: 23/11/2026- 14/12/2026</b>			

**BHARATIYA VIDYA BHAVAN, KOCHI**

**YEAR PLAN FOR THE ACADEMIC YEAR 2026-27**

**SUB: FOOD, NUTRITION AND DIETITICS(834)**

**CLASS: XII**

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH-APRIL	PART B Unit 1 : Clinical and Therapeutic Nutrition	Chapter 1 Therapeutic Nutrition  Chapter 2 Therapeutic Diets  Chapter 3 Nutrition and Infection	Role of Dietitian in Health Care Role of Dietitian in Nutrition Care  Types of Dietary Adaptations for Therapeutic Needs A. Diets of Altered Consistency B. Modification in Quantity C. Modification in Nutrient (Protein, Fat, Carbohydrate) D. Changes in Meal Frequency E. Changes in Method of Cooking F. Modification in the Method of Feeding  The cycle of malnutrition and infection Infection and Nutritional Status
	PART A Unit 1: Communication Skills	Session 1 Active Listening Session 2 Parts of Speech	Factors affecting active listening Using capitals, punctuations basic and supporting parts of speech
JUNE	PART B Unit 1 : Clinical and Therapeutic Nutrition  Unit 2 : Diet in Health and Disease: cause, physiological conditions, clinical symptoms and dietary management	Chapter 4 Methods of Cooking  Chapter 5 Fever (Acute & Chronic)  Chapter 6 Diarrhoea  Chapter 7 Eating Disorders (Anorexia Nervosa, Bulimia, Binge Eating)	Principles of cooking food Cooking methods - Moist ,Dry heat & Combination Method  Fever: Definition, Causes & Symptoms Classification and Types Metabolic Changes during Fever Dietary Management of Sub-Acute Fever,Chronic Fever  Diarrhea: Definition, Causes & Symptoms Treatment and management of diarrhea  What are Eating Disorders? Clinical Characteristics, Sign, Symptoms of Eating Disorders Management of Eating Disorders
	PART A Unit 1: Communication Skills	Session 3 Writing Sentences	Simple and complex sentences Types of object

JUNE	<b>FIRST UNIT TEST - PART A: Unit 1: Communication Skills ( Active Listening ;Parts of Speech )</b> <b>PART B:Unit 1 : Clinical and Therapeutic Nutrition ( Chapters 1; 2; 3)</b>		
JULY	<b>PART B</b> <b>Unit 2 : Diet in Health and Disease: cause, physiological conditions, clinical symptoms and dietary management</b>  <b>Unit 3 : Diet in Health and Disease - II</b>	<b>Chapter 8 Overweight/Obesity</b>  <b>Chapter 9 Hypertension</b>  <b>Chapter 10 Diabetes</b>	<b>Why should we avoid Obesity?</b> <b>Causes</b> <b>General Strategies for Obesity Prevention</b> <b>Dietary Management of Obesity</b>  <b>Symptoms and Physiological Conditions</b> <b>Management of Hypertension &amp; Dietetics</b>  <b>Symptoms &amp; Physiological Conditions</b> <b>Management of Diabetes &amp; Dietetics</b>
	<b>PART A</b> <b>Unit 2: Self-management Skills</b>	<b>Session 1 Motivation and Positive Attitude</b> <b>Session 2 Result Orientation</b> <b>Session 3 Self-awareness</b>	<b>1. Finding and listing motives(needs and desires);</b> <b>2. Finding sources of motivation and inspiration (music, books, activities);</b> <b>expansive thoughts; living fully in the present moment; dreaming big</b>  <b>Personality</b> <b>1. Describe the meaning of personality</b> <b>2. Describe how personality influence others</b> <b>3. Describe basic personality traits</b> <b>4. Describe common personality disordersparanoid, antisocial,schizoid, borderline, narcissistic, avoidant, dependent and obsessive</b>
JULY	<b>SECOND UNIT TEST - PART A:Unit 1: Communication Skills ( Writing Sentences); Unit 2: Self-management Skills</b> <b>PART B: Unit 1 : Clinical and Therapeutic Nutrition ( Chapter 4);</b> <b>Unit 2 : Diet in Health and Disease: cause, physiological conditions, clinical symptoms and dietary management ( Chapters 5, 6, 7 &amp; 8)</b>		
AUGUST	<b>PART B</b> <b>Unit 3 : Diet in Health and Disease - II</b>	<b>Chapter 11 Jaundice/ Hepatitis</b>  <b>Chapter 12 Celiac disease, Lactose Intolerance &amp; Peptic ulcer</b>	<b>Symptoms &amp; Physiological Conditions</b> <b>Management of Hepatitis &amp; Dietetics</b> <b>Clinical Symptoms and Physiological Conditions</b> <b>Management of Jaundice &amp; Dietetics</b>  <b>Malabsorption Syndrome</b> <b>Causes Symptoms &amp; Physiological Conditions</b> <b>Management of Celiac Disease; Lactose Intolerance; peptic ulcers And Dietetics</b>

	<b>PART A</b> Unit 4: Entrepreneurship Skills	Session 1 Entrepreneurship and Entrepreneur Session 2 Barriers to Entrepreneurship Session 3 Entrepreneurial Attitudes Session 4 Entrepreneurial Competencies	1. Barriers to becoming entrepreneur 2. Behavioral and entrepreneurial competencies– adaptability/decisiveness, initiative/perseverance, interpersonal skills, organizational skills, stress management, valuing service and diversity 3. Entrepreneurial competencies in particular: self -confidence, initiative, seeing and acting on opportunities, concern for quality, goal setting and risk taking, problem solving and creativity, systematic planning and efficiency, information seeking, persistence, influencing and negotiating, team building
<b>SEPTEMBER</b>	<b>PART B</b> Unit 4 : Food Safety and Quality Control	Chapter 13 Food Hazards  Chapter 14 Personal Hygiene & Food Hygiene  Chapter 15 Food Adulteration	Food safety hazards Food Borne Disease Prevention and Control  Types of Personal Hygiene Environmental Sanitation and Safety Integrated Pest Management and Food Safety  Types of Adulteration Fssai III Effects of Adulterants
	<b>PART A</b> Unit 5: Green Skills	Session 1 Green Jobs Session 2 Importance of Green Jobs	1. Role of green jobs in toxin-free homes, 2. Green organic gardening, public transport and energy conservation, 3. Green jobs in water conservation 4. Green jobs in solar and wind power, waste reduction, reuse and recycling of wastes, 5. Green jobs in green tourism 6. Green jobs in building and construction 7. Green jobs in appropriate technology 8. Role of green jobs in Improving energy and raw materials use 9. Role of green jobs in limiting greenhouse gas emissions 10. Role of green jobs minimizing waste and pollution 11. Role of green jobs in protecting and restoring ecosystems 12. Role of green jobs in support adaptation to the effects of climate change
<b>SEPTEMBER- OCTOBER</b>	<b>PRE MODEL EXAMINATION - PART A ( Unit 1; 2; 4; 5)</b>		

