

**SUBJECT – ENGLISH CORE**

Month	Name of the Chapter	Objective/Aim	Subject Enrichment Activity	Project
<b>April</b>	Passages for Comprehension  The Portrait of a Lady	To strengthen concept clarity along with vocabulary enhancement To point out the relevance of a strong relationship with elders	Discussion of Poetic Devices with examples from various contemporary poems	
<b>May</b>	Exercises based on Tense A Photograph	To develop the ability to write flawless language To understand the transient nature of human life.		Step 1 of the Project.... Discussing the aim and objective of the final English Project
<b>July</b>	Passages for Note Making & Summary Writing Classified Ads- Property & Job Speech Error Correction The Summer of a Beautiful White Horse The Tale of Melon City Revision of all the lessons done in April and May	To develop the skill of making notes and summarizing To convey needs and requirements in a concise and precise way To present ideas on given issues in a convincing way. To develop the ability to find grammatical errors and write flawless language. To know that essential goodness in a human being remains intact To point out that misuse of Power and a lack of wisdom result in a catastrophic situation.	Deliver a Speech on any relevant topic	Preparing the initial pages of the project file- preface, acknowledgment, etc
<b>August</b>	Passages for Note Making Classified ads Matrimonial, Sale & Purchase Posters Jumbled Words We're Not Afraid to Die..... The Laburnum Top Voice of the Rain The Address Discovering Tut- The Saga Continues	To develop the skill of making notes and summarizing To convey needs and requirements in concise and precise way To present topics of educational and social relevance aesthetically. To develop confidence and proficiency in the use of language skills To appreciate the importance of courage and determination in adverse circumstances. To emphasize the phenomena of transfer of energy present in Nature	Design colourful posters based on social issues	



		To appreciate the bounties of nature in the form of rain. To explain the impact of war. To point out the contribution of technology in studying the past.		
<b>September</b>	Passages for Comprehension & Note Making Debate Editing	To develop comprehension skills along with vocabulary enhancement To express arguments in a coherent way To develop the ability to identify mistakes and correct them	Assessment of Listening Skills	Research-based questions for the project file covering textbooks
<b>October</b>	Passages for Note Making (practice) Classified Ads Error Correction Childhood Mother's Day	To develop the skill of making notes and summarizing Revision To use different grammatical structures in appropriate contexts. To know the constraints of adult life. To realize the value of mothers and respect them	Draft all kinds of Classified Ads	
<b>November</b>	Passages for Comprehension (practice) Speech & Debate Omission Father to Son The Adventure	To build confidence regarding concept clarity along with vocabulary enhancement Revision To develop confidence and proficiency in the use of language skills To point out changing relationship between parents and children. To acquaint with the genre of time travel	Debating on current issues	Final compilation of the project file
<b>December</b>	Revision & Practice of Reading and Writing Skills The Silk Road Birth	To develop fluency in English To develop a liking for reading travelogues To know that persistent efforts bring results	MCQ and extrapolatory based assignment	
<b>January &amp; February</b>	Revision	To develop confidence and proficiency in the use of language skills		Submission of Project File

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
READING SECTION:	READING SECTION: Comprehension Passage	READING SECTION: Comprehension Passage	Complete Syllabus	Complete Syllabus



Note Making & Summary WRITING SECTION: Classified Ads, Speech GRAMMAR SECTION: Error Correction LITERATURE SECTION: The Portrait of a Lady, The Summer of a Beautiful White Horse A Photograph & The Tale of Melon City	and Note Making & Summary Writing WRITING SECTION: Classified Ads, Posters, Speech, Debate GRAMMAR SECTION: Editing, Gap Filling & Jumbled Words LITERATURE SECTION: The Portrait of a Lady, We're Not Afraid to Die..., Discovering Tut, A Photograph, Laburnum Top, Voice of the Rain, The Summer of a Beautiful White Horse, The Address, The Tale of Melon City	WRITING SECTION: Posters, Debate GRAMMAR SECTION: Editing & Jumbled Words LITERATURE SECTION: The Adventure, Childhood, Mother's Day		
	Assessment of Speaking & Listening			Assessment of Speaking and Listening





**SUBJECT – PHYSICS**

Month	Name of the Chapter	Learning Objective/ Learning Outcomes	Practical / Activities
<b>April</b>	Ch-1 Units and Measurements	To learn the proper way to express the results of calculations and measurements including the appropriate dimensions.	Ex.1. Diameter of small spherical/cylindrical body by vernier calipers.
	Ch-2 Motion in a straight line	To study the motion of objects, calculation of the distance.	Act.1. To make paper scale of given L.C. 0.2 cm & 0.5cm
<b>May</b>	Ch-3 Motion in a plane	To analyze the tracks of elementary particles in two dimensions.	Ex.2. Internal diameter & depth of a beaker or calorimeter using vernier calipers.
<b>July</b>	Ch-4 Laws of Motion	To study Newton's laws of classical mechanics which form the basis of our understanding of motion and its causes.	Ex.3. Diameter of a wire by using screw gauge.
	Ch-5 Work, Energy & Power	To discuss energy in a more comprehensive way and generalize the law of conservation of energy which is one of the most useful laws of Physics.	Act.2. Variation of range of jet of water with angle of projection.
<b>August</b>	Ch-6 Systems of Particles and Rotation	To show that Newton's laws can be used to describe the motion of the center of mass of a complex system. To consider the general motion of a rigid body and to describe the rotation with appropriate variables and relating them to one another.	Ex.4. Thickness of a given sheet using screw gauge.
	Ch-7 Gravitation	To study the gravitational force and the law that describes the force, controls the structure, the development and the eventual fate of the universe.	Ex. 5. Mass of two different objects using beam balance.
<b>September</b>	Revision, Half Yearly examinations		
<b>October</b>	Ch-8 Mechanical properties of solids	To study the properties of solids.	Ex.6. Weight of a given body using parallelogram law of vectors.
	Ch-9 Mechanical properties of fluids	To study the properties of fluids and the laws that govern them.	Act.3. To plot cooling curve of molten wax.
<b>November</b>	Ch-10 Thermal properties of matter	To study the properties of matter due to transfer of heat.	Ex.7. Force constant of a helical spring.
	Ch-11 Thermodynamics	To discuss internal energy and another method for changing the energy of system	Ex.8. To plot L-T, $LT^2$ graph using simple pendulum.
<b>December</b>	Ch-12 Kinetic Theory of Gases	To take a microscopic approach and seek to account for the	Act.4. Effect of heating on a bi-metallic strip.
			Ex.9. Coefficient of viscosity of a viscous



	Ch-13 Oscillations	macroscopic properties of a gas in terms of the properties of its molecules. To understand the concepts of SHM and its applications.	liquid. Ex.10. To verify Newton's Law of cooling. Act.5. Factors affecting the rate of loss of heat of a liquid.
<b>January</b>	Ch- 14 Waves	To study waves and the principles applicable on it.	Act 6: Effect of detergent on surface tension.
<b>February</b>	Revision		

