| <b>ENGLISH</b> | <b>ENGLISH</b>  |   |   |  |  |
|----------------|---|---|---|--|--|
| MONTH          | Units/Subunits/ Topics/ Chapters to be<br>Covered   | Details of Activity/ Practice al / Projects to be given   | Unit Tests / Formative/<br>Tests/ Assignment  |  |  |
| JUNE           | READING 1. Reading Comprehension WRITING AND GRAMMAR 1. Advertisement and its types   | Draft an advertisement for your school informing about upcoming events.      Write a diary entry sharing your childhood memories.   |   |  |  |
| JULY           | GRAMMAR: WRITING: SPEECH 1. Clauses LITERATURE (Hornbill) 1. The Portrait of a Lady 2. A Photograph Snapshot 1. The Summer of the Beautiful White Horse               | 3. Role play: Enact a scene from the chapter "The Summer of the Beautiful White Horse" and exchange your thoughts.  | Test-1<br>(Portion from June to July)   |  |  |
| AUG            | WRITING AND GRAMMAR  1. Poster LITERATURE (Hornbill)  1. We're not afraid to die  2. Discovering Tut Snapshot  1. The address   | 1 Prepare a mind map of the chapter "we are not afraid to die" 2. Watch and give Review of any of the suggested survival movies Life of Pie and draw its similarity from the text. 3. Practice Communication skills through dialogue writing. 4. Read some suggested novels.                      |   |  |  |
| SEPT           | READING 1. Note-making and Summarisation WRITING AND GRAMMAR Practice ( Writing Section) LITERATURE (Hornbill) 1. The Laburnum Top 2. The Voice of the Rain           | Write a poem on nature and submit it as an assignment.     Practice note-making.  |   |  |  |
| OCT            | READING 1. Solving Comprehension 2. Passage WRITING AND GRAMMAR 1. Gap Filling 2. Reordering of sentences 3. Transformation of sentences Lit: (Snapshot) Mother's Day | Prepare a Vlog capturing your daily life and interests.     Write an autobiography of rain.     Review any poetry of the Romantic era writers   | HALF YEARLY<br>(Portion from July to<br>September)                                  |  |  |
| NOV            | READING 1. Practice Unseen Passages WRITING AND GRAMMAR 1. Tenses 2. Debates LITERATURE (Hornbill) 1. Childhood   | <ol> <li>Organise a debate competition in your class on the topic – Class Activity.</li> <li>"Gender War disrupts the society."</li> <li>Share any anecdote from your childhood days.</li> <li>Distinguish and share the experiences between the two phases – adulthood and childhood.</li> </ol> |   |  |  |
| DEC            | READING 1. Note-making Practice WRITING AND GRAMMAR 1. Practice (Grammar Section) LITERATURE (Hornbill) 1. The Adventure Snapshot 1. Birth                            | 1. Write a brief note on any of your childhood experiences (good or bad). 2. ASL test   | Test-2<br>(Portion from October to<br>November)                                     |  |  |
| JAN            | READING 1. Revision WRITING AND GRAMMAR 1. Revision All LITERATURE (Hornbill) 1. Father to Son 2. Silk Road (Snapshot) 1. The tale of Melon City                      | Prepare a 'thank you card' for your father and add adjectives showing his qualities.     Prepare your own travelogue and share your memories in class.     Prepare a list of all poetic devices used in all the poetry of your textbook and write examples for each of these poetic devices.      |   |  |  |
| FEB            | Practice of Grammar exercises and writing<br>section Revision for Annual Examination.   |   | ANNUAL EXAM FROM<br>16/02/26<br>Syllabus: All ( As prescribed<br>from the teacher.) |  |  |

| HISTORY |   |   |  |  |
|---------|---|---|--|--|
| MONTH   | Units/Subunits/Topics/ Chapters to be Covered   | Details of Activity/Practical/<br>Projects to be given  | Unit Tests /Formative<br>Tests/Assignment  |  |
| JUNE    | Introduction to World History<br>Introduction of Early Societies  |   |  |  |
|         | CH-1 Writing and City Life Focus: Iraq, 3rd millennium BCE Mesopotamia Mesopotamia and its Geography  | How is Mesopotamian Civilisation different from its Contemporary Harappan Civilisation?   |  |  |