OCTOBER	PART B Unit 4 : Food Safety and Quality	Chapter 16 Reading and Understanding Food labels  Chapter 17 HFSS Foods and their implications	Advantages and Limitations of food label Information of the Nutritional Facts provided by Label Standard/Certification Mark Guiding Principles of Nutrition Labelling  HFSS Foods' and Ingredients of Concern Preventive Measures
	PART A Unit 3: Information and Communication Technology Skills	Session 1 Getting Started with Spreadsheet Session 2 Performing Basic Operations in a Spreadsheet Session 3 Working with Data and Formatting Text Session 4 Advanced Features in Spreadsheet Session 5 Presentation Software Session 6 Opening, Closing, Saving and Printing a Presentation Session 7 Working with Slides and Text in a Presentation Session 8 Advanced Features used in Presentation	Spreadsheet Software 1. Introduction to spreadsheet application 2. Spreadsheet applications 3. Creating a new worksheet 4. Opening workbook and entering text 5. Resizing fonts and styles 6. Copying and moving 7. Filter and sorting 8. Formulas and functions 9. Password protection. 10. Printing a spreadsheet. 11. Saving a spreadsheet in various formats. Presentation Software (Saving a spreadsheet in various formats) 1. Introduction to presentation 2. Software packages for presentation 3. Creating a new presentation 4. Adding a slide 5. Deleting a slide 6. Entering and editing text 7. Formatting text 8. Inserting clipart and images 9. Slide layout 10. Saving a presentation 11. Printing a presentation document
NOVEMBER-DECEMBER	FIRST MODEL EXAMINATION		
JANUARY	SECOND MODEL EXAMINATION		

**BHARATIYA VIDYA BHAVAN, KOCHI**

**YEAR PLAN FOR THE ACADEMIC YEAR 2026-27**

**SUBJECT: HOME SCIENCE**

**CLASS: XII**

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH	Chapter 1 - Work, livelihood and Career	<ol style="list-style-type: none"> <li>1. Work, careers and livelihood</li> <li>2. Traditional occupation in India</li> <li>3. Work ,Age and Gender</li> <li>4. Life skills for livelihood</li> <li>5. Ergonomics</li> <li>6. Entrepreneurship</li> </ol>	<ol style="list-style-type: none"> <li>1. Agriculture, Handicraft, Indian cuisine, Visual arts</li> <li>2. KGBV, BBPY</li> <li>3. Soft skills at work place</li> <li>4. Four pillars - Anthropometry, Biomechanics, Industrial psychology, Physiology</li> <li>5. Entrepreneurs and social entrepreneurs</li> </ol>
APRIL	Chapter 2 - Clinical Nutrition and Dietetics	<ol style="list-style-type: none"> <li>1. Basic concepts</li> <li>2. Diet therapy</li> <li>3. Types of diet</li> <li>4. Feeding routes</li> <li>5. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Nutrition and clinical nutrition</li> <li>2. Diet therapy - Objectives</li> <li>3. Regular and modified diets</li> <li>4. Intravenous and tube feeding</li> </ol>
JUNE	Chapter 3 Public Nutrition and Health	<ol style="list-style-type: none"> <li>1. Basic concept</li> <li>2. Nutritional Problems of India</li> <li>3. Strategies/Intervention to tackle Nutritional problems</li> <li>4. Health Care</li> <li>5. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Public health nutrition</li> <li>2. PEM and micronutrient deficiencies</li> <li>3. Nutrient based and diet based strategies, ICDS, Food supplementation and food security programme, NDCP</li> <li>4. Primary, secondary and tertiary health care</li> </ol>
JUNE	<b>UNIT TEST I- CHAPTERS 1 &amp; 2</b>		
JUNE	Chapter 4 Food Processing and Technology	<ol style="list-style-type: none"> <li>1. Basic concepts</li> <li>2. Importance of Food processing and Preservation</li> <li>3. Classification of food on the basis of extent and type of processing</li> <li>4. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Food science, food processing, food technology and food manufacturing</li> <li>2. Perishable, semi-perishable and non- perishable foods</li> <li>3. Preserved foods, manufactured foods, formulated foods, food derivatives, functional foods, medical foods</li> </ol>
JUNE	Chapter 5 - Food Quality and Food Safety	<ol style="list-style-type: none"> <li>1. Basic concepts</li> <li>2. Food standards regulation in India-FSSA (2006)</li> <li>3. International Organization and agreements in the area of Food Standards, Quality, Research and Trade</li> <li>4. Food Safety Management Systems</li> <li>5. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Food safety (Toxicity &amp; Hazard), Hazards (Physical, chemical and biological), Food infection, Food poisoning, Food quality, food adulteration and contamination</li> <li>2. National, Company, Regional and international standards</li> <li>3. Codex Alimentarius Commission, International Organization for Standardisation &amp; World Trade Organization</li> <li>4. Good manufacturing practices (GMP), Good handling practices (GHP), Hazard Analysis Critical Control Points (HACCP)</li> </ol>
JULY	Chapter 6 - Early Childhood Care and Education	<ol style="list-style-type: none"> <li>1. Significance</li> <li>2. Basic concepts</li> <li>3. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Toddler, Creche, Montessori,</li> <li>2. Objectives and guiding principles of ECCE</li> </ol>
JULY	Chapter 7 - Management of Support Services, Institutions and Programmes for Children, Youth and Elderly	<ol style="list-style-type: none"> <li>1. Basic Concepts</li> <li>2. Why are children vulnerable?</li> <li>3. Institutions, programmes and initiatives for children</li> <li>4. Why are Youth vulnerable?</li> <li>5. Youth programmes in India</li> <li>6. Why are the elderly vulnerable?</li> <li>7. Some programmes for the elderly</li> <li>8.Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. ICDS, SOS Children’s Village, Children’s Homes run by the Government, Adoption</li> <li>2. NSS, NSVS, Prmotion of adventure, Scouts and guides, CYP, PNI</li> <li>3. Oldage home, respite home, NOAPS, mobile medicare unit</li> <li>4. People skill and administrative skill</li> </ol>
JULY	Chapter 8 - Design for Fabric and Apparel	<ol style="list-style-type: none"> <li>1. Basic concepts</li> <li>2. Elements of design</li> <li>3. Principles of Design</li> <li>4. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Design: Structural &amp; Applied</li> <li>2. Colour, Texture, Line, Shapes or form</li> <li>3. Proportion, Balance, Emphasis, Rhythm, Harmony</li> </ol>
JULY	<b>UNIT TEST II - CHAPTERS 3,4, 5 &amp; 6</b>		