**Exam Syllabus**

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Ch- 1, 2, 3	Ch- 1 to 5	Ch- 7, 8, 9	Ch- 1 to 9	Ch- 1 to 14

**SUBJECT – CHEMISTRY**

Month	Name of the Chapter	Learning Objective/ Learning Outcomes	Subject Enrichment Activity
April	UNIT-1 Some basic concepts of chemistry	Students will be able to <ul style="list-style-type: none"><li>• explore and appreciate the earliest chemical process, in which materials were mixed, molded and alchemy to transmute from one chemical to others</li><li>• use scientific notations and determines significant figures</li><li>• explain various laws of chemical combinations</li><li>• describe the terms – mole and molar mass</li></ul>	
May	UNIT-1 Some basic concepts of chemistry	Students will be able to <ul style="list-style-type: none"><li>• understand mole concept and stoichiometry</li><li>• determine empirical formula and molecular formula for a compound from the given experimental data.</li></ul>	
July	UNIT -2 Structure of Atom  UNIT -3 Classification of Elements & Periodicity in Properties	Students will be able to <ul style="list-style-type: none"><li>• describe Thomson, Rutherford and Bohr atomic models</li><li>• understand nature of electromagnetic radiation and Planck's quantum theory</li><li>• explain the photoelectric effect and describe features of atomic spectra</li><li>• state the de Broglie relation, Heisenberg uncertainty principle and Schrodinger's Wave Equation</li><li>• define an atomic orbital in terms of quantum numbers</li><li>• state Aufbau principle, Pauli exclusion principle and Hund's rule</li><li>• write the electronic configurations of atoms and filling of electrons in atomic orbitals.</li></ul> Students will be able to <ul style="list-style-type: none"><li>• appreciate how the concept of grouping elements in accordance to their properties led to the development of Periodic Table.</li><li>• understand the significance of atomic numbers and electronic configuration as the basis for periodic classification.</li><li>• name the elements with <math>Z &gt; 100</math> according to IUPAC nomenclature</li><li>• understand the significance of atomic number and electronic configuration as the basis for periodic classification</li><li>• recognize the periodic trends in physical and chemical properties of elements</li></ul>	Detection of cation and anion in the given salt. (Group-0,1,2)
August	UNIT-4 Chemical Bonding	Students will be able to <ul style="list-style-type: none"><li>• explain the formation of different types of bonds</li></ul>	Titration and core experiments



[illegible]



	UNIT-8 Organic Chemistry- Some Basic Principles and Techniques	<ul style="list-style-type: none"> <li>identify redox reactions as a class of reactions in which oxidation and reduction reactions occur simultaneously</li> <li>define the terms oxidation, reduction, oxidant and reductant</li> <li>classify redox reaction</li> <li>balance chemical equations using (i) oxidation number (ii) half reaction method</li> <li>learn the concept of redox reactions in terms of electrode processes.</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>understand reasons for tetravalence of carbon and shapes of organic molecules name the compounds according to IUPAC system of nomenclature and also derive their structures from the given names</li> </ul>	anion in the given salt. (Group-4)
<b>December</b>	UNIT-8 Organic Chemistry- Some Basic Principles and Techniques  UNIT-9 Hydrocarbons	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>recognize the types of organic reactions</li> <li>explain the influence of electronic displacements on structure and reactivity of organic compounds</li> <li>learn the techniques of purification of organic compounds</li> </ul> <p>Students will be able to</p> <ul style="list-style-type: none"> <li>name hydrocarbons according to IUPAC system of nomenclature</li> <li>recognize and write structures of isomers of alkanes, alkenes, alkynes and aromatic hydrocarbons</li> </ul>	Detection of cation and anion in the given salt. (Group-5,6)
<b>January</b>	UNIT-9 Hydrocarbons	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>learn about various methods of preparation of hydrocarbons</li> <li>distinguish between alkanes, alkenes, alkynes and aromatic hydrocarbons on the basis of physical and chemical properties</li> <li>predict the formation of the addition products of unsymmetrical alkenes and alkynes on the basis of electronic mechanism</li> <li>comprehend the structure of benzene, explain aromaticity and understand mechanism of electrophilic substitution reactions of benzene predict the directive influence of substituents in monosubstituted benzene ring</li> </ul>	
<b>February</b>	Revision		

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Unit- 1, 2	Unit- 1, 2, 3, 4	Unit- 6, 7	Unit- 1, 2, 3, 4, 5, 8	Complete Syllabus



**SUBJECT – BIOLOGY**

Month	Name of Chapter	Objective/Aim	Lab Activity	Project
April	Ch-1 The living world  Ch-2 Biological Classification	<ol style="list-style-type: none"> <li>To make students understand biodiversity and classify living organisms, Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature.</li> <li>Understand and describe about two, three, four, five kingdom classification. Understand and explain systematics under four heads- identification, classification Nomenclature, Taxonomy.</li> <li>Comprehend the characteristic features of different kingdoms.</li> <li>Salient features of Lichens, Viruses and Viroid's.</li> </ol>	<p>To study different parts of microscope and its working.</p> <p>2. Group discussion on Need of classification.</p> <p>1. To observe different slides of the kingdom Monera and Protista and comment on it</p> <p>2.To observe different specimens and slides of kingdom Fungi and comment on it.</p>	Classify any five plant and any five animals on the basis of taxonomical hierarchy
May	Ch-3 Plant Kingdom	Classify and describe plant kingdom under different divisions – thallophyta, bryophyta, pteridophyta, gymnosperm and angiosperm.	<ol style="list-style-type: none"> <li>To observe the different specimens of plant kingdom and comment on it</li> <li>Spotting- To identify the given organism, classify, draw and write its significant characteristics</li> </ol>	
July	Ch-3 Plant kingdom Ch-4 Animal kingdom  Ch-5 Morphology of flowering plants	<ul style="list-style-type: none"> <li>Bryophyta, Pteridophyta, Gymnosperm.</li> <li>Students will be able to understand about Animal kingdom under different phylum porifera, cnidaria, ctenophore, platyhelminthes, aschelminthes, annelida, mollusca, arthropoda, echinodermata, chordate.</li> <li>Enable the students to know and understand the morphology &amp; modifications Root, Stem, leaf, Inflorescence, Flower, Parts of a flower, Fruit, Seed.</li> <li>Students will be able to describe a flower parts, writes floral formula with floral diagrams and description of family Solanaceae.</li> </ul>	<ol style="list-style-type: none"> <li>To observe the different specimens of animal kingdom and comment on it.</li> <li>Spotting- To identify the given organism, classify, draw and write its significant characteristics</li> </ol> <p>Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of</p>	



			particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound)	
<b>August</b>	Ch-6 Anatomy of flowering plants Ch-7 Structural organisation in animals  Ch-8 Cell: Structure and Function	<ul style="list-style-type: none"> <li>To provide the knowledge of the Anatomy and functions of tissue systems in dicots and monocots.</li> <li>Students will be able to understand Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog.</li> </ul> <p>To make them comprehend and to connect with the earlier understanding about the cell and its organelles like Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall. Cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function, nucleus.</p>	<ol style="list-style-type: none"> <li>Preparation and study of T.S. of dicot and monocot roots and stems (primary).</li> <li>To observe the structure of frog through specimen.</li> <li>To observe the structure of cell</li> <li>Study of distribution of stomata on the upper and lower surfaces of leaves.</li> <li>Comparative study of the rates of transpiration in the upper and lower surfaces of leaves.</li> </ol>	
<b>September</b>	Half Yearly Examination			
<b>October</b>	Ch-9 Biomolecules	<ul style="list-style-type: none"> <li>To make them understand about the constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, and nucleic acids.</li> <li>To make them understand about the structure and function of Enzyme, their types, properties and enzyme action</li> </ul>	<ol style="list-style-type: none"> <li>To prove heat destroys the activity of enzymes and not the catalyst.</li> <li>To prove that change of pH inhibits the enzyme activity.</li> <li>To test for the presence of sugar,</li> </ol>	





	<p>Ch-10 Cell Cycle and Cell Division</p> <p>Ch-11 Photosynthesis in Higher Plants</p>	<ul style="list-style-type: none"> <li>To explain the importance of cell division</li> <li>To make them understand about the various stages of Mitosis in cell and relate with various examples of cell division Differentiate between mitosis and meiosis</li> <li>To make them understand the various phases of meiotic cell division of Meiosis I &amp; II and relate it with the gamete formation in gonads and the significance of the process.</li> <li>To make them understand with the Early Experiments</li> <li>To explain and make them understand the structure of chloroplast where Light reaction takes place, mechanism of Light reaction.</li> <li>To make them aware about Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis and electron transport System</li> </ul>	<p>starch, proteins and fats in suitable plant and animal materials.</p> <ol style="list-style-type: none"> <li>To observe the different stages of meiosis through permanent slides</li> <li>To prepare the onion root tip slide and to observe different stages of mitosis. To observe the effect of light in photosynthesis</li> <li>To observe the stomata in the lower and upper epidermis of leaf and find the stomatal index</li> <li>To detect the formation of starch in different leaves</li> <li>To prove the presence of chlorophyll by paper chromatography</li> </ol>	
<b>November</b>	Ch- 12 Respiration in plants	<ul style="list-style-type: none"> <li>To make them understand about the Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.</li> <li>To make them differentiate between Fermentation/Anaerobic and Aerobic respiration.</li> <li>To enable the student to understand about Seed germination; phases of plant growth and plant growth rate; conditions of growth;</li> </ul>	<ol style="list-style-type: none"> <li>To compare the rate of respiration in germinating seeds (carbohydrate, proteins and fats)</li> <li>To prove anaerobic respiration takes place in yeast (alcohol fermentation)</li> <li>To prove CO<sub>2</sub> is given out during respiration (aerobic)</li> </ol>	





	<p>Ch-13 Plant - Growth and Development</p> <p>Ch-14 Breathing and Exchange of Gases</p>	<p>differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; plant growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA.</p> <ul style="list-style-type: none"> <li>To make them understand and differentiate the concept of breathing and respiration. Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume;</li> <li>To educate them with the Disorders of respiratory system asthma, emphysema, occupational disorder.</li> </ul>	<p>4. To prove lime water turns milky during exhalation.</p>	
December	<p>Ch-15 Body Fluids and circulation</p> <p>Ch-16 Excretory products and their elimination</p>	<ul style="list-style-type: none"> <li>Students will know and understand the composition of blood, blood groups, coagulation of blood; composition of lymph and its function;</li> <li>To enable the students to learn about human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity;</li> <li>To educate them with the disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure.</li> <li>Explain the purpose of Modes of excretion - ammoniotelic, ureotelism, uricotelism.</li> <li>Describe the human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion;</li> <li>Make them educate about the disorders like uremia, renal failure,</li> </ul>	<ol style="list-style-type: none"> <li>Study and draw a well labelled diagram of human heart.</li> <li>To test the presence of urea, sugar, albumin, bile salts in urine. . Study of different types of bones and cartilage of human body by models.</li> <li>To identify different bones of skull vertebral column, sternum, girdles, Forelimb and Hind limb from the human skeleton and comment on it.</li> <li>Role play of synovial joints with various day to day life activities.</li> </ol>	

	Ch-17 Locomotion and Movement	<p>renal calculi, nephritis; dialysis and artificial kidney, kidney transplant.</p> <ul style="list-style-type: none"> <li>To understand types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and muscle contraction</li> <li>To describe the skeletal system and its functions; joints;</li> </ul> <p>To make them educate about the disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.</p>		
<b>January</b>	<p>Ch-18 Neural control and Coordination</p> <p>Ch-19 Chemical Coordination and Integration</p>	<ul style="list-style-type: none"> <li>To familiarize with different parts of Neuron and nerves.</li> <li>To make them understand about the Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system.</li> <li>To describe the process of generation and conduction of nerve impulse.</li> <li>To apply the learning to determine the Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea)</li> </ul> <p>To make them realize the role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease.</p>	<p>To observe sudden withdrawal movements of body on coming in contact with hot, cold or pointed objects, jerking of knee when hit below knee cap, Watering of mouth by seeing delicious food</p>	<p>A case study on any disease caused due to hypo or hyper hormonal imbalance in your family/neighbour</p>

## Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Ch. 1, 2, 3, 4	Ch. 1, 2, 3, 4, 5, 6, 8	Ch. 8, 9, 10	Ch. 11, 12, 13, 14, 15	Full Syllabus





**SUBJECT – MATHEMATICS**

Month	Name of the Chapter	Objective/Aim	Subject Enrichment Activity
<b>April</b>	Ch -1 Sets	To know about sets, subsets, and their representation, Venn diagrams, operations on sets, practical problems on Union and Intersection.	1.To find the number of subsets of a given set and verify that if a set has $n$ number of elements, then the total number of subsets is $2^n$
	Ch-2 Relations And Functions	To know ordered pair, Cartesian product, relations, functions, domain, co-domain, range and graphs of different functions.	2.To represent set theoretic operations using Venn diagrams.
<b>May</b>	Ch-2 Relations And Functions (Contd.)	To know ordered pair, Cartesian product, relations, functions, domain, co-domain, range and graphs of different functions.	3.To distinguish between a Relation and a Function
	Ch-3 Trigonometric Functions	To know trigonometric functions using unit circle, identities, formulas and their application	
<b>July</b>	Ch-3 Trigonometric Functions (Contd.)	To know trigonometric functions using unit circle, identities, formulas and their application	4.To find the values of sine and cosine functions in second, third and fourth quadrants using their given values in first quadrant.
	Ch-4 Complex Numbers & Quadratic Equations Ch-5 Linear Inequalities	To make clear about complex numbers and real numbers of operations on complex numbers and multiplicative Inverse, conjugate, modulus and their properties. To make clear about the symbols less than, more than use in inequality, meaning of at least and at most, solution of inequality algebraically and graphically, word problems	
<b>August</b>	Ch-6 Permutations & Combinations	To understand the concept of fundamental principle of counting, factorial notation, permutations and combination and their properties with daily life examples	6. To construct a pascal triangle and to write binomial expansion for a given positive integer power
	Ch-7 Binomial Theorem Ch-8 Sequences and Series	Binomial expansion for a given positive integral power To Know about the sequence, Series, Arithmetic and geometric progressions and their Sum, mean and relation between them.	
<b>September</b>	Revision Ch-9 Straight Lines	Half Yearly Exams. To use algebra advantageously in study of straight line, their slopes and their properties	
<b>October</b>	Ch-9 Straight Lines (Contd.)	To use algebra advantageously in study of straight line, their slopes and their properties.	





