

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS-XI Subject : BIOLOGY Session - 2024-25

S.NO	MONTH	CONTENT	ACTIVITIES
1.	April / June / July	UNIT-3 : Cell Structure function Chapter – 8 : Cell The Unit of Life Chapter – 9 : BIO - Molecules Chapter –10 : Cell Cycle and Cell Division	Study of Osmosis by potato Osmometer study the parts of Compound microscope Test for the presence of sugar , starch , proteins and fats.
2.	1 August to 30 August	UNIT-2 : Structural Organisation in Animals and Plants Chapter – 5 : Morphology of flowering plants	Modifications of stem , root , leaf and morphology of cockroach.
3.	1 September to 15 September	Chapter – 6 : Anatomy of flowering plants Chapter – 7 : Structural Organisation in Animals	Study of in a bibitions of seeds.
4.	1 October to 15 October	UNIT-5 : Human Physiology Chapter – 17 : Breathing and Exchange of Gases Chapter – 18 : Body fluids and Circulation Chapter – 19 : Excretory product and their elimination	Study of stomata on lower and upper surface of leaf.
5.	15 October to 30 November	UNIT-4 : Plant Physiology Chapter – 13 : Photosynthesis in Higher Plants Chapter – 14 : Respiration in Plants Chapter – 15 : Plant Growth and Development	Separation of plant pigments through Chromalography.
6.	1 December	Chapter – 20 : Locomotion and movement Chapter – 21 : Neural Control and Co-ordination	Study of human skeleton and different types of joints.
7.	1 January	Chapter – 22 : Chemical Co-ordination and Integration	Study plants and animal tissues.
8.	2 January to February	UNIT-1 : Diversity of living Organisms Chapter – 1 : The Living World Chapter – 2 : Biological Classification Chapter – 3 : Plant Kingdom Chapter – 4 : Animal Kingdom	Study of plant specimens , animal specimens.

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS-XI Subject - BUSINESS STUDIES Session - 2024-25

S.NO	MONTH	CONTENT	ACTIVITIES
1.	April	UNIT – 1 : Foundation of Business	1. Find out and write about 10-10 Public Sector Private Sector and Joint Sector Organisation. 2. Role Play 3. Visit to a Bank to observe the working of it. 4. Write down few companies names who performs social responsibility towards different interest group . 5. Slide show / PPT 6. Project work As per CBSE guidelines. 7. Visit to a mall to observe the process of selling and billing.
2.	June / July	Chapter – 1 : Nature and purpose of Business Chapter – 2 : Forms of Business Organisation Chapter – 3 : Public Private and Global Enterprises Revision for Unit Test - I	
3.	August	Chapter – 3 : Continued Chapter – 4 : Business Services	
4.	September	Chapter – 5 : Emerging Modes of Business Revision for Term – I	
5.	October	Chapter – 6 : Social Responsibilities of Business and Business Ethics UNIT – 2 : Finance and Trade Chapter – 7 : Sources of Business Finance	
6.	November	Chapter – 7 : Continued Chapter – 8 : Small Business	
7.	December	Chapter – 9 : Internal Trade Revision for Unit Test - II	
8.	January	Chapter – 9 : Continued Chapter – 10 : International Business	
9.	February	Revision for Annual Exam Portion for Unit Test / Exam Unit Test – I Chapter – 1 & 2 Term – I Chapter – 1 , 2 , 3 , 4 , 5 Unit Test – II Chapter – 6 , 7 Term – II Chapter – 1 - 10	

ST. MARY'S CO-ED SCHOOL, HARDA
CLASS-XI Subject - NCC (076) Session - 2024-25

S.NO	MONTH	CONTENT	ACTIVITIES
1.	April	NCC : A + A Glance	
2.	June	NCC : A + A Glance	
3.	July	Defence Services National Integration	War Heroes
4.	August	Leadership and Personality Development Social Awareness	Rural Development Programmes
5.	September	Drill and Commands	Drill and Commands
6.	October	Weapon Training Map Reading	. 22 Rifle . 5.56 mm INSAS
7.	November	Civil Defence and Disaster Management Environment and Ecology	Civil Defence Disasters
8.	December	Field Craft and Battle Craft obstacles Training	
9.	January	Health and Hygiene Home Nursing General Awareness	F. C. B. C Project
10.	February	Revision	

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS-XI Subject – ECONOMICS Session - 2024-25