AUGUST	Chapter 9 - Fashion Design and Merchandising	<ol style="list-style-type: none"> <li>1. Basic Concepts</li> <li>2. Fashion terminology</li> <li>3. Fashion Development</li> <li>4. Fashion Merchandising</li> <li>5. Fashion Retail Organization</li> <li>6. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Fashion ,fads, style, classic</li> <li>2. France-The centre of fashion, Fashion Evolution, Fashion cycle</li> <li>3. Retail organisation merchandising, buying agency merchandising, export house merchandising</li> <li>4. Market segmentation - Demographic, geographic, psychographic, behavioural</li> <li>5. Small single unit store, department store, chain store</li> <li>6. forecasting ability, analyticalability and communication skill</li> </ol>
	Chapter 10 - Care and Maintenance of Fabrics in Institutions	<ol style="list-style-type: none"> <li>1. Basic concepts</li> <li>2. Institutions</li> <li>3. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Washing equipment, Drying equipment, Ironing/pressing equipment</li> <li>2. Laundry in hospitals and hotels</li> </ol>
SEPTEMBER	Chapter 11 - Hospitality Management	<ol style="list-style-type: none"> <li>1. Basic concepts</li> <li>2. Departments involved in hospitality management of an organization</li> <li>3. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Hospitality, Guest cycle,</li> <li>2. Front office, House keeping department, Food and beverage department - Kitchen stewarding</li> </ol>
SEPTEMBER	Chapter 12 - Consumer Education and Protection	<ol style="list-style-type: none"> <li>1. Significance of consumer education and protection</li> <li>2. Basic concepts</li> <li>3. Standardized marks</li> <li>4. Protection Councils</li> <li>5. Consumer Responsibilities</li> <li>6. Scope</li> </ol>	<ol style="list-style-type: none"> <li>1. Consumer product, Consumer behaviour, Consumer forum, Consumer footfalls, Consumer problems, Consumer rights</li> <li>2. ISI, Wool Mark, Hall Mark, Silk Mark</li> </ol>
SEPTEMBER - OCTOBER	PRE MODEL EXAMINATION - CHAPTERS 1, 2, 3, 4, 5, 6, 7,8, 9, 10, 11, 12		
OCTOBER	Chapter 13: Development communication and Journalism	<ol style="list-style-type: none"> <li>1. Significance</li> <li>2. Basic concepts</li> <li>3. Methods of communication</li> <li>4. Scope and career avenues in development communication</li> </ol>	<ol style="list-style-type: none"> <li>1. Development, Development journalism, Development Communication</li> <li>2. Campaign</li> <li>3. Radio and television</li> <li>4. Print media - Project village Chhatera</li> <li>5. Information and communication technologies - SEWA, SARI,CLCs</li> </ol>
NOVEMBER-DECEMBER	FIRST MODEL EXAMINATION		
JANUARY	SECOND MODEL EXAMINATION		

# BHARATIYA VIDYA BHAVAN, KOCHI KENDRA

## YEAR PLAN MATHEMATICS(041)

### CLASS XII 2026-2027

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH	3.MATRICES	Introduction Matrix Types of matrices Operations on matrices Transpose of a matrix symmetric and skew symmetric matrices. Invertible matrices	Concept, notation, order, equality, types of matrices, zero and identity matrix, transpose of a matrix, symmetric and skew symmetric matrices. Operation on matrices: Addition and multiplication and multiplication with a scalar. Simple properties of addition, multiplication and scalar multiplication. Non- commutativity of multiplication of matrices and existence of non-zero matrices whose product is the zero matrix (restricted to square matrices of order 2). Invertible matrices and proof of the uniqueness of inverse, if it exists; (Here all matrices will have real entries).
APRIL	4.DETERMINANTS	Introduction Determinant Area of a Triangle Minors and Cofactors Adjoint and Inverse of a Matrix Applications of Determinants and Matrices	Determinant of a square matrix (up to 3 x 3 matrices), minors, cofactors and applications of determinants in finding the area of a triangle Adjoint and inverse of a square matrix. Consistency, inconsistency and number of solutions of systems of linear equations by examples, solving systems of linear equations in two or three variables (having unique solution) using inverse of a matrix.
JUNE	1.RELATIONS AND FUNCTIONS ( <b>Not for first Unit Test</b> )	Introduction Types of Relations Types of Functions	Types of relations: reflexive, symmetric, transitive and equivalence relations. One to one and onto functions.
<b>FIRST UNIT TEST(08/06/26 - 17/06/26) (chapters 3 and 4)</b>			

JUNE	2 .INVERSE TRIGONOMETRIC FUNCTIONS	Introduction Basic Concepts	Definition, range, domain, principal value branch. Graphs of inverse trigonometric functions
JUNE	5.CONTINUITY & DIFFERENTIABILITY	Introduction Continuity Differentiability Exponential and Logarithmic Functions Logarithmic Differentiation Derivatives of Functions in Parametric Forms Second Order Derivative	Continuity and differentiability, chain rule, derivative of COMPOSITE FUNCTIONS, inverse trigonometric functions like $\sin^{-1} x$ , $\cos^{-1} x$ , $\tan^{-1} x$ , derivative of implicit functions. Concept of exponential and logarithmic functions. Derivatives of logarithmic and exponential functions. Logarithmic differentiation, derivative of functions expressed in parametric forms. Second order derivatives.
JULY	6 .APPLICATION OF DERIVATIVES (NOT INCLUDED FOR SECOND UNIT TEST)	Introduction Rate of Change of Quantities Increasing and Decreasing Functions Maxima and Minima	Rate of change of quantities, increasing/decreasing functions, maxima and minima (first derivative test motivated geometrically and second derivative test given as a provable tool). Simple problems (that illustrate basic principles and understanding of the subject as well as real life situations).
<b>SECOND UNIT TEST(Chapters 1,2,5) (27/07/26 - 03/08/26)</b>			
JULY	7.INTEGRALS	Introduction Integration as an Inverse Process of Differentiation Methods of Integration Integrals of Some Particular Functions Integration by	Integration as an inverse process of differentiation. Integration of a variety of functions by substitution, by partial fractions and by parts, Evaluation of special integrals. Fundamental theorem of calculus (without proof), Basic properties of definite integrals and evaluation of definite integrals.