	Ch-10 Conic Section	To learn about the intersection of a plane with a double napped cone, a right circular cone results in different types of the curve.	7. To construct ellipse when two fixed points are given.
<b>November</b>	Ch-10 Conic Section (Contd.) Ch-11 Introduction to Three-Dimensional Geometry Ch-12 Limits & Derivatives	To learn about the intersection of a plane with a double napped cone, a right circular cone results in different types of the curve To extend the knowledge of two-dimensional geometry to three-dimensional geometry. To find out the limits and derivatives of different functions	
<b>December</b>	Ch-12 Limits & Derivatives (Contd.) Ch-13 Statistics	To find out the limits and derivatives of different functions To learn about the important measures of dispersion and their methods of calculation for ungrouped and grouped data.	
<b>January</b>	Ch-14 Probability	To know about the basic terms, for random experiments with different cases to interpret the probability.	8. To find the sample space of (i) coins (ii) Playing cards
<b>February</b>	Revision and Annual Examination		

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Ch- 1, 2, 3	Ch- 1, 2, 3, 4, 5, 6, 7, 8	Ch- 9, 10, 11	Ch- 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Whole Syllabus

**SUBJECT – COMPUTER SCIENCE WITH PYTHON**

Month	Chapter Name	Objective / Aim	Lab Activity
April	Ch – 1 Computer System Organization	Description of a computer system and mobile system, CPU, memory, hard disk, I/O, Types of software, OS, utility, libraries, Language of Bits: bit, byte, MB, GB, TB, and PB. Execution of a program, Interpreters, Compiler and an interpreter, how an operating system runs a program, idea of loading, operating system as a resource manager, Concept of cloud computers, cloud storage (public/private), and brief introduction to parallel computing.	Introduction to Python environment <ul style="list-style-type: none"> <li>• Interactive Mode</li> <li>• Script Mode</li> <li>• Operators &amp; Operands</li> </ul>
May	Ch – 2 Data Representation & Boolean Logic	Information representation: numbers in base 2, 8, 16, unsigned integers, binary addition, Strings: ASCII, UTF8, UTF32, ISCII (Indian script code), Boolean logic: OR, AND, NAND, NOR, XOR, NOT, truth tables, De Morgan's laws	Basic Programs of Python: <ul style="list-style-type: none"> <li>• Add 2 numbers.</li> <li>• Make a simple calculator.</li> <li>• Calculate total &amp; percentage of a student.</li> </ul>
July	Ch – 3 Computational Thinking & Getting Started with Python  Ch – 4 Python Programming Fundamentals	Introduction to problem solving, Steps for problem solving, Algorithms, Flowcharts, Pseudocode, computational thinking & its components, Familiarization with the basics of Python, features, advantages, disadvantages, how to install python, Python IDLE, Exiting Python.  Variables, Multiple assignments, Keywords, expressions, Operators & its types, User Defined Functions, Indentation, Tokens, Comments process of writing a program, running it, and print statements; simple datatypes: integer, float, string	Basic Programs of Python: <ul style="list-style-type: none"> <li>• Swap the values of two variables.</li> <li>• Conversion of Celsius to Fahrenheit &amp; vice -versa.</li> <li>• Conversion of units of measurement.</li> </ul> Basic Programs of Python: <ul style="list-style-type: none"> <li>• To calculate the area &amp; perimeter of various shapes.</li> <li>• Conversion from amount-in-dollars and dollar-to-rupee.</li> </ul>
August	Ch – 5 Conditional & Looping Constructs  Ch – 6 Strings in Python	Conditional statements: if, if-else, if-elif-else; simple programs: e.g.: absolute value, sort 3 numbers, and divisibility. Notion of iterative computation and control flow: for, while, Nested loop, jump Statements- break, continue & pass. Strings: compare, concatenation, substring; various string operations & functions.	Basic Programs of Python: <ul style="list-style-type: none"> <li>• Print numbers from 1 to 100.</li> <li>• Print the table of a given number.</li> <li>• Check for Palindrome, Armstrong number.</li> <li>• Print Fibonacci Series</li> </ul> Basic Programs of Python: <ul style="list-style-type: none"> <li>• Reverse a string.</li> <li>• Check whether a string is palindrome or not.</li> <li>• Count the occurrence of a character in a string.</li> </ul>





September	Half Yearly Examinations		
<b>October</b>	Ch – 7 Lists in Python  Ch – 8 Tuples and Dictionary	Lists: finding the maximum, minimum, mean; linear search on list/tuple of numbers, and counting the frequency of elements in a list using a dictionary. Introduce the notion of accessing elements in a collection using numbers and names. Tuples and dictionary: finding the maximum, minimum, mean; linear search on list/tuple of numbers, and counting the frequency of elements in a list using a dictionary. Introduce the notion of accessing elements in a collection using numbers and names.	Basic Programs of Python: <ul style="list-style-type: none"> <li>• Enter elements in a list and find the sum.</li> <li>• Find the minimum &amp; maximum element in a list/tuple.</li> <li>• Input a list of numbers and swap elements at the even location with the elements at the odd location.</li> <li>• Input a list/tuple of elements, search for a given element in the list/tuple.</li> <li>• Create a dictionary with the roll number, name and marks of n students in a class and display the names of students who have scored marks above 75.</li> </ul>
<b>November</b>	Ch – 9 Introduction to Python Modules Ch – 10 Society, Law & Ethics	Importing module using import statement/ from statement, importing math module, random module, statistics module. Digital Footprints, Digital society & Netizen, Data Protection, Intellectual Property Rights, its violation, Cyber crime	Basic Programs of Python: <ul style="list-style-type: none"> <li>• Create a module Area and define functions to find the area of circle, square, rectangle etc. Import the module and calculate the area of a shape.</li> </ul>
<b>December</b>	Ch – 11 Cyber Safety	Cyber safety: safely browsing the web, identity protection, confidentiality, social networks, cyber trolls and bullying, Appropriate usage of social networks: spread of rumors, and common social networking sites (Twitter, LinkedIn, and Facebook) and specific usage rules, safely accessing web sites: adware, malware, viruses, Trojans, safely communicating data: secure connections, eavesdropping, phishing and identity verification, IT Act, 2000, E-Waste management.	<ul style="list-style-type: none"> <li>• Revision of all the programming concepts.</li> </ul>
<b>PROJECT:</b> The aim of the class project is to create something that is tangible and useful using Python file handling/Python-SQL connectivity. This should be done in groups of two to three students. The aim here is to find a real-world problem that is worthwhile solving. Students will choose a topic and prepare synopsis on the topic.			