S.NO	MONTH	CONTENT	ACTIVITIES
1.	April	Part B – Introductory Micro Economics UNIT-1: Introduction, What is economics? Meaning, Scope, Functions etc.	Project work as per CBSE guidelines.
2.	June	Difference between Micro + Macro economics, Introduction etc.	
3.	July	Meaning of Micro economics, What is an economy? Central problems of an economy. What to produce , how to produce ? for whom to produce Part A – Unit I : Statistics for economics Introduction , scope etc.	Effect on PPC due to Various Govt. Policies.
4.	August	UNIT- 2: Collection, organization and importance of Statistics in economics. UNIT- 5: Consumers equilibrium and demand	Opportunity cost as an economic tool.
5.	September	UNIT- 3: Statistical Tools and Interpretation Revision for Term - I	Presentation by Students
6.	October	Measures of Central Tendency, Arithmetic mean , Median and Mode	
7.	November	UNIT- 6: Producer behaviour and Supply	Debat or different forms of market.
8.	December	Correlation: Meaning and Properties Scatter diagram etc.	
9.	January	Introduction to Index Numbers UNIT- 7: Forms of market and price determination under perfect competition with simple applications	Presentation Sewa Project
10.	February	Project work, Revision, Viva and Annual Examination	Group activites
11.	March	Annual Exam and Result	

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS-XI Subject - P.E. Session - 2024-25

S.NO	MONTH	CONTENT	ACTIVITIES
1.	April / June	UNIT- 1 : Changing Trends and Career in physical Education	Project on Career options in physical Education.
2.	July	UNIT- 2 : Olympism Value Education UNIT- 3 : Yoga	Project on Olympic Project of Asana by video clips and file.
3.	August	UNIT- 4 : Physical Education and Sports for (CWSN) UNIT- 5 : Physical Fitness, Wellness and Lifestyle	Project on physical disability PPT on describe good and bad posture. Project on physical, fitness, Health and Wellness.
4.	September	TERM - I	
5.	October	UNIT- 6 : Test, Measurement and Evaluation	Sai Khelo India fitness Test and Project file.
6.	November	UNIT- 7 : Fundamental of Anatomy and physiology in Sports	Project on classification of Bones and types of Joints.
7.	December	UNIT- 8 : Fundamentals of Kinesiology and Biomechanics and Sports	Project on Types of Body Movement.
8.	January	UNIT- 9 : Psychology and Sports UNIT- 10 : Training and Doping in Sports	Project on Sports injuries classification causes and prevention. Project on concept of Doping and its Disadvantages.
9.	February	Final Exam	

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS- XI Subject - HINDI SESSION 2024-25

क्र.	माह	पाठ का नाम
1.	अप्रैल	पुस्तक एवं पाठ परिचय
2.	जून	प्रेमचंद कबीर दास
3.	जुलाई	प्रेमचंद, कबीरदास, अभिव्यक्ति और माध्यम मकबूल फिदा हुसैन
4.	अगस्त	अमरकांतदेसाई, हरिशंकर परसाई सूरदास, अभिव्यक्ति और माध्यम मकबूल फिदा हुसैन
5.	सितंबर	रांगेय राघव, देव विष्णु प्रभकर
6.	अक्टूबर	सुधा अरोडा, सुमित्रानंदन पंत महादेवी वर्मा, विष्णु प्रभाकर
7.	नवंबर	ओमप्रकाश वाल्मीकि, अभिव्यक्ति और माध्यम नागार्जुन
8.	दिसंबर	पांडेय बैचन शर्मा श्रीकांत वर्मा
9.	जनवरी	भारतेंदु हरिश्चंद्र धूमिल,
10.	फरवरी	पुनः अभ्यास
11.	मार्च	परीक्षा

ST. MARY'S CO-ED SCHOOL, HARDA
Class-XI Applied Mathematics Syllabus (2024-25)