		Partial Fractions Integration by Parts Definite Integral	
AUGUST	8. Application of Integrals	Introduction Area under Simple Curves	Applications in finding the area under simple curves, especially lines, circles/ parabolas/ellipses; (in standard form only)
AUGUST	9. Differential Equations	Introduction Basic Concepts General and Particular Solutions of a Differential Equation Methods of Solving First Order, First Degree Differential Equations	Definition, order and degree, general and particular solutions of a differential equation. Solution of differential equations by method of separation of variables, solutions of homogeneous differential equations of first order and first degree . Solutions of linear differential equation of the type $dy/dx + P y = Q$ , where P and Q are functions of x or constants . $dx/dy + Px = Q$ where P and Q are functions of y or constants

SEPTEMBER	10. Vectors	<p>Introduction  Some Basic  Concepts  Types of Vectors  Addition of Vectors  Multiplication of a  Vector by a Scalar  Product of Two  Vectors</p>	<p>Vectors and scalars, magnitude and direction of a vector  ,direction cosines and direction ratios of a vector ,types of  vectors,(equal, unit, zero ,parallel and collinear  vectors)position vector of a point,negative of a vector,  components of a vector ,addition of vectors ,multiplication  of vectors by a scalar ,position vector of a point dividing a  line segment in a given ratio,definition ,geometrical  interpretation ,properties and application of scalar  product of vectors ,vector product of vectors</p>
<p>PRE MODEL EXAM (7/10/26 to 18/10/26) (Chapters1,2,3,4,5,6,7,8,9,10)</p>			

OCTOBER	11. Three dimensional Geometry	<p>Introduction  Direction  Cosines and  Direction Ratios  of a Line  Equation of a  Line in Space  Angle between  Two Lines  Shortest  Distance  between Two  Lines</p>	<p>Direction cosines and direction ratios of a line joining two points. Cartesian equation and vector equation of a line, skew lines, shortest distance between two lines.  Angle between 2 lines</p>
OCTOBER	12.LINEAR PROGRAMMING	<p>Introduction  Linear Programming Problem</p>	<p>Introduction, related terminology such as constraints, objective function, optimization, Graphical method of solution for problems in two variables, feasible and infeasible regions (bounded OR unbounded), feasible and infeasible solutions, optimal feasible solutions (up to three non-trivial constraints).</p>

OCTOBER	13. Probability	Introduction Conditional Probability Multiplication Theorem on Probability Independent Events Bayes' Theorem	Conditional probability, multiplication theorem on probability, independent events, total probability, Bayes' theorem.
FIRST MODEL EXAM (23/11/2026 TO 14/12/2026)			

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**YEAR PLAN FOR CLASS XII – 2026-27**

<b>MONTH</b>	<b>TOPIC</b>
<b>JUNE</b>	PART A UNIT 1 – Communication Skills & Part B Unit 1 – Overview Of Physical Education & Sports Sectors
<b>JULY</b>	PART A UNIT 2 – SELF MANAGEMENT SKILLS, PART B UNIT 1 – OVERVIEW OF PHYSICAL EDUCATION & SPORTS SECTORS & PART B UNIT 2 – ASSESSMENT OF STUDENTS
<b>AUGUST</b>	PART B UNIT 2 – ASSESSMENT OF STUDENTS
<b>SEPTEMBER</b>	PART B UNIT 3 – EMERGENCY MANAGEMENT
<b>OCTOBER</b>	PART A – UNIT 3 – INFORMATION AND COMMUNICATION TECHNOLOGY SKILLS & PART B – UNIT 4 – HEALTH AND HYGIENE IN PLAY AREA
<b>NOVEMBER</b>	PART A UNIT 4 – ENTREPRENURAL SKILLS & PART A UNIT 5 – GREEN SKILLS

**BHARATIYA VIDYA BHAVAN, KOCHI**

**YEAR PLAN FOR THE ACADEMIC YEAR 2025- 2026**

**Std. XII - PHYSICS**

MONTH	TOPIC	SUB-TOPICS	CONCEPTS
MARCH/ APRIL	<b>Chapter-1: Electric Charges and Fields</b>  <b>Chapter-2: Electrostatic Potential and Capacitance</b>	<b>Electric charges, Electric Field, Electric Flux, Gauss's law</b>  <b>Electric potential &amp; potential energy, equipotential surfaces, Conductors and insulators, Dielectrics and electric polarization Capacitors and capacitance.</b>	Electric charges, Conservation of charge, Coulomb's law-force between two- point charges, forces between multiple charges; superposition principle and continuous charge distribution. Electric field, electric field due to a point charge, electric field lines, electric dipole, electric field due to a dipole, torque on a dipole in uniform electric field. Electric flux, statement of Gauss's theorem and its applications to find field due to infinitely long straight wire, uniformly charged infinite plane sheet and uniformly charged thin spherical shell (field inside and outside).  Electric potential, potential difference, electric potential due to a point charge, a dipole and system of charges; equipotential surfaces, electrical potential energy of a system of two-point charges and of electric dipole in an electrostatic field. Conductors and insulators, free charges and bound charges inside a conductor. Dielectrics and electric polarization, capacitors and capacitance, combination of capacitors in series and in parallel, capacitance of a parallel plate capacitor with and without dielectric medium between the plates, energy stored in a capacitor (no derivation, formulae only).

JUNE	Chapter–3: Current Electricity	Electric current, drift velocity, Ohm's law, temperature dependence of resistance, Internal resistance and emf of a cell, Kirchhoff's rules, Wheatstone bridge.	Electric current, flow of electric charges in a metallic conductor, drift velocity, mobility and their relation with electric current; Ohm's law, V-I characteristics (linear and non-linear), electrical energy and power, electrical resistivity and conductivity, temperature dependence of resistance, Internal resistance of a cell, potential difference and emf of a cell, combination of cells in series and in parallel, Kirchhoff's rules, Wheatstone bridge.
	Chapter–4: Moving Charges and Magnetism	Biot - Savart law and its applications, Ampere's law and its applications, force on a moving charge in uniform magnetic and electric fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors, torque experienced by a current loop in uniform magnetic field, moving coil galvanometer	Concept of magnetic field, Oersted's experiment, Biot - Savart law and its application to current carrying circular loop. Ampere's law and its applications to infinitely long straight wire. Straight solenoid (only qualitative treatment), force on a moving charge in uniform magnetic and electric fields. Force on a current-carrying conductor in a uniform magnetic field, force between two parallel current-carrying conductors-definition of ampere, torque experienced by a current loop in uniform magnetic field; Current loop as a magnetic dipole and its magnetic dipole moment, moving coil galvanometer- its current sensitivity and conversion to ammeter and voltmeter.
<b>FIRST UNIT TEST (25 marks) /9 JUNE to 17 JUNE</b> <b>Electric Charges and Fields –</b> <b>Electrostatic Potential and Capacitance -</b> <b>8(including potential due to a dipole)</b>			
JULY	Chapter–5: Magnetism and Matter	Bar magnet, magnetic field intensity due to a magnetic dipole (bar magnet), torque on a magnetic dipole. Magnetic properties of materials, Magnetization of materials, effect of temperature on magnetic properties.	Bar magnet, bar magnet as an equivalent solenoid (qualitative treatment only), magnetic field intensity due to a magnetic dipole (bar magnet) along its axis and perpendicular to its axis (qualitative treatment only), torque on a magnetic dipole (bar magnet) in a uniform magnetic field (qualitative treatment only), magnetic field lines. Magnetic properties of materials- Para-, dia- and ferro -magnetic substances with examples, Magnetization of materials, effect of temperature on magnetic properties.
	Chapter–6: Electromagnetic Induction	Electromagnetic induction; Lenz's Law, Self and mutual induction.	Electromagnetic induction; Faraday's laws, induced EMF and current; Lenz's Law, Self and mutual induction.