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Ch – 1, 2 & 3	Ch – 1 to 5	Ch – 6, 7, 8	Ch – 1 to 9	Complete Syllabus





CLASS: XI SCIENCE – BIFURCATED SYLLABUS – 2025 – 26  
**SUBJECT – INFORMATICS PRACTICES**



Month	Unit Name	Chapter Name	Objective / Aim	Lab Activity
April	Unit 1: Introduction to Computer System	Introduction to Computer System	Introduction to computers 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. 2 Software: purpose and types – system and application software, generic and specific purpose software.	Identify the components of the Computer System.
May	Unit 2: Introduction to Python	Introduction to Python	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, control statements: if-else, for loop	1. To find average and grade for given marks. 2. To find sale price of an item with given cost and discount (%). 3. To calculate perimeter/circumference and area of shapes such as triangle, rectangle, square and circle. 4. To calculate Simple and Compound interest. 5. To calculate profit-loss for given Cost and Sell Price. 6. To calculate EMI for Amount, Period and Interest. 7. To calculate tax - GST / Income Tax.
July		List	Lists: list operations - creating, initializing, traversing and manipulating lists, list methods and built-in functions.: len(), list(), append(), extend(), insert(), count(), find(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum()	8. To find the largest and smallest numbers in a list. 9. To find the third largest/smallest number in a list. 10. To find the sum of squares of the first 100 natural numbers. 11. To print the first 'n' multiples of given number. 12. To count the number of vowels in user entered string. 13. To print the words starting with a alphabet in a user entered string. 14. To



				print the number of occurrences of a given alphabet in each string.
<b>August</b>		Dictionary	Dictionary: concept of key-value pair, creating, initializing, traversing, updating and deleting elements, dictionary methods and built-in functions: len(), dict(), keys(), values(), items(), get(), update(), clear(), del()	15. Create a dictionary to store names of states and their capitals. 16. Create a dictionary of students to store names and marks obtained in 5 subjects. 17. To print the highest and lowest values in the dictionary.
		NumPy	Creation of NumPy array from the list, Creation of 2D NumPy array.	
<b>September</b>	Half Yearly Examinations			
<b>October</b>	Unit 3: Database concepts and the Structured Query Language		Database Concepts: Introduction to database concepts and its need, Database Management System. Relational data model: concept of attribute, domain, tuple, relation, candidate key, primary key, alternate key, foreign key. Structured Query Language: Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL: Creating a database, using database, showing tables using MySQL, Data Types: char, varchar, int, float, date Data Definition Commands: CREATE, DROP, ALTER (Add and Remove primary key, attribute). Data Query Commands: SELECT-FROM-WHERE, LIKE, BETWEEN, IN, ORDER BY, using arithmetic, logical, relational operators and NULL values in queries, Distinct clause Data Manipulation Commands: INSERT, UPDATE, DELETE.	19. To create student table with the student id, class, section, gender, name, dob, and marks as attributes where the student id is the primary key. 20. To insert the details of at least 10 students in the above table. 21. To display the entire content of table. 22. To display Rno, Name and Marks of those students who are scoring marks more than 50. 23. To find the average of marks from the student table. 24. To find the number of students, who are from section 'A'. 25. To display the information all the students, whose name starts with 'AN' (Examples: ANAND, ANGAD,..) 26. To display Rno, Name, DOB of those students who are born between '2005- 01- 01' and '2005-12-31'. 27. To display Rno, Name, DOB, Marks, Email of those male students in ascending order of their names.



				28. To display Rno, Gender, Name, DOB, Marks, Email in descending order of their marks. 29. To display the unique section available in the table.
<b>November</b>	Unit 4: Introduction to the Emerging Trends		Artificial Intelligence, Machine Learning, Natural Language Processing, Immersive experience (AR, VR), Robotics, Big data and its characteristics, Internet of Things (IoT), Sensors, Smart cities, Cloud Computing and Cloud Services (SaaS, IaaS, PaaS); Grid Computing, Block chain technology.	<ul style="list-style-type: none"> <li>Identify the Emerging trends in the fields of Information Technology.</li> </ul>
<b>December</b>	Revision			
<b>January</b>	Revision			

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Unit 1: Introduction to Computer System Unit 2: Introduction to Python	Unit 1: Introduction to Computer System Unit 2: Introduction to Python List, Dictionary	Unit 3: Database Concepts and The Structured Query Language	Unit 2: Introduction to Python List, Dictionary Unit 3: Database Concepts and The Structured Query Language	Complete Syllabus





CLASS: XI SCIENCE – BIFURCATED SYLLABUS – 2025 – 26  
**SUBJECT – ARTIFICIAL INTELLIGENCE**



Month	Unit Name	Learning Outcomes	Practical
May	<b>Part A: Unit I: Communication Skills III</b>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify the elements of Communication, understand communication cycle, identify the factors affecting our perspectives in communication.</li> <li>Understand Verbal Communication, 7 Cs of Communication. Explain the importance of non – verbal and visual communication. Use the right non – verbal communication at work. Avoid common mistakes in non – verbal communication.</li> <li>Explain the meaning of Phonetics. Differentiate between Vowel, Diphthong and Consonant.</li> <li>Understand different Communication Styles. Saying No — Demonstrate the knowledge of using Refusal Skills.</li> <li>Revise their knowledge of Writing Skills, they will learn Parts of Speech, Sentences.</li> <li>Understand the relevance of Greetings and Introduction, talking about self, Asking Questions, talking about Family, Describing Habits and Routines, Asking for Directions</li> </ul>	<ul style="list-style-type: none"> <li>Categorize the given applications into the three domains.</li> <li>IBM Skills Build – Introduction to AI</li> </ul>
July	<p><b>Part A: Unit II: Self – Management Skills III</b></p> <p><b>Part B: Unit I: Introduction : Artificial Intelligence for everyone</b></p> <p><b>Part B: Unit II: Unlocking your future in AI</b></p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Understand Strength and Weakness Analysis</li> <li>List the benefits of Grooming, Follow the guidelines for grooming.</li> <li>List the benefits of maintaining Personal Hygiene.</li> <li>Explain the meaning of Team, Describe the benefits of working in a Team, Describe the importance of achieving the team’s goal.</li> <li>Understand and develop Networking Skills.</li> <li>Explain the meaning of Self-motivation.</li> <li>Understand Goal Setting, SMART Goals, understand the best way to work on long term goals.</li> <li>Describe the importance of Time Management.</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Communicate effectively about AI concepts and applications in written and oral formats.</li> <li>Describe the historical development of AI.</li> <li>Differentiate between various types and domains of AI, including their applications.</li> <li>Recognize the key terminologies and concepts related to machine learning and deep learning.</li> <li>Formulate informed opinions on the potential benefits and limitations of AI in various contexts.</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Articulate the demand for AI professionals and the diverse career opportunities available in the field.</li> <li>Identify the requisite skills and tools needed to pursue a career in artificial intelligence.</li> </ul>	<ul style="list-style-type: none"> <li>Identify ten companies currently hiring employees for specific AI positions.</li> <li>Note down the technical skills and soft skills listed by any two companies for the specific AI position.</li> </ul>