Months	Unit No.	Unit Name	Topics Covered	Key Concepts
April	1	Number, Quantification, and Numerical Applications	Numbers and Quantification, Binary numbers	Binary number system
June			Simple applications of logarithm and antilogarithm, Laws and properties of logarithms, Indices, logarithms, and antilogarithms	Logarithmic functions, and antilogarithmic functions.
July			Numerical Applications (Seating arrangement, Mensuration, Time, work, and distance, Calendar, Clock, Averages)	Practical applications of numerical concepts
August	2	Algebra	Sets, Operations on sets, Venn's diagrams, Intervals, Subsets, Types of sets and their notations, Representation of sets, Introduction to sets – definition, Relations (Cartesian product of two sets, Ordered pairs, Permutations and combinations, Fundamental principle of counting, Factorial)	Fundamental set operations, Relations and functions, Permutations and combinations
September	3	Mathematical Reasoning	Logical Reasoning	Logical reasoning principles
October	4	Calculus	Derivatives of algebraic functions using the chain rule, Differentiation as a process of finding derivative, Instantaneous rate of change, Concepts of limits of a function	Fundamental concepts of calculus, Limits, Derivative applications
November	5	Probability	Bayes theorem, Total probability, Conditional probability, Event, Random experiment, and sample space, Introduction	Probability basics, Conditional probability, Bayes theorem
December	7	Financial Mathematics	Calculation and interpretation of electricity bill, water supply bills, and other bills, Bills, tariff rates, fixed charges, surcharge, service charge, Tax, calculation of tax, simple applications of tax calculations in Goods and Services tax, income tax, Simple applications of regular annuities [up to 3 periods], Annuities, calculating regular annuities, Present value, net present value, and future value, Effective rate of interest, Simple and compound interest rates with equivalency, Accumulation with simple and compound interest, Interest and interest rates	Financial calculations, Annuities, Net present value, Compound interest
January	8	Coordinate Geometry	Parabola, Circle, Straight line	Equations and properties of geometric figures

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS- XI Subject - Accountancy SESSION 2024-25

MONTH	NAME OF CHAPTERS	ACTIVITY
April	Introduction to Accounting + Basic Accounting Terms Theory Base of Accounting, Accounting Standards & Indian AS	1. Try to find out various Source Documents used in Day to Day life. 2. Visit a Bank and find out information about various activity conduct by bank. 3. find out information about Tally & Other accounting software
June	Base of Accounting + Accounting Equation	
July	Accounting Procedures – Rules of Debit & Credit Origin of Transactions – Source Documents & Preparation of Vouchers + Journal + Ledger	
August	Special Purpose Books I – Cash Book + Special Purpose Books II – Other Books	
September	Accounting of GST + Bank Reconciliation Statement	
October	Trial Balance Provision & Reserves	
November	Depreciation Rectification of Errors	
December	Financial Statements of Sole Proprietorship	
January	Adjustments in Preparation of Financial Statements Accounts from Incomplete Records (Single Entry System)	

P.T. I – Chapters – 1, 2, ,3, 4

Mid Term – Chapters 1 to 11

Annual Exam - 1 to 20

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS- XI Subject - Physics SESSION 2024-25

S.N.	Month	Unit / Chapter / Content	Activities / ICT / Practical
1.	April	Unit-1 - Physical World and Measurement Chapter-1 (Deleted) Chapter-2: Units and Measurements	Experiment- 1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/calorimeter using Vernier Callipers and hence find its volume. Experiment- 2. To measure diameter of a given wire and thickness of a given sheet using screw gauge. Activity- 1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm.
2.	June	Unit-II Kinematics Chapter-3: Motion in a Straight Line Chapter-4: Motion in a Plane	Experiment- 3. To determine volume of an irregular lamina using screw gauge. Experiment- 4. To determine radius of curvature of a given spherical surface by a spherometer. Activity- 2. To determine mass of a given body using a metre scale by principle of moments.
3.	July	Unit-III Laws of Motion Chapter-5: Laws of Motion Unit-IV Work, Energy and Power Chapter-6: Work, Energy and Power	Experiment- 5. To determine the mass of two different objects using a beam balance. Experiment- 6. To find the weight of a given body using parallelogram law of vectors. Activity-3 To measure the force of limiting friction for rolling of a roller on a horizontal plane.
4.	August	Unit-V Motion of System of Particles and Rigid Body Chapter-7: System of Particles and Rotational Motion Unit-VI Gravitation Chapter-8: Gravitation	Experiment- 7. Using a simple pendulum, plot its $L-T^2$ graph and use it to find the effective length of second's pendulum. Experiment- 8. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result. Activity-4 To study dissipation of energy of a simple pendulum by plotting a graph between square of amplitude and time.
5.	September	Unit-VII Properties of Bulk Matter Chapter-9: Mechanical Properties of Solids Chapter-10: Mechanical Properties of Fluids	Experiment-9. To determine Young's modulus of elasticity of the material of a given wire. Experiment- 10. To find the force constant of a helical spring by plotting a graph between load and extension. Activity-5 To study the factors affecting the rate of loss of heat of a liquid
6.	October	Unit-VII Properties of Bulk Matter Chapter-11: Thermal Properties of Matter	Experiment- 11. To study the relation between frequency and length of a given wire under constant tension using sonometer. Experiment- 12. To study the relation between the length of a given wire and tension for constant frequency using sonometer. Activity-6 To study the effect of detergent on surface tension of water by observing