**SECOND UNIT TEST (25 marks) [25 JULY to 2 AUGUST]**  
**Electrostatic Potential and Capacitance (from equipotential surface )**  
**Current Electricity**  
**Moving Charges and Magnetism**  
**( including Force on a current-carrying conductor in a uniform magnetic field )**

<b>AUGUST</b>	<p><b>Chapter–7: Alternating Current</b></p> <p><b>Chapter–8: Electromagnetic Waves</b></p> <p><b>Chapter–9: Ray Optics and Optical Instruments</b></p>	<p><b>Alternating currents, LCR series circuit (phasors only), AC generator, Transformer.</b></p> <p><b>Basic idea of displacement current, Electromagnetic waves, Electromagnetic spectrum</b></p> <p><b>Reflection of light, spherical mirrors, refraction of light, refraction at spherical surfaces, lenses, , lens maker’s formula, refraction of light through a prism.</b></p> <p><b>Optical instruments</b></p>	<p>Alternating currents, peak and RMS value of alternating current/voltage; reactance and impedance; LCR series circuit (phasors only), resonance, power in AC circuits, power factor, wattless current. AC generator, Transformer.</p> <p>Basic idea of displacement current, Electromagnetic waves, their characteristics, their transverse nature (qualitative idea only). Electromagnetic spectrum (radio waves, microwaves, infrared, visible, ultraviolet, X-rays, gamma rays) including elementary facts about their uses.</p> <p>Reflection of light, spherical mirrors, mirror formula, refraction of light, total internal reflection and optical fibers, refraction at spherical surfaces, lenses, thin lens formula, lens maker’s formula, magnification, power of a lens, combination of thin lenses in contact, refraction of light through a prism.</p> <p>Optical instruments: Microscopes and astronomical telescopes (reflecting and refracting) and their magnifying powers.</p>
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SEPTEMBER	Chapter–10: Wave Optics	Wave front and Huygen’s principle, Interference, diffraction due to a single slit.	Wave front and Huygen’s principle, reflection and refraction of plane wave at a plane surface using wave fronts. Proof of laws of reflection and refraction using Huygen’s principle. Interference, Young's double slit experiment and expression for fringe width (No derivation final expression only), coherent sources and sustained interference of light, diffraction due to a single slit, width of central maxima (qualitative treatment only).
	Chapter–11 Dual Nature of Radiation and Matter	Dual nature of radiation, Photoelectric effect, Einstein's photoelectric equation, de-Broglie relation.	Dual nature of radiation, Photoelectric effect, Hertz and Lenard's observations; Einstein's photoelectric equation-particle nature of light. Experimental study of photoelectric effect Matter waves-wave nature of particles, de-Broglie relation.
	Chapter–12: Atoms	Alpha-particle scattering experiment; Bohr model of hydrogen atom	Alpha-particle scattering experiment; Rutherford's model of atom; Bohr model of hydrogen atom, Expression for radius of nth possible orbit, velocity and energy of electron in nth orbit, hydrogen line spectra (qualitative treatment only).
OCTOBER	Chapter–13: Nuclei	Composition and size of nucleus, nuclear force, mass defect & binding energy per nucleon , nuclear fission, nuclear fusion	Composition and size of nucleus, nuclear force, mass-energy relation, mass defect & binding energy per nucleon and its variation with mass number nuclear fission, nuclear fusion.
	Chapter–14: Semiconductor Electronics: Materials, Devices and Simple Circuits	Energy bands in conductors, Intrinsic and extrinsic semiconductors- , p-n junction, application of junction diode.	Energy bands in conductors, semiconductors and insulators (qualitative ideas only) Intrinsic and extrinsic semiconductors- p and n type, p-n junction Semiconductor diode - I-V characteristics in forward and reverse bias, application of junction diode -diode as a rectifier.
<b>PRE MODEL EXAMINATION (7th October to 18th October)</b>			
<p>Electric Charges and Fields &amp; Electrostatic -potential and capacitance</p> <p>Current Electricity</p> <p>Moving Charges and Magnetism &amp; Magnetism and Matter</p> <p>EMI &amp; AC</p> <p>EM Waves</p> <p>Ray Optics</p> <p>Wave Optics (Upto Interference, including reflection and refraction using Huygen’s principle )</p>			
NOVEMBER & DECEMBER	<b>FIRST MODEL EXAMINATION (ALL CHAPTERS)</b> <b>(24th November to 12th December)</b>		

JANUARY		<b>SECOND MODEL EXAMINATION (ALL CHAPTERS)</b> <b>(January 1st to 14th)</b>
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**Physical Education**  
**Year Plan-class XII -2026-2027**

<b>June</b>	<ul style="list-style-type: none"> <li>• Physical fitness exercise</li> <li>• Training in Sports and games</li> <li>• Selection for Annual Sports day</li> <li>• BMI</li> <li>• March Past</li> <li>• HPE Activity.</li> </ul>
<b>July</b>	<ul style="list-style-type: none"> <li>• HPE Fitness assessment</li> <li>• External competitions &amp; Intramural competitions</li> <li>• Training in physical fitness and various sports and games,</li> <li>• BMI</li> <li>• Inter class competition</li> <li>• March Past</li> <li>• Selection for annual sports day.</li> </ul>
<b>August</b>	<ul style="list-style-type: none"> <li>• March past training</li> <li>• Selection for Annual sports meet</li> <li>• Training for external competitions</li> <li>• Major games</li> <li>• Inter house competition</li> <li>• HPE Fitness assessment</li> <li>• HPC Activity</li> </ul>
<b>September</b>	<ul style="list-style-type: none"> <li>• Organizing sports day</li> <li>• Training for external competitions &amp; Intramural competitions Inter class competition</li> <li>• HPE Fitness assessment</li> <li>• Practice session for major sports and games.</li> </ul>
<b>October</b>	<ul style="list-style-type: none"> <li>• General fitness exercises</li> <li>• Training in various sports and games</li> <li>• HPE Fitness assessment</li> <li>• Inter house and Inter class competition.</li> </ul>
<b>November</b>	<ul style="list-style-type: none"> <li>• General fitness exercise</li> <li>• Inter house and inter class competition</li> <li>• HPE Fitness assessment</li> <li>• Practice for various sports and games</li> </ul>
<b>December</b>	<ul style="list-style-type: none"> <li>• Assessment and grading</li> </ul>