		<ul style="list-style-type: none"> <li>Understand the potential roles and responsibilities of AI professionals across different industries.</li> <li>Explore resources for further learning and skill development in the field of AI.</li> <li>Evaluate their own interests and skills to determine potential pathways for a career in AI.</li> </ul>	
<b>August</b>	<p><b>Part B: Unit III: Python Programming</b></p> <p><b>Part B: Unit IV: Introduction to Capstone Project</b></p> <p><b>Part A: Unit III: ICT Skills III</b></p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Explain the basics of python programming language and write programs with basic concepts of tokens.</li> <li>Use selective and iterative statements effectively.</li> <li>Gains practical knowledge on how to use the libraries efficiently.</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Decompose any problem using the 5W1H method.</li> <li>Apply Design thinking methodology.</li> <li>Create empathy maps.</li> <li>Align problems to SDGs.</li> <li>Apply all the learnings in solving real world problems.</li> <li>Comfortably express their solution to a problem in non-technical words.</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Understand ICT.</li> <li>Explain what a word processor is, Learn Basic Interface of LibreOffice Writer,</li> <li>Learn Saving, Closing, Opening and Printing Document.</li> <li>Learn to format text in a Word Document.</li> <li>Learn to Check Spelling and Grammar, Inserting Lists, Tables, Pictures, and Shapes.</li> <li>Learn to insert Header, Footer and Page Number.</li> <li>Explain the need of tracking changes in LibreOffice Writer.</li> </ul>	<ul style="list-style-type: none"> <li>Python programs using operators, data types, control statements.</li> <li>Python programs on Numpy, Pandas, Scikit-learn.</li> <li>Create an empathy map for a given scenario.</li> <li>Project Abstract Creation Using Design Thinking Framework.</li> <li>Python programs to demonstrate the use of mean, median, mode, standard deviation and variance.</li> <li>Python programs to visualize the line graph, bar graph, histogram, scatter graph and pie chart using matplotlib.</li> </ul>
<b>September</b>	Revision and Half Yearly Examination		
<b>October</b>	<p><b>Part B: Unit V: Data Literacy – Data Collection to Data Analysis</b></p> <p><b>Part B: Unit VI: Machine Learning Algorithms</b></p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Explain the importance of data literacy in AI.</li> <li>Identify different data collection methods and their applications.</li> <li>Comprehend mathematical concepts related to matrices, its operations, and applications.</li> <li>Apply basic data analysis techniques to analyze data.</li> <li>Visualize the data using different techniques.</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Differentiate the different types of machine learning methods.</li> <li>They will be able to understand the concept behind each machine learning method.</li> <li>Apply these methods to develop simple solutions for some day-to-day situations.</li> </ul>	<ul style="list-style-type: none"> <li>Calculation of pearson correlation coefficient in MS – Excel.</li> <li>Demonstration of Linear regression in MS – Excel / using python program.</li> <li>Demonstration of k – Nearest Neighbour using python program.</li> <li>Demonstration of k – means</li> </ul>





		<ul style="list-style-type: none"> <li>Build up this knowledge to the next level to apply during Capstone Project development.</li> </ul>	clustering using python program.
<b>November</b>	<b>Part A: Unit IV: Entrepreneurial Skills III</b>  <b>Part B: Unit VII: Leveraging Linguistics and Computer Science</b>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Learn and understand Entrepreneurship.</li> <li>Learn and understand the values of an Entrepreneur, Attitude of an Entrepreneur.</li> <li>Learn to think like an entrepreneur.</li> <li>Come up with a Business Idea.</li> <li>Understand the Market and Business Planning</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Develop a better understanding of the complexities of language and the challenges involved in NLP tasks.</li> <li>Learn new techniques and algorithms for NLP tasks.</li> </ul>	<ul style="list-style-type: none"> <li>Create a chatbot on ordering ice-creams using any of the following platforms:               <ol style="list-style-type: none"> <li>Google Dialogflow</li> <li>Botsify.com</li> <li>Botpress.com</li> <li>Any other online platform</li> </ol> </li> <li>Python program to demonstrate the working of a chatbot.</li> <li>Python program to summarize the given text.</li> </ul>
<b>December</b>	<b>Part B: Unit VIII: AI Ethics and Values</b>  <b>Part A: Unit V: Green Skills III</b>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Demonstrate an understanding of the fundamental principles of ethics and gain insight into ethical considerations related to AI technologies.</li> <li>Develop an understanding of AI bias, its sources, and its real-world implications, as well as the ethical considerations.</li> <li>Identify and apply strategies for mitigating bias in AI systems to promote fairness and transparency in technology.</li> <li>Recognize the significance of AI policies in promoting responsible, safe, and ethical use of AI technologies.</li> </ul> <p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Understand Sectors of Green Economy.</li> <li>Learn and analyze Policies for a Green Economy.</li> <li>Understand the Stakeholders in Green Economy.</li> <li>Understand and relate the role of Government and Private Agencies.</li> </ul>	<ul style="list-style-type: none"> <li>Summarize your insights and interpretations from the video "Humans need not apply."</li> <li>Comparative study of AI policies (that involve examining guidelines and principles) established by various organizations and regulatory bodies.</li> <li>Understanding ethical dilemma using Moral machine Survival of the best fit.</li> </ul>
<b>January</b>	Revision and Qualifying Examination.		
<b>February</b>	Revision and Annual Examination		

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Part A: Unit I, II Part B: Unit I, II	Part A: Unit I, II, III Part B: Unit I, II, III, IV	Part A: Unit IV Part B: Unit V, VI	Part A: Unit I to V Part B: Unit I to VI and VIII	Complete Syllabus