			capillary rise.
7.	November	Unit–VIII Thermodynamics Chapter–12: Thermodynamics	Experiment-13 To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body. Activity-7 To observe the decrease in pressure with increase in velocity of a fluid.
8.	December	Unit–IX Behaviour of Perfect Gases and Kinetic Theory of Gases Chapter–13: Kinetic Theory	Experiment-14 To study the variation in volume with pressure for a sample of air at constant temperature by plotting graphs between P and V, and between P and 1/V. Activity-8 To observe and explain the effect of heating on a bi-metallic strip.
9.	January	Unit–X Oscillations and Waves Chapter–14: Oscillations Chapter–15: Waves	Experiment-15 To find the speed of sound in air at room temperature using a resonance tube by two resonance positions. Activity- 9 To observe change of state and plot a cooling curve for molten wax.
10.	February	Final Practical Exam & Annual examination	

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS- XI Subject – Chemistry (043 Theory) SESSION 2024-25

70 Marks

SR.NO.	MONTH	NAME OF CHAPTER	CONTENT	ACTIVITY
1.	April- June	1. STRUCTURE OF ATOM	Discovery of Electron Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations, Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principles, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals – Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms, stability of half-filled and completely filled orbitals.	NCERT BASED ACTIVITY
2.	July	2. CLASSIFICATION OF ELEMENTS AND PERIODICITY IN PROPERTIES	Significance of classification, brief history of the development of periodic table, modern periodic law and the present form of periodic table, periodic trends in properties of elements – atomic radii, ionic radii, inert gas radii, ionization enthalpy, electron gain enthalpy, electronegativity, valency. Nomenclature of elements with atomic number greater than 100.	NCERT BASED ACTIVITY
3.	July	3. SOME BASIC CONCEPTS OF CHEMISTRY	General Introduction: Importance and scope of Chemistry. Nature of matter, laws of chemical combination, Dalton's atomic theory: Concept of elements, atoms and molecules. Atomic and molecular masses, mole concept and molar mass, percentage composition, empirical and molecular formula, chemical reactions, stoichiometry and calculations based on stoichiometry.	NCERT BASED ACTIVITY
UNIT TEST- I	JULY	UNIT – STRUCTURE OF ATOM		
4.	August	4. CHEMICAL BONDING AND MOLECULAR STRUCTURE	Valence electrons, ionic bond, covalent bond, bond parameters, Lewis structure, polar character of covalent bond, covalent character of ionic bond, valence bond theory, resonance, geometry of covalent molecules, VSEPR theory, concept of hybridization, involving s, p and d orbitals and shapes of some simple molecules, molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), Hydrogen bond	NCERT BASED ACTIVITY
September		MID TERM – UNIT – 1,2,3,4		
5.	October	5. ORGANIC CHEMISTRY SOME BASIC	General introduction, methods of purification, qualitative and quantitative analysis, classification and IUPAC nomenclature of organic compounds. Electronic displacements in a covalent bond: inductive effect, electrometric effect,	NCERT BASED ACTIVITY

		PRINCIPLES AND TECHNIQUES	resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions.	
6.	November	6. HYDROCARBONS	Classification of Hydrocarbons Aliphatic Hydrocarbons Alkanes – Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reaction reactions including free radical mechanism of halogenation, combustion and pyrolysis. Alkenes- Nomenclature, structure of double bond (ethene), geometrical isomerism, physical properties, methods of preparation, chemical reactions: addition of hydrogen, halogen, water, hydrogen halides (Markovnikov's addition and peroxide effect), ozonolysis, oxidation, mechanism of electrophilic addition. Alkynes- Nomenclature, structure of triple bond (ethyne), physical properties, methods of preparation, chemical reactions: acidic character of alkynes, addition reaction of – hydrogen, halogens, hydrogen halides and water. Aromatic Hydrocarbons: Introduction, IUPAC nomenclature, benzene: resonance, aromaticity, chemical properties: mechanism of electrophilic substitution. Nitration, sulphonation, halogenation, Friedel Craft's alkylation and acylation, directive influence of functional group in monosubstituted benzene. Carcinogenicity and toxicity.	NCERT BASED ACTIVITY
7.	NOVEMBER	7. REDOX REACTION	Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons an change in oxidation number, applications of redox reactions.	NCERT BASED ACTIVITY
8.	December	8. CHEMICAL THERMODYNAMICS	Concepts of System and types of systems, surroundings, work, heat, energy, extensive and intensive properties, state functions. First law of thermodynamics- internal energy and enthalpy, heat capacity and specific heat, measurement of U and H, Hess's law of constant heat summation, enthalpy of bond dissociation, combustion, formation, atomization, sublimation, phase transition, ionization, solution and dilution. Second law of Thermodynamics (brief introduction) Introduction of entropy as a state function, Gibb's energy change for spontaneous and nonspontaneous processes, criteria for equilibrium. Third law of thermodynamics (brief introduction).	NCERT BASED ACTIVITY
9.	January	9. EQUILIBRIUM	Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium – Le Chatelier's principle, ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, Henderson	NCERT BASED ACTIVITY

		Equation, solubility product, common ion effect (with illustrative examples).	
10.	JANUARY	REVISION	
11	FEBRUARY	ANNUAL EXAMINATION	

CLASS XII CHEMISTRY PRACTICALS 2024-25

Evaluation Scheme for Examination Marks	Marks
Volumetric Analysis	08
Salt Analysis 08	08
Content Based Experiment	06
Project Work	04
Class record and viva	04
Total	30

PRACTICAL SYLLABUS

Micro-chemical methods are available for several of the practical experiments. Wherever possible, such techniques should be used.

A. Basic Laboratory Techniques

1. Cutting glass tube and glass rod
2. Bending a glass tube
3. Drawing out a glass jet.
4. Boring a cork

B. Characterization and Purification of Chemical Substance.

1. Determination of melting point of an organic compound.
2. Determination of boiling point of an organic compound.
3. Crystallization of impure sample of any one of the following: Alum, Copper Sulphate, Benzoic Acid.

C. Experiments based on pH

a) Any one of the following experiments:

- Any one of the following experiments:

- Determination of pH of some solutions obtained from fruit juices, solution of known and varied concentrations of acids, bases and salts using pH paper or universal indicator.
- Comparing the pH of solutions of strong and weak acids of same concentration.
- Study of pH change in the titration of a strong base using universal indicator.

b) Study of pH change by common-ion in case of weak acids and weak bases.

D. Chemical Equilibrium One of the following experiments:

- Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/ decreasing the concentration of either of the ions.
- Study the shift in equilibrium between $[\text{Co}(\text{H}_2\text{O})_6]^{2+}$ and chloride ions by changing the concentration of either of the ions.

E. Quantitative Estimation

- Using a mechanical balance/electronic balance.
- Preparation of standard solution of Oxalic acid.
- Determination of strength of a given solution of Sodium hydroxide by titrating it against standard solution of Oxalic acid.
- Preparation of standard solution of Sodium carbonate.
- Determination of strength of a given solution of hydrochloric acid by titrating it against standard Sodium Carbonate Solution.

F. Qualitative Analysis

a) Determination of one anion and one cation in a given salt

Cations- Pb^{2+} , Cu^{2+} , As^{3+} , Al^{3+} , Fe^{3+} , Mn^{2+} , Ni^{2+} , Zn^{2+} , Co^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+} , Mg^{2+} , NH_4^+

Anions – CO_3^{2-} , S^{2-} , NO_2^- , SO_3^{2-} , SO_4^{2-} , NO_3^- , Cl^- , Br^- , I^- , PO_4^{3-} , CH_3COO^-

(Note: Insoluble salts excluded)

b) Detection of – Nitrogen, Sulphur, Chlorine in organic compounds.

c) PROJECTS Scientific investigations involving laboratory testing and collecting information from other sources. A few suggested Projects

- Checking the bacterial contamination in drinking water by testing sulphide ion
- Study of the methods of purification of water
- Testing the hardness, presence of iron, Fluoride, Chloride, etc., depending upon the regional variation in drinking water and study of causes of presence of these ions above permissible limit (if any).
- Investigation of foaming capacity of different washing soaps and the effect of addition of Sodium carbonate on it
- Study the acidity of different samples of tea leaves.
- Determination of the rate of evaporation of different liquids Study the effect of acids and bases on the tensile strength of fibers.
- Study of acidity of fruit and vegetables juices.

Note: Any other investigatory project, which involves about 10 periods of work, can be chosen with the approval of the teacher.

ST. MARY'S CO-ED SCHOOL, HARDA
ANNUAL SYLLABUS (Computer Science (New) 083 Python) 2024-25
CLASS – XI

S.no.	Months	Unit	Chapter/Contents	Activities
1	April	1 Computer Systems and Organization.	Basic Computer Organization, Mobile System Organization, Types of software, Memory Unit, etc.	• PPT related to CPU & Mobile Sys.Org.
2	June + July		Boolean Logic :-Logic Operator , Truth Table, & De Morgan's Laws , Logic gates , Logic circuits , etc.	• Activities related to Boolean Logic & Gates.
3	July + August		Numbers System: Numbers in base 2,8,16 & Binary addition. Concepts of Compiler and Interpreter. Operating System (OS) : Need for an OS, Brief Intro. to Function of OS, User Interface.	• Assignment related to Number System. • PPT of Operating System.
4	September	2 Computational Thinking and Programming I	Introduction to Problem Solving : Familiarization with the basics of Python Programming, Knowledge of data types and Operators, Expressions ,Statement, type conversion & input & output, Errors, Conditional Statements, computational and Control flow, Iterative statements ,	• Practical & Activities related to Python programming And conditional statements and control Flow.
5	October		Strings : Traversal Operations. List : Definition, Creation, Traversal , Operations on a List. Tuples : Definition, Creation, Traversal, Operation on a Tuples and Functions.	• Practical related to Strings , List and Tuple. Traversal, creation, functions.
6	November		Dictionary : Definition, Creation, Accessing elements of a Dictionary, Add & Modify an item in a Dictionary, Traversal, Operation on a Dictionary and Functions.	• PPT Related to Dictionary .Operation on Dict., Traversal, creation, functions.
7	December	3 Society, Law and Ethics	Introduction to Python Modules: Importing Math, Random, and Statistics Modules. Digital Footprints, Digital society & Netizen , Data Protection , Cyber Crime, Cyber Safety.	• Assignment About Cyber Safety, Social Networks Communicating data , Digital rights mgmt.
8	January		Safety Accessing Websites. E-waste Management, Indian Information Technology Act (ICT Act) Technology & Society	• Activities Related to Privacy Laws, Fraud, Cyber-Crime Technology and Society. Identity Theft,
9	February	Revision + Annual Exam		

ST. MARY'S CO-ED SCHOOL, HARDA
Class XI Subject - English Core Session - 2024-25

Months	Contents	Assessments	Activity/Projects
	Chapters of the Text-books		
April	1. The Portrait of a Lady [Note Making and Summary Writing]		Reading Skill Assessment
June	2. The Summer of the Beautiful White Horse [Tenses & Clauses [Gap Filling]]		Group Discussion
July	3. A Photograph 4. The Address [Re-ordering & Transformation of Sentences]	Periodic Test - I	Speech Sessions
August	5. We are not Afraid to Die...if We Can Be Together 6. Mother's Day [Advertisements]		Listening and comprehension skill assessment
September	7. Discovering Tut: The Saga Continues 8. Birth [Poster-making]	Term - I	Projects for Term I
October	9. The Laburnum top 10. The Tale of Melon City [Speech Writing]		Projects for Term II
November	11. The Voice of the Rain 12. Childhood [Debate Writing]		Classroom skit performance
December	13. The Adventure 14. Silk Road	Periodic Test - II	Revision Assessments
January	15. Father to Son		Revision Assessments
FEBRUARY [FINAL EXAMINATION]			