**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA  
COMPUTER SCIENCE  
YEAR PLAN FOR THE ACADEMIC YEAR 2026-27**

**CLASS: XII**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB-TOPICS</b>	<b>CONCEPTS</b>
<b>MARCH/ APRIL</b>	Computational Thinking and Programming-2 Database Management	Revision of python topics in class XI (Functions Database concepts Relational data model till delete command)	Basic concepts of Python programming Creating reusable and modular code, promoting good programming practices such as code reusability, readability, and maintainability. Concepts of RDBMS.
<b>UNIT TEST 1(8/6/2026 to 16/06/2026)</b>			
<b>TOPICS :REVISION STD XI,FUNCTIONS,DATABASE CONCEPTS,RELATIONAL DATA MODEL(till delete command)</b>			
<b>JUNE</b>	Database Management	Structured Query Language,Interface o	The use of RDBMS to store, organize, and retrieve large amounts of data efficiently. Understand and use MySQL commands to store and manage data. Grouping and filtering of records to get cumulative data. Extracting data from multiple tables. Client Server architecture -to transfer and manage
<b>JULY</b>	Computational Thinking and Programming-2 Database Management	Introduction to Files,Text Files, Binary Files,	Files as a medium for permanent storage. Binary file Handling Types of Files and paths.Text File Handling
<b>UNIT TEST 2 (27/07/2026 to 03/08/2026)</b>			
<b>TOPICS :SQL(AGGREGATE FUNCTIONS,GROUP BY, HAVING, JOINS),CONNECTIVITY,EXCEPTION HANDLING , TEXT FILE ONLY</b>			

<b>AUGUST</b>	Computational Thinking and Programming-2	Introduction to Files- CSV Files	Files as a medium for permanent storage. CSV file Handling
<b>SEPTEMBER</b>	Computational Thinking and Programming-2, Computer Networks	Data Structure, Evolution of Networking,Data communication terminologies,Transmission Media,Network Devices,Network Types,Network Protocol	Understand the concept of Stack. Various types of transmission media used in different types of networks, including wired ,wireless networks,network types,
<b>PRE MODEL EXAMINATION (28/9/2026 to 9/10/2026)</b>			
<b>1) Revision Std XI</b> <b>2) Functions</b> <b>3) Database Concepts, Relational Data Model &amp; Mysql</b> <b>4) Connectivity, Exception Handling</b> <b>5) Files</b> <b>6) Data Structure</b>			
<b>OCTOBER</b>	Computer Networks	Network topologies and Network types, Introduction to web services	Topologies,network protocol and network devices.
<b>FIRST MODEL: 23/11/2026 to 14/12/2026</b>			
<b>SECOND MODEL:04/01/2027 TO 22/01/2027</b>			

**BHARATIYA VIDYA BHAVAN , KOCHI**  
**YEAR PLAN 2026-2027**  
**STD XII ENGLISH**

<b>MONTH</b>	<b>MAIN TEXT (FLAMINGO)</b>	<b>SUPPLEMENTARY READER (VISTAS)</b>	<b>WRITING</b>
MARCH / APRIL (25 DAYS)	THE LAST LESSON LOST SPRING MY MOTHER AT SIXTY-SIX (P)	THE THIRD LEVEL THE TIGER KING	NOTICE
<b>UNIT TEST 1 (JUNE 8 - 16)</b>			
JUNE (23 DAYS)	DEEP WATER KEEPING QUIET (P)	JOURNEY TO THE END OF THE EARTH THE ENEMY (not to be included for UT -2)	LETTER TO THE EDITOR
JULY (25 DAYS)	A THING OF BEAUTY (P) A ROADSIDE STAND (P) (not to be included for UT -2) INDIGO (not to be included for UT-2)	ON THE FACE OF IT (not to be included for UT-2)	INVITATION (FORMAL AND INFORMAL)
<b>UNIT TEST 2 (JULY 27 - AUG 3)</b>			
AUGUST (16 DAYS)	THE RATTRAP AUNT JENNIFER'S TIGERS (P) GOING PLACES (not to be included for Pre Model Examination)		REPORT WRITING (NEWSPAPER & MAGAZINE)  ARTICLE
SEPTEMBER (22 DAYS)	THE INTERVIEW (not to be included for Pre Model Examination)	MEMORIES OF CHILDHOOD (not to be included for Pre Model Examination)	
<b>PRE MODEL EXAMINATION (SEPT 28 - OCT 9)</b>			
OCTOBER (22 DAYS)	POETS AND PANCAKES (not to be included for Pre Model Examination)		JOB APPLICATION

<b>FIRST MODEL EXAMINATION (NOV 23 - DEC 14)</b>			
<b>SECOND MODEL EXAMINATION (JAN 4 - JAN 22)</b>			

**BHARATIYA VIDYA BHAVAN, KOCHI KENDRA**  
**INFORMATICS PRACTICES(065)**  
**YEAR PLAN FOR THE ACADEMIC YEAR 2026-2027**

**CLASS: XII**

<b>MONTH</b>	<b>TOPIC</b>	<b>SUB-TOPICS</b>	<b>CONCEPTS</b>
<b>MARCH/APRIL</b>	Unit 1: Data Handling using Pandas –I	Introduction to Python libraries- Pandas, Matplotlib Data structures in Pandas - Series and Data Frames Series: Creation of Series from – ndarray, dictionary, scalar value , Mathematical operations on series – addition, subtraction, multiplication, division ,Head and Tail functions Selection, Indexing and Slicing Attributes of Series – name, index.name, values, size, emptyDataFrames: creation - from dictionary of Series, list of dictionaries, displaying dataframe Attributes of DataFrames – index, columns, dtypes, values, shape, size, T, ndim, head(), tail()	Data analysis using Python libraries,Concepts of data structures,Series creation and its operations. Creation of 2D data structure: Dataframe and its attributes
<b>JUNE</b>	Unit 1: Data Handling using Pandas –I	Dataframe Creation using Text/CSV files, display; iteration; Operations on rows and columns: add, select, delete, rename; Head and Tail functions; Indexing using Labels, Boolean Indexing; Importing/Exporting Data between CSV files and Data Frames.	DataFrame creation (Revision) Operations and methods dataframes.  Dataframes indexing , concept of importing and exporting data using csv