**SUBJECT – PSYCHOLOGY**

Month	Name of the Chapter	Objective/Aim	Subject Enrichment /Lab Activity	Project
<b>April</b>	Chapter-1 What is Psychology?	<ul style="list-style-type: none"> <li>Develop the understanding of mind and behaviour.</li> <li>Explain different fields of Psychology, its discipline, and professions.</li> <li>Develop the understanding of value of psychology in daily life.</li> </ul>	Arrange different areas of psychology according to your interest.	
<b>May</b>	Chapter-2 Methods of enquiry	<ul style="list-style-type: none"> <li>Explain the goals and nature of psychological enquiry.</li> <li>Explain the important methods of psychological enquiry.</li> <li>Develop the understanding about the limitations of psychological enquiry and ethical considerations.</li> </ul>		Students will prepare project by using different methods of psychological enquiry.
<b>July</b>	Chapter-3 Human Development	<ul style="list-style-type: none"> <li>Explain the meaning and process of development.</li> <li>Explain and identify the stages of development and describe the major characteristics of infancy, childhood, Adolescence, adulthood and old age</li> </ul>	Interview people from 3 different stages of life, for example, 20-30, 35-60, 60 years of age and find out major transitions that have taken place in their lives.	
<b>August</b>	Chapter-4 Sensory Attentional and Perceptual Processes	<ul style="list-style-type: none"> <li>Develop the understanding of nature of sensory processes.</li> <li>Explain the types and processes of attention.</li> <li>Develop the understanding of the role of socio-cultural factors in perception.</li> </ul>		
<b>September</b>	Chapter-5 Learning	<ul style="list-style-type: none"> <li>Develop the understanding of the nature and features of learning.</li> <li>Explain the types of learning.</li> <li>Acquainted with the leaning principles.</li> </ul>	Experiment on Methods of Verbal Learning.	
<b>October</b>	Chapter-6 Memory	<ul style="list-style-type: none"> <li>Develop the understanding of the nature of memory.</li> <li>Develop the understanding of the nature and causes of forgetting.</li> <li>Develop the skills for improving memory.</li> </ul>	Experiment based on Memory processes.	
<b>November</b>	Chapter-7 Thinking	<ul style="list-style-type: none"> <li>Understand the nature of thinking and Reasoning.</li> </ul>		



		<ul style="list-style-type: none"> <li>Understand the nature and process of creative thinking and learn the ways of enhancing it.</li> <li>Understand the relationship between language and thought.</li> </ul>		
<b>December</b>	Chapter-8 Motivation and Emotion	<ul style="list-style-type: none"> <li>Understand the nature of human motivation.</li> <li>Describe the nature of some important motives.</li> <li>Describe the nature of emotional expression.</li> <li>Students will get to know about managing emotions.</li> </ul>		
<b>January</b>	Revision			
<b>February</b>	Revision			

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Chapter-1 What is Psychology? Chapter-2 Methods of Enquiry.	Chapter-1 What is Psychology? Chapter-2 Methods of Enquiry Chapter-3 Human Development Chapter-4 Sensory Attentional and Perceptual Processes	Chapter-5 Learning Chapter-6 Memory	Chapter-1 What is Psychology? Chapter-2 Methods of Enquiry Chapter-3 Human Development Chapter-4 Sensory Attentional and Perceptual Processes Chapter-5 Learning Chapter-6 Memory Chapter- 7 Thinking	Complete Syllabus

**SUBJECT – COMMERCIAL ART**

Month	Name of the Chapter	Objective/Aim	Subject Enrichment Activity	Project
April	Fundamental of Art- Element of Art, Principles of Art.	Students will be able to understand different elements and principles of art.	How to use different drawing tools and materials to create three-dimensional art work	
May	Pre Historic Rock Paintings. Indus valley Civilization. Introduction, period and location. Study of sculptures and terracotta's.	To familiarize students with Pre Historic Rock Painting and Indus Valley Civilization's various modes of art expressions and styles.	To draw a still life composition, set an eye level with one vanishing point.	Make still life composition with pencil shading.
July	Buddhist, Jain and Hindus art.	Students will be acquainted with wide range of artistic impressions techniques and paintings.	Solving design problems that come up while creating and communicating through images.	
August	Ajanta Caves location- period, number of caves, subject matter and techniques and study of paintings and sculptures.	Students will be acquainted with wide range of artistic impressions techniques and paintings and sculptures of Ajanta Caves.	Stimulating creative thoughts, curiosity, open-mindedness, freedom, perseverance and flexibility.	
September	General Introduction of and study of sculptures during Mauryan, Kushan & Gupta Period.	Students will get to know about the various forms of artistic styles of sculpture of Mauryan, Kushan & Gupta period.	Encouraging to make thoughtful responses that include describing, analysing, interpreting, and judging.	
October	Indian Temple Sculptures and artistic aspects of Indian Temple Sculptures.	This would enable and enrich in students artistic sense and sensibility towards Indian Temple Sculptures.	Understanding various careers in art and related areas.	
November	Bronze Sculptures from Chola period Introduction of Indian Bronze, methods of casting and study of Chola Sculptures.	Here students will observe brief glimpses of development of Indian Bronze Art and methods of Casting of Bronze.	To developing advertising and promotional ideas, essential to survive in a thriving and sustainable market.	Make a poster of any edible product.





<b>December</b>	Indo Islamic Architecture Features 1. Qutub Minar 2. Gol Gumbad of Bijapur	Here students will get to understand the origin and development of Indo Islamic Architecture.		
<b>January</b>	Revision			
<b>February</b>	Revision			

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Fundamental of art, Pre-historic Rock painting, Indus valley civilization and its artistic aspect.	Buddhist, Jain and Hindu Art, Ajanta Caves Location and Technique and painting and sculptures	Indian temple Architecture and sculptures Indian Bronze Natraj.	Complete Syllabus	Complete Syllabus

**SUBJECT – HOME SCIENCE**

Month	Name of the Chapter	Objective/Aim	Subject Enrichment Activity	Project
<b>April</b>	CH-1 Introduction to Home Science Ch-2 Understanding the Self	-Understand different areas of home science and its scope -discuss the importance of knowing oneself and the significance of developing a positive sense of self. -list the factors that influence the development of selfhood and identity.	Planning of therapeutic meals	
<b>May</b>	Ch-3 Food, Nutrition, Health and Fitness  Ch-4 Management of Resources	-define the terms — food, nutrition, nutrients, health, fitness and the role of food and nutrition in maintaining health. -understand the basis for defining the Recommended Dietary Allowances (RDAs) and the difference between Dietary Requirement and RDA. -discuss the concept of a resource. -identify various resources.	Prepare a PPT on different types of hazards	
<b>July</b>	Ch-5 Fabrics Around Us  Ch-6 Media and Communication Ch-7 A. Nutrition, Health and Hygiene	-discuss the diversity in fabrics. -name and classify the fabrics commonly seen around. -define the concept of communication. -discuss the significance of communication in everyday life -discuss the importance of health and its dimensions. -understand the interrelationship of nutrition and health.		Hand-made handloom with yarns
<b>August</b>	Ch-7 B. Resource Availability and Management  Ch- 8 Survival, Growth and Development	-describe time and space as important resources. - analyse the need for managing time and space. -explain the concepts of survival, growth and development. -analyse the relationship between growth and health. -make suggestions for planning balanced meals for children	Flip book on principles/ elements of design	
<b>September</b>	Ch-9 Nutrition, Health and Wellbeing	-describe the nutritional needs of children at different stages of development.	Flow chart on different functions of housekeeping department	
<b>October</b>	Ch-10 Our Apparel	-discuss the clothing functions and the factors influencing selection of clothes.	Prepare own food label of any product	