ST. MARY'S CO-ED SCHOOL, HARDA

CLASS XI SUBJECT - MATHEMATICS SYLLABUS SESSION 2024-25

MONTH	CONTENT	PROJECT/ACTIVITY/ ASSIGNMENT
APRIL	Sequence and Series Sequence and Series. Arithmetic Mean (A.M.) Geometric Progression (G.P.), general term of a G.P., sum of n terms of a G.P., infinite G.P. and its sum, geometric mean (G.M.), relation between A.M. and G.M.	To demonstrate: The Arithmetic mean of two different positive numbers is always greater than the Geometric mean To make a model of 3D space CHART AND ASSIGNMENT To construct parabola and ellipse
JUNE	Introduction to Three-dimensional Geometry Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points	
JULY	Trigonometric Functions Positive and negative angles. Measuring angles in radians and in degrees and conversion from one measure to another. Definition of trigonometric functions with the help of unit circle. Truth of the identity $\sin^2 x + \cos^2 x = 1$, for all x . Signs of trigonometric functions. Domain and range of trigonometric functions and their graphs. Expressing $\sin(x \pm y)$ and $\cos(x \pm y)$ in terms of $\sin X$, $\sin Y$, $\cos X$ & $\cos Y$ and their simple applications. Deducing identities like the following: $\tan(x \pm y) = \frac{\tan x \pm \tan y}{1 \mp \tan x \tan y}, \cot(x \pm y) = \frac{\cot x \cot y \mp 1}{\cot y \pm \cot x}$ $\sin \alpha \pm \sin \beta = 2 \sin \frac{(\alpha \pm \beta)}{2} \cos \frac{(\alpha \mp \beta)}{2}$ $\cos \alpha + \cos \beta = 2 \cos \frac{(\alpha + \beta)}{2} \cos \frac{(\alpha - \beta)}{2}$ $\cos \alpha - \cos \beta = -2 \sin \frac{(\alpha + \beta)}{2} \sin \frac{(\alpha - \beta)}{2}$ Identities related to $\sin 2x$, $\cos 2x$, $\tan 2x$, $\sin 3x$, $\cos 3x$ and $\tan 3x$.	
AUGUST	Coordinate Geometry Straight Lines Brief recall of two dimensional geometry from earlier classes. Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axis, point -slope form, slope-intercept form, two-point form, intercept form, Distance of a point from a line. Conic Sections Sections of a cone: circles, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section. Standard equations and simple properties of parabola, ellipse and hyperbola. Standard equation of a circle.	

	Sets and Functions [Sets] Sets and their representations, Empty set, Finite and Infinite sets, Equal sets, Subsets, Subsets of a set of real numbers especially intervals (with notations). Universal set. Venn diagrams. Union and Intersection of sets. Difference of sets. Complement of a set. Properties of Complement.	
SEPTEMBER	Relations & Functions Ordered pairs. Cartesian product of sets. Number of elements in the Cartesian product of two finite sets. Cartesian product of the set of reals with itself (upto $\mathbb{R} \times \mathbb{R} \times \mathbb{R}$). Definition of relation, pictorial diagrams, domain, co-domain and range of a relation. Function as a special type of relation. Pictorial representation of a function, domain, co-domain and range of a function. Real valued functions, domain and range of these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and greatest integer functions, with their graphs. Sum, difference, product and quotients of functions.	To find analytically $\lim_{x \rightarrow c} f(x)$ <i>Other activities and projects according to instructions issued by CBSE</i>
OCTOBER	Algebra Complex Numbers and Quadratic Equations Need for complex numbers, especially $\sqrt{-1}$, to be motivated by inability to solve some of the quadratic equations. Algebraic properties of complex numbers. Argand plane Linear Inequalities Linear inequalities. Algebraic solutions of linear inequalities in one variable and their representation on the number line.	
NOVEMBER	Permutations and Combinations Fundamental principle of counting. Factorial n. (n!) Permutations and combinations, derivation of Formulae for P(n, r) and C(n, r) and their connections, simple applications. Binomial Theorem Historical perspective, statement and proof of the binomial theorem for positive integral indices. Pascal's triangle, simple applications.	
DECEMBER	Limits and Derivatives Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea of limit. Limits of polynomials and rational functions trigonometric, exponential and logarithmic functions. Definition of derivative relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions. Derivatives of polynomial and trigonometric functions.	
JANUARY	Statistics and Probability Measures of Dispersion: Range, Mean deviation, variance and standard deviation of ungrouped/grouped data. Probability Events; occurrence of events, 'not', 'and' and 'or' events, exhaustive events, mutually exclusive events, Axiomatic (set theoretic) probability, connections with other theories of earlier classes. Probability of an event, probability of 'not', 'and' and 'or' events.	
FEBRUARY	Revision and Annual exam	
MARCH	Annual exam and Result	