**UNIT TEST I -08/06/2026 TO 16/06/2026**

**Portions:- Introduction to Python libraries- Pandas,Data structures in Pandas - Series and Data Frame Creation - from dictionary of Series, list of dictionaries**

**MARKING SCHEME:**

**OBJECTIVE TYPE QUESTIONS :- [MCQs - 5 marks(20%) ]**

**COMPETENCY BASED QUESTIONS:- MCQ - 2 Marks, Assertion Reasoning - 1 Mark (4%), Find the output, Find the errors and operations based on Series - 10 Marks (40%),Series and Data Frame creation - 5 Marks (20%)**

**CONSTRUCTED RESPONSE QUESTIONS [Short answer questions - 2 Marks (8%)]**

JULY	<b>Unit 1: Data Visualization, I</b> <b>Unit 3: Introduction to Computer Networks</b>	<p>Data Visualization: Purpose of plotting; drawing and saving following types of plots using Matplotlib –line plot, bar graph, histogram  Customizing plots: adding label, title, and legend in plots.</p> <p>Introduction to networks, Types of network: PAN, LAN, MAN, WAN.  Network Devices: modem, hub, switch, repeater, router, gateway  Network Topologies: Star, Bus, Tree, Mesh. Introduction to Internet, URL, WWW, and its applications- Web, email, Chat, VoIP.  Website: Introduction, difference between a website and webpage, static vs dynamic web page, web server and hosting of a website.  Web Browsers: Introduction, commonly used browsers, browser settings, add-ons and plug-ins, cookies.</p>	<p>Visualizing data using matplotlib library,</p> <p>Network and types of Network, Network Devices, Network Topology, Internet and web fundamentals</p>
<p><b>UNIT TEST II: 27/07/2026 TO 03/08/2026</b></p> <p><b>PORTIONS :Data Frames: creation -(All methods given in the curriculum) display; iteration; Operations ,Indexing Importing/Exporting Data between CSV files and Data Frames.</b></p> <p><b>MARKING SCHEME:</b></p> <p><b>OBJECTIVE TYPE QUESTIONS [MCQs - 5 marks(20%) ]</b></p> <p><b>COMPETENCY BASED QUESTIONS</b></p> <p><b>Assertion Reasoning - 1 Mark (4%)</b></p> <p><b>Find the output, Find the errors and operations based on DataFrame -9 Marks (36%)</b></p> <p><b>Dataframe Creation and CSV - 4 Marks (16%)</b></p> <p><b>CONSTRUCTED RESPONSE QUESTIONS [Short answer questions - 6 marks (24%)]</b></p>			
AUGUST	<b>Unit 2: Database Query using SQL</b>	<p>Database Query using SQL</p> <p>Revision of database concepts and SQL commands covered in class XI</p> <p>Math functions: POWER (), ROUND (), MOD ().</p> <p>Date Functions: NOW (), DATE (), MONTH (), MONTHNAME (), YEAR (), DAY (), DAYNAME ().</p>	<p>Database Query using SQL</p> <p>Revision of database concepts, SQL single row functions- Math and Date functions</p>
	<b>Unit 2: Database Query using SQL</b>	<p>Text functions: UCASE ()/ UPPER (), LCASE ()/ LOWER (), MID ()/ SUBSTRING ()/SUBSTR (), LENGTH (), LEFT (), RIGHT (), INSTR (), LTRIM (), RTRIM (), TRIM</p> <p>Aggregate Functions: MAX (), MIN (), AVG (), SUM (), COUNT (); using COUNT (*).</p> <p>Querying and manipulating data using Group by, Having, Order by.</p> <p>Working with two tables using equi-join.</p>	<p>SQL single row functions- Text functions</p> <p>Aggregate Functions, Group by Clause, Having clause, Order by clause, SQL join</p>

SEPTEMBER	<p style="text-align: center;"><b>PRE MODEL EXAMINATION 28/09/2026 TO 09/10/2026</b>  <b>( PORTIONS : All portions except Societal Impacts )</b></p> <p><b>MARKING SCHEME :Unit I Data Handling using Pandas and Data Visualization - 30 Marks, Unit 2: Database Query using SQL-28 Marks,Unit 3: Introduction to Computer Networks -12 Marks</b></p> <p style="text-align: center;"><b>SELECT RESPONSE TYPE QUESTIONS [MCQs - 14 marks (20%) ]</b></p> <p style="text-align: center;"><b>COMPETENCY BASED QUESTIONS</b></p> <p style="text-align: center;"><b>Assertion Reasoning - 2 Mark (3 %)</b></p> <p style="text-align: center;"><b>Very Short Answer type questions carrying 01 mark or 02 marks each(case based source-based integrated ,MCQ ,any other type) - 17 marks (24 %)</b></p> <p style="text-align: center;"><b>Short Answer type questions carrying 03 marks - 9 Marks (13%)</b></p> <p style="text-align: center;"><b>Short Answer type questions carrying 04 marks - 8 Marks (12%)</b></p> <p style="text-align: center;"><b>CONSTRUCTED RESPONSE QUESTIONS</b></p> <p style="text-align: center;"><b>Questions carrying 5 marks each (constructed response type) -10 Marks (14%)</b></p> <p style="text-align: center;"><b>Questions carrying 2 marks each (constructed response type) -10 Marks (14%)</b></p>		
OCTOBER	<p><b>Unit 4: Societal Impacts</b></p>	<p>Societal Impacts  Digital footprint, net and communication etiquettes, data protection, intellectual property rights (IPR), plagiarism, licensing and copyright, free and open source software (FOSS),  cybercrime and cyber laws, hacking, phishing, cyber bullying, overview of Indian IT Act.  E-waste: hazards and management.  Awareness about health concerns related to the usage of technology</p>	<p>Societal Impacts- cybercrime and cyber laws,  E-waste: hazards and management.</p>
NOVEMBER	<p><b>FIRST MODEL EXAMINATION FULL PORTIONS</b></p>		
JANUARY	<p><b>SECOND MODEL EXAMINATION 04/01/2027-22/01/2027 FULL PORTIONS</b></p>		