	Ch- 11 Health and Wellness	-identify general clothing needs of the children. -discuss the importance of health and fitness. -explain the health concerns and challenges of adults.		
<b>November</b>	Ch- 12 Financial Planning and Management	-understand the meaning and concept of financial management. -know the different types of income.		
<b>December</b>	Ch- 13 Care and Maintenance of Fabrics	-understand the aspects of care and maintenance of different fabrics. -know the procedure of removing different stains.		
<b>January</b>	Revision			
<b>February</b>	Annual Examination			

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Ch- 1, 2	Ch- 1, 2, 3, 4, 5, 6, 7	Ch- 8, 9	Ch- 1, 3, 4, 5, 7, 8, 9, 10	Complete Syllabus





CLASS: XI SCIENCE – BIFURCATED SYLLABUS – 2025 – 26  
**SUBJECT – HINDUSTANI MUSIC VOCAL**



Month	Name of the Chapter	Objective/Aim	Subject Enrichment Activity	Project
<b>April</b>	Basics of raag & taal Alankar & teen taal	Explain the basic terms of Indian classical music.	Sargam practice in different Laya in practical class.	
<b>May</b>	Raag Vihag General Introduction Aroh Avroh palta & Swar vistar Teen taal on hand	Introduction of raag, & taal.	Sargam Geet practice in raag& Basic Knowledge of taal on hands in practical class.	
<b>July</b>	Raag Vihag swar vistar drut Khayal with Alap - taan Teen taal thah, dugun chargin lay kari on hands. Brief Description - Naad, Shruti, Swar, Saptak, Margee Gaan	Explain raag with notation Taal on hands in different layakari. Knowledge of basic terms of Indian classical music.	Practice of raag & taal in detail.	
<b>August</b>	Raag Vihag -notation with alap taan. Raag Bhimpalasi parichay Teen taal with thah dugun & chargin lay kari and taal notation. Life sketch of Tansen. Dhrupad gayan shelly Tanpura sachitr varnan	Introduction of Bhimpalasi raag and explain raag in detail. To show different laya on hands. To know about the contribution of Indian classical music. Explain the structure of tanpurasician.	Demonstration & practice of raag & taal	
<b>September</b>	Raag Bhimpalasi drut Khayal with Alap –taan. Ek Taal thah & dugun on hands & Taal Notation	Raag Bhimpalasi drut Khayal with Alap –taan. Ek Taal thah & dugun on hands & Taal Notation	Practice of raag & taal in detail.	
<b>October</b>	RaagBhimpalasi Notation with Alaptaan EkTaalthah, dugun, chargin on hands &taallipi. Brief Description of that, laya, raag, raagjati,khayal ,Thaat, life sketch V.N Bhathkhande,	Raag Bhimpalasi Notation with Alap taan Ek Taal thah, dugun, chargin on hands &taallipi. Brief Description of that, laya, raag, raagjati,khayal ,Thaat, life sketch V.N Bhathkhande,	Practice of raag & taal.	
<b>November</b>	Raag Bhairvi Parichay & Drut khayal, taal char taal thah & taallipi. Brief Description - taal, tarana, sangeet Natyashastra, Life sketch V.N Paluskar,	Description of raag & taal through drut khyal and taal notation. Know about the life history & contribution of musician.	Practice of raag & taal in detail.	



<b>December</b>	Raag Bhairvi Notation, char taal thah, dugun ,chargun with taallipi Raag pehchaan & Bhairvi Alap - Taan	To know about the raag & taal in detail.	Practice of raag & taal in detail.	
<b>January</b>	Vilambit khayal /dhrupad bandish with Notation. Revision of previous ragas & taal	Explain dhrupad singing style with bandish.	Practice of raag & taal in detail.	Music practical file.
<b>February</b>	Vilambit khayal/dhrupad with alap /lay karee.	Discuss & explain raag drutkhyal , dhrupad & taal.	Practice of raag & taal in detail.	

### Exam Syllabus

Unit Test I	Half Yearly	Unit Test II	Qualifying	Annual
Naad, Shruti, swar, Saptak, Margee gaan, Dhrupad, Tansen, Teen taal thah, dugun chargun parichay & taal lipi, Ektaal parichay thah laya. Raag vihag parichay, pehchaan, drut khayal, Raag Bhimpalasi Parichay.	Raag Vihag drut Khayal with Alap & taan drut khayal with alap taan teen taal thah, dugun chargun laykari on hands. Brief Description - Naad, Shruti, Swar, margee gaan, Saptak, raag pehchaan Raag Vihag-notation with alap taan, raag Bhimpalasi Parichay ektaal Parichay, taal lipi life sketch of Tansen Raag & Taal parichay Dhrupad. Raag Bhimpalasi drut Khayal with Alap -taan	Raag Bhimpalasi Notation With Alap taan EkTaal thah, dugun, chargun on hands & taal lipi . Brief Description thaata, laya, raag, raag jati, khayal. Life sketch - V.N Bhathkhende, V. N Palusker, tanpure ka sachitr varnan, Raag Bhairvi Parichay & Drut khayal, taal char taal thah & taal lipi, Brief Description - taal, tarana, sangeet Natyashastra, Raag Bhairvi Notation, char taal thah, dugun chargun with taal lipi, raag pehchaan & Bhairvee Alap - Taan	Raag Bhimpalasi Notation With Alap taan, Brief Description thaata, laya, raag, raag jati, khayal. life sketch- V.N Bhathkhende, V. N Palusker, tanpure ka sachitr varnan, Raag Bhairvi Parichay & Drut khayal, Raag Bhairvi notation, Bhairvee Alap – Taan char taal thah, dugun chargun with taal lipi, Brief Description - taal, tarana, sangeet Natyashastra, raag pehchaan & Vilambit khayal /dhrupad bandish with Notation.	Raag Bhimpalasi Notation With Alap taan, Brief Description thaata, laya, raag, raag jati, khayal. life sketch- V.N Bhathkhende, V. N Palusker, tanpure ka sachitr varnan, Raag Bhairvi Parichay & Drut khayal, Raag Bhairvi notation, Bhairvee Alap – Taan char taal thah, dugun chargun with taal lipi, Brief Description - taal, tarana, sangeet Natyashastra, raag pehchaan & Vilambit khayal /dhrupad bandish with Notation.



**SUBJECT – SUPW**

Month	Topic
April	Drawing on stone
May	Poster ( AI and Human)
July	Book marker
August	Old paper or newspaper craft
September	Folder
October	Stitching and tailoring
November	Shagun envelope
December	Greeting card for teacher's
January	Paper quilling
February	Best out of waste