|         | The significance of urbanism and trade The development and uses of writing and its legacy Urbanization in Southern Mesopotamia: temples Nature of early urban societies: Town structure and Life in   | Map Work -Location and labelling of important cities of Mesopotamian Civilisation on the maps based on the given chapter.   |  |  |
| JULY    | the city Case-study of Mari: A trading town in a Pastoral Zone CH-2 An Empire across Three Continents Focus: Roman Empire, 27 BCE to 600 CE   | Prepare a short note on the role of slavery as a significant element in the economy of Roman empire.  |  |  |
|         | Extend of Roman Empire Political evolution Economic Expansion   | Map Work -Location and labelling of extend of Roman Empire and its important cities on the maps based on the given chapter.   |  |  |
|         | Religion-culture foundation Social Hierarchies Late Antiquity   |   |  |  |
|         | Historian view on the Institution of Slavery  |   |  |  |
| AUG     | CH-3 Nomadic Empires Focus: The Mongol, 13th to 14th century The nature of nomadism Social and Political background of Mongols The Career of Genghis Khan: Formation of Mongol Empire   | Stories of Genghis Khan & The Mongol<br>Empire  Map Work -Location and labelling of extend<br>of Mongol Empire and its area of conquest   | 18.08.2025 – Test 01 : History Syllabus: CH-1 Writing and City Life  |  |
|         | Conquests and relations with other states<br>Social, Political and Military system of Mongols<br>Historians view on Nomadic societies and state formation   | on the maps based on the given chapter.   | CH-2 An Empire across Three Continents   |  |
|         | CH-4 The Three Orders Focus: Western Europe 13th - 16th century Feudal society and economy The Three Orders First Order: Church and its role in society The Second Order: Nobility & the Knights The Third Order: Peasants, free & unfree Formation of the Fourth Order The Crisis of the c. 14 <sup>th</sup> Historians view on decline of feudalism   | Map Work -Location and labelling of feudal cities of Europe on the maps based on the given chapter.   |  |  |
| SEPT    | CH-5 Changing Cultural Traditions Focus: Europe 14th -17th century Introduction to Changing Traditions Revival of Italian Cities Development of Universities and Humanism: New ideas and new trends in Literature, Arts & Architecture Relationship with earlier ideas The contribution of Arabs in Science and Philosophy Debates within Christianity Scientific Revolution Historians view on the notion of Renaissance | Map Work -Location and labelling the centres of Renaissance on the maps based on the given chapter.   |  |  |
| OCT     | Revision  |   | HALF YEARLY<br>From 06/10/2025<br>Syllabus: CH-1 TO CH-4   |  |
| NOV     | CH-6 Displacing Indigenous People Focus: North America and Australia, 18th to 20th century European colonialism in North America and Australia Formation of White Settler societies Displacement and repression of local people Historians view on the impact of European settlement  | Compare and contrast the 10 political situations of the native people of India and America during the first quarter of 20th century.  Map work: Origin & places of Indigenous People Collection of Data for final Presentation. |  |  |
| DEC     | CH-7 Paths to Modernization Focus: East Asia, late 19th to 20th century Political and economic growth of Japan Historians debate on the meaning of modernization  | Write a short note on Ancient Political<br>System of Japan<br>Preparation of Presentation   | 08.12.2025 – Test – 02: P2 History Syllabus: CH-5 Changing Cultural Traditions CH-6 Displacing Indigenous People |  |
| JAN     | FINAL PRESENTATION (INTERNAL ASSESSMENT) Revision   |   | FINAL PRESENTATION (INTERNAL ASSESSMENT)   |  |
| FEB     |   | <u> </u>  | ANNUAL EXAM From 16/02/26  |  |

| POLITICAL | POLITICAL SCIENCE   |   |  |  |  |
|-----------|---|---|--|--|--|
| MONTH     | Units/Subunits/Topics/ Chapters to be Covered   | Details of Activity/Practical/<br>Projects to be given  | Unit Tests /Formative<br>Tests/Assignment  |  |  |
| JUNE      | Political Theory – An introduction  a. Meaning and Importance of political theory b. Various Political Concepts c. Contribution of Political thinkers Rights in the Indian Constitution – a. Introduction to the Indian Constitution and the society  | Classroom discussion<br>Oral tests  |  |  |  |
| JULY      | Rights in the Indian Constitution  a. The importance of Rights and the Bill of Rights b. Fundamental Rights in the Indian Constitution C. Directive Principles of State Policy Election and Representation  Election and Representation a. Elections and Democracy b. Election System in India Why did India adopted FPTP system? | Discussion on Rights, Type of Rights and why some rights are considered fundamental Brain Storming – Whether Directive Principles should take precedence over fundamental rights?     |  |  |  |
| AUG       | a. Reservation of Constituencies b. Free and Fair Elections c. Electoral Reforms Freedom a. The ideal of freedom b. The Sources of Constraints – Why do we need Constraints c. The Harm Principle d. Positive and Negative Liberty  | Group discussion –<br>Challenges and Reforms Conducting mock<br>elections<br>Debate: Does dress code curtail individual<br>freedom  | 04-08-2025 Test 01 Political Theory – An Introduction Rights in the Indian Constitution  |  |  |
| SEPT      | Executive  a. What is an executive?  b. What are the different types of executive  c. Parliamentary executive in India d. Permanent and Political Executives  Equality  a. Why does Equality matter?  b. Dimensions of Equality  C. Feminism and Socialism d. Ways to promote Equality  | Interpretation of cartoons and caricatures     Quiz     Discussion and debate on promotion of Equality  |  |  |  |
| ОСТ       | Social Justice a. What is Justice b. Just Distribution  | Oral tests  | HALF YEARLY From 06/10/2025 1. Rights in the Indian Constitution 2. Election and Representation 3. Political Theory – Introduction 4. Freedom Equality |  |  |
| NOV       | a. John Rawls Theory of Justice b. Pursuing Social Justice c. Free markets versus State Intervention Legislature a. Why do we need Parliament? b. Powers of Lok Sabha and Rajya Sabha c. Making of Laws d. Control of Legislature over Executive e. Committees of Parliament How does Parliament regulate itself                  | Debate: Free market versus State Intervention Comparative AnanlysisPowers and Functions of Lok Sabha and Rajya Sabha Map Activity: Identification of State with bicameral legislature |  |  |  |

# LOYOLA HIGH SCHOOL, PATNA-800010 SYLLABUS FOR CLASS-11 ARTS (2025-2026)

| DEC | Judiciary  a. Independence of Judiciary  b. Structure of Judiciary  c. Jurisdiction of Supreme Court  | Discussion : Enhancing assertiveness of the Judiciary Debate: How far separation of Power is practiced? |   |
|-----|---|---|---|
| JAN | Local Governments  a. Why local governments?  b. Growth of local governments in India  c. 73 <sup>rd</sup> and 74 <sup>th</sup> Amendment of the Indian Constitution  Merits and demerits of decentralisation |   | 1. Flow Charts: On the structural arrangement of Panchayati Raj     2. Group presentation: Amendments     Debate: Merits and demerits of decentralization |
| FEB | Revision for exam   |   | ANNUAL EXAM From<br>16/02/2025 Whole<br>Syllabus<br>(As prescribed by the<br>teacher)   |

| ECONOMI | Units/Subunits/Topics/ Chapters to be Covered  | Details of Activity/Practical/   | Unit Tests /Formative  |
|---------|--|--|--|
| MONTH   | omas/subumas/ ropics/ mapters to be devered  | Projects to be given   | Tests/Assignment   |
| JUNE    | (a)Central Problems of the Economy   | Discussing the basic concepts related to Economics Types of economic system Definition of economics – wealth, welfare and scarcity Flow chart Numerical calculation Graphs, Tables |  |
| JULY    | MICRO ECONOMICS (a)Central Problems of the Economy, (b) Introduction to Consumer Behaviour. Utility Approach, indifference curve Approach                                  | Basic concepts Flow chart Exemplary situation to explain the theories Derivation of formulas Conditions, Diagram Graphs, Numerical, Tables   |  |
| AUG     | Continuation of<br>Consumer behaviour  |  | Unit test I<br>Central problems of the<br>economy<br>Consumer behaviour  |
| SEPT    | MICRO ECONOMICS Consumer Behaviour : Demand Theory, Elasticity of Demand STATISTICS (a)Statistics-Meaning, Scope/ Function, importance of Statistics (b)Collection of Data | Concept development Flow chart Details notes preparation on various topics   |  |
| ОСТ     | (c)Organisation / Presentation of data. Classification, tabulation, Diagrammatic and Graphical Representation (d)Measure of Central Tendency Mean, Median, Mode            | Example Flow chart , Tables , Diagram , Graphs , Numericals  | HALF YEARLY From 06/10/2025 Central problems of the economy Consumer behaviour Statistics, Introduction meaning importance Limitation, Organization and presentation of data, Central tendency mean  |
| NOV     | MICRO ECONOMICS (a)Producer Behaviour (b)Production Function (c)Cost (d) Revenue   | Basic concepts Flow chart Exemplary situation to explain the theories Derivation of formulas Conditions, Diagram, Graphs Numerical, Tables   | , and the second |
| DEC     | MICRO ECONOMICS (e)Production Equilibrium (f) Forms of Market Projects Work  | Formula, Diagram, Flow chart   | Unit test II Statistics , Central tendency Mean median mode Production function  |
| JAN     | STATISTICS (e)Corelation (f)Index No.  | Formula Numerical Flow chart   |  |
| FEB     | (f)Index No. Continuation  | Formula, Flow chart<br>Numerical   | ANNUAL EXAM From<br>16/02/26<br>Entire syllabus  |

| MONTH   | L EDUCATION Units/Subunits/Topics/ Chapters to be Covered   | Details of<br>Activity/Practical/<br>Projects to be given | Unit Tests /Formative<br>Tests/Assignment |
|---------|---|---|---|
|         | Unit 1 Changing Trends and Careers in Physical Education  |   |   |
| JUNE    | 1. Concept, Aims & Objectives of Physical Education   |   |   |
|         | 2. Development t of Physical Education in India – Post Independence   |   |   |
|         | 3. Changing Trends in Sports  |   |   |
|         | 4. Career options in Physical Education   |   |   |
|         | 5. Khelo-India Program and Fit – India Program  |   |   |
|         | UNIT 2 Olympic Value Education  |   | Unit Test -1                              |
|         | 1. Olympism – Concept and Olympics Values   |   | 21-07-2025- Unit 1 & 2                    |
| JULY    | 2. Olympic Value Education  |   |   |
| ,021    | 3. Ancient and Modern Olympics  |   |   |
|         | 4. Olympics - Symbols, Motto, Flag, Oath, and Anthem  |   |   |
|         | 5. Olympic Movement Structure   | VOCA  |   |
|         | Unit 3 Yoga   | YOGA  |   |
|         | 1. Meaning and importance of Yoga   | PERFORMANCE BY STUDENT                                    |   |
|         | 2. Introduction to Astanga Yoga<br>3. Yogic Kriyas (Shat Karma)   | STUDENT   |   |
| AUG     | 4. Pranayama and its types.   |   |   |
| Aud     | 5. Active Lifestyle and stress management through Yoga  |   |   |
|         | Unit 4 Physical Education and Sports for Children with Special Needs  |   |   |
|         | Concept of Disability and Disorder  |   |   |
|         | 2. Types of Disability, its causes & nature   |   |   |
|         | 3. Disability Etiquette   |   |   |
|         | 4. Aim and objectives of Adaptive physical <b>Education</b>   |   |   |
|         | 5. Role of various professionals for children with special needs  |   |   |
|         | Unit 5 Physical Fitness, Wellness, and Lifestyle  |   |   |
| SEPT    | 1. Meaning & importance of Wellness, Health, and Physical Fitness.  |   |   |
|         | 2. Components/ Dimensions of Wellness, Health, and Physical Fitness   |   |   |
|         | 3. Traditional Sports & Regional Games  |   |   |
|         | 4. Leadership through Physical Activity and Sports  |   |   |
|         | 5. Introduction to First Aid – PRICE  |   |   |
|         | Unit 6 Test, Measurement & Evaluation   |   | HALF YEARLY                               |
| OCT     | 1. Define Test, Measurements and Evaluation.  |   | From 06/10/2025                           |
|         | 2. Importance of Test, Measurements and Evaluation in Sports.   |   | Unit 1-5                                  |
|         | 3. Calculation of BMI   |   |   |
|         | 4. Somato Types 5. Measurements of health related fitness   |   |   |
|         | Unit 7 Fundamentals of Anatomy, Physiology in Sports  |   |   |
|         | 1. Definition and importance of Anatomy and Physiology in Exercise and  |   |   |
| NOV     | Sports.   |   |   |
| 1.01    | 2. Functions of Skeletal System   |   |   |
|         | 3. Properties and Functions of Muscles.   |   |   |
|         | 4. Structure and Functions of Circulatory System and Heart.   |   |   |
|         | 5. Structure and Functions of Respiratory System.   |   |   |
|         | Unit 8 Fundamentals of Kinesiology and Biomechanics in Sports   |   | Unit Test 2                               |
|         | 1. Definition and Importance of Kinesiology and Biomechanic s in Sports.                                      |   | 15-12-2025                                |
|         | 2. Principles of Biomechanic s  |   | Unit 6-8                                  |
|         | 3. Kinetics and Kinematics in Sports  |   |   |
| DEC     | 4. Types of Body Movements  |   |   |
|         | 5. Axis and Planes  |   |   |
|         | Unit 9 Psychology and Sports  |   |   |
|         | 1. Definition & Importance of Psychology in Physical Education & Sports;                                      |   |   |
|         | Develop-mental Characteristics at Different Stages of Development.     Adolescent Problems & their Management |   |   |
|         | 4. Team Cohesion and Sports;  |   |   |
|         | 5. Introduction to Psychological Attributes:  |   |   |
|         | Unit 10 Training & Doping in Sports   |   |   |
| JAN     | 1. Concept and Principles of Sports Training  |   |   |
| J2 11 1 | 2. Training Load: Over Load, Adaptation, and Recovery   |   |   |
|         | 3. Warming-up & Limbering Down  |   |   |
|         | 4. Concept of Skill, Technique, Tactics &Strategies   |   |   |
|         | 5. Concept of Doping and its disadvantage   |   |   |
|         | PRACTICAL PRACTICE  |   | ANNUAL EXAM From                          |
| FEB     |   |   | 16/02/2026                                |
|         |   |   | Unit 1-10                                 |

|       | IATICS PRACTICES Units/Subunits/Topics/ Chapters to be Covered  | Details of Activity/Practical/  | Unit Tests /Formative                            |
|-------|---|---|--|
| MONTH | , , , , ,   | Projects to be given  | Tests/Assignment                                 |
| JUNE  | 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 the domain, tuple, relation, candidate key, primary key, alternate key.  Advantages of using Structured Query Language, Data Definition Language, Data Query Language and Data Manipulation Language, Introduction to MySQL, creating a database using MySQL, and Data Types.  | create a database     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.  |  |
| JULY  | Unit 3: Database concepts and the Structured Query Language Data Definition:  CREATE DATABASE, CREATE TABLE,  DROP, ALTER TABLE Data Query SELECT FROM, WHERE with relational operators, BETWEEN, Logical operators, IS, NULL, IS NOT NULL Data Manipulation: INSERT, DELETE, UPDATE Commands   | 3. To insert the details of at least 10 students in the above table.  4.To display the entire content of table.  5.To display Rno, Name and Marks of those students who are scoring marks more than 50.  6.To display Rno, Name, DOB of those students who are born between '2005- 01-01' and '2005-12-31'  *Suggested material NCERT Informatics Practices - Text book for class - XI  | Monday Test<br>21-07-2025<br>Chapter : 7,8       |
| AUG   | UNIT 1: Introduction to Computer System Introduction to computer and computing: evolution of computing devices, components of a computer system and their interconnections, and input/output devices. Computer Memory: Units of memory, types of memory primary and secondary, data deletion, its recovery, and related security concerns.  Software: purpose and types system and application software, generic and specific purpose software.   | Activities as specified in the NCERT book   |  |
| SEPT  | UNIT 2: Introduction to Python Basics of Python programming, Python interpreter - interactive and script mode, The structure of a program, Indentation, identifiers, keywords, constants, variables. Indentation, identifiers, keywords, constants, variables. types of operators, precedence of operators, Data types, mutable and immutable data types, statements, expressions, evaluation and comments, input and output statements, data type conversion, debugging. Control Statements: if-else, if-elif-else, while loop, for loop | Programming in Python 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. 8. To find the largest and smallest numbers in a list  |  |
| ОСТ   | Lists: list operations - Creating, Initializing, Traversing, and Manipulating Lists, List Methods, and built-in Functions.  Dictionary: the concept of key-value pair, Creating, Initializing, Traversing, Updating, and Deleting elements, Dictionary Methods, and built-in functions.   | 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 an alphabet in a user entered string. 14. To print number of occurrences of a given alphabet in each string. 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. | HALF YEARLY<br>From 06/10/2025<br>Chapter: 1,7,8 |
| NOV   | UNIT 2: Introduction to Python Introduction to NumPy: Introduction, Creation of NumPy Arrays from List 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.   | Activities as specified in the NCERT book   |  |
|       | Unit 4: Introduction to the Emerging Trends:  • Cloud Computing and Cloud Services (SaaS, IaaS, PaaS)   | Activities as specified in the NCERT book   | Monday Test-02<br>15-12-2025                     |
| JAN   | Grid Computing     Blockchain technology     REVISION   |   | Chapter : 3,4                                    |

| MATHEMA<br>MONTH | Units/Subunits/Topics/ Chapters to be Covered  | Unit Tests /Formative               |
|------------------|--|-------------------------------------|
|                  | <u>Unit-I:</u> Sets, Relation and Functions  | Tests/Assignment                    |
|                  | 1. Sets  |                                     |
| JUNE             | 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.  |                                     |
|                  | 2. <b>Relations &amp; Functions</b> 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 (up to R x R x 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   |                                     |
| 111137           | these functions, constant, identity, polynomial, rational, modulus, signum, exponential, logarithmic and   |                                     |
| JULY             | greatest integer functions, with their graphs. Sum, difference, product and quotients of functions.  3. <b>Trigonometric Functions</b>   |                                     |
|                  | 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  |                                     |
|                  | $sin^2x + cos^2x = 1$ , for all x. Signs of trigonometric functions. Domain and range of trigonometric functions   |                                     |
|                  | and their graphs. Expressing $sin(x\pm y)$ and $cos(x\pm y)$ in terms of $sinx$ , $siny$ , $cosx \& cosy$ and their simple   |                                     |
|                  | applications. Deducing identities like the following: trigonometric identities.  Unit-II: Algebra  | First weekly Test: 11 <sup>th</sup> |
|                  | 1. Complex Numbers and Quadratic Equations   | Aug.                                |
|                  | Need for complex numbers, especially $\sqrt{-1}$ , to be motivated by inability to solve some of the quadratic   | Syllabus :                          |
| AUG              | equations. Algebraic properties of complex numbers. Argand plane.  | Unit I: Sets, Relation,             |
|                  | 2. Linear Inequalities   | Functions including Trigonometry.   |
|                  | Linear inequalities. Algebraic solutions of linear inequalities in one variable & two variable and their   | Trigonometry.                       |
|                  | representation on the number line.   |                                     |
|                  | <b>3. Permutations and Combinations</b> Fundamental