**BHARATIYA VIDYA BHAVAN, KOCHI**

**YEAR PLAN FOR THE ACADEMIC YEAR 2026-2027**

**CLASS XII -CHEMISTRY (043)**

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

JUNE	6. HALOALKANES AND HALOARENES	influence of halogen in mono substituted compounds only). Uses and environmental effects of dichloromethane, trichloromethane, tetrachloromethane, iodoform, freons, DDT.	
JUNE	2.ELECTROCHEMISTRY	Redox reactions, conductance in electrolytic solutions, specific and molar conductivity, variations of conductivity with concentration, Kohlrausch's Law, electrolysis and law of electrolysis (elementary idea), dry cell-electrolytic cells and Galvanic cells, lead storage cell, EMF of a cell, standard electrode potential, Nernst equation and its application to chemical cells, Relation between Gibbs energy change and EMF of a cell, fuel cells, corrosion.	Electrochemical cell, Nernst equation, Electrolytic conductivity and molar conductivity, Kohlrausch's law, electrolysis, fuel cells and batteries, corrosion
<b>FIRST UNIT - TEST ( 8-6-2026 to 16-6-2026)</b>  <b><u>PORTIONS</u></b>  <b>1.SOLUTIONS (18) - Numericals 7 marks.</b>  <b>6.HALOALKANES AND HALOARENES- Including physical properties (7)</b>			
		Alcohols , Phenols and ethers :  Alcohols: Nomenclature, methods of preparation, physical and chemical properties (of primary alcohols only), identification of primary, secondary and tertiary alcohols, mechanism of	Alcohols, Phenols and Ethers- IUPAC nomenclature, preparation, properties , reaction mechanisms of Alcohols, phenols and Ethers.

JULY	7.ALCOHOLS, PHENOLS AND ETHERS	dehydration, uses with special reference to methanol and ethanol.  Phenols: Nomenclature, methods of preparation, physical and chemical properties, acidic nature of phenol, electrophilic substitution reactions, uses of phenols.  Ethers: Nomenclature, methods of preparation, physical and chemical properties, uses	
	8.ALDEHYDES, KETONES AND CARBOXYLIC ACIDS	Nomenclature, nature of carbonyl group, methods of preparation, physical and chemical properties,	IUPAC nomenclature of aldehydes , ketones and carboxylic acids , structure of carboxyl groups, preparation of aldehydes and ketones, physical and chemical characteristics of aldehydes and ketones ,
AUGUST	8.ALDEHYDES, KETONES AND CARBOXYLIC ACIDS (Contd)	Mechanism of nucleophilic addition, reactivity of alpha hydrogen in aldehydes: uses. Carboxylic acid-Nomenclature, acidic nature, methods of preparation, physical and chemical properties; uses.	preparation of carboxylic acids , physical and chemical characteristics of carboxylic acids. Application of aldehydes , ketones and acids.
<b>SECOND UNIT – TEST ( 27-7-2026 to 3-8-2026 )</b>  <b><u>PORTIONS</u></b>  <b>6.HALO ALKANES &amp; HALOARENES - from chemical properties.(8 )</b> <b>2. ELECTROCHEMISTRY (10 ) Numericals 5 marks</b> <b>7. ALCOHOLS , PHENOLS AND ETHERS( Excluding Ethers 7.6 ) (7)</b>			

SEPTEMBER	3.CHEMICAL KINETICS	Chemical Kinetics :Rate of a reaction (Average and instantaneous), factors affecting rate of reaction: concentration, temperature, catalyst; order and molecularity of a reaction, rate law and specific rate constant, integrated rate equations and half-life (only for zero and first order reactions), concept of collision theory (elementary idea, no mathematical treatment). Activation energy, Arrhenius equation.	Chemical kinetics - types of chemical reactions , average rate of reaction, rate equation , order of reaction, rate constant, rate of reaction, rate equation for different orders of reaction, rate constant and order of reaction, collision theory.
	10.BIOMOLECULES	Carbohydrates - Classification (aldoses and ketoses), monosaccharides (glucose and fructose), D-L configuration oligosaccharides (sucrose, lactose, maltose), polysaccharides (starch, cellulose, glycogen); Importance of carbohydrates. Proteins – Elementary idea of – amino acids , peptide bond , polypeptides , proteins , structure of proteins- primary, secondary , tertiary, quaternary structures ( qualitative idea only), denaturation of proteins, enzymes . Hormones- Elementary idea excluding structure. Vitamins- Classification and functions. Nucleic acids – DNA and RNA	Biomolecules - Carbohydrates- classification, fructose and glucose, sources of protein , types of protein , denaturation of protein , enzymes , vitamins , structure and chemical composition of nucleic acids, role of biomolecules.
<p><b>PRE MODEL EXAMINATION (28-9-2026 to 09 -10-2026)</b></p> <p><b><u>PORTION</u></b></p> <p><b>1. SOLUTIONS (8)</b></p>			

<b>6. HALOALKANES AND HALOARENES(7)</b> <b>7. ALCOHOLS , PHENOLS AND ETHERS (10)</b> <b>8. ALDEHYDES , KETONES AND CARBOXYLIC ACIDS (13)</b> <b>10. BIOMOLECULES (8)</b> <b>2. ELECTROCHEMISTRY (12)</b> <b>3. CHEMICAL KINETICS (12) (Numericals -12)</b>			
OCTOBER	4.THE d-AND f-BLOCK ELEMENTS	General introduction, electronic configuration, occurrence and characteristics of transition metals, general trends in properties of the first row transition metals - metallic character, ionization enthalpy, oxidation states, ionic radii, colour, catalytic property, magnetic properties, interstitial compounds, alloy formation, preparation and properties of $K_2Cr_2O_7$ and $KMnO_4$ .	d and f Block Elements: Position of transition elements, electronic configuration, physical and chemical characteristics of transition elements, variable oxidation number , electrode potential, oxidation states, magnetic properties , complex compounds, preparation of metal oxides, properties of f-block elements.
	5.COORDINATION COMPOUNDS	Co-ordination compounds :Co-ordination compounds - Introduction, ligands, coordination number, colour, magnetic properties and shapes, IUPAC nomenclature of mononuclear coordination compounds. Bonding, Werner's theory, VBT,magnetic properties of complexes, Co-ordination compounds: Crystal field theory, synergic bonds, applications of complex compounds.	Co-ordination compounds : Werner's theory, co-ordination entity , co-ordination number, polyhedron , oxidation number of central atom , homoleptic and heteroleptic complexes, IUPAC nomenclature, isomerism, valence bond theory , magnetic properties of complexes, Co-ordination compounds: Crystal field theory, synergic bonds, applications of complex compounds.

NOVEMBER	9. AMINES	<p>Nomenclature, classification, structure, methods of preparation, physical and chemical properties, uses, identification of primary, secondary and tertiary amines.</p> <p>Diazonium salts: Preparation, chemical reactions and importance in synthetic organic chemistry</p>	<p>Amines: Structure of amines, classification, IUPAC nomenclature, preparation, physical and chemical properties, diazotisation, preparation of diazonium salts, importance of diazonium salts</p>
<b>FIRST MODEL EXAMINATION (23-11-2026 to 14-12-2026 )</b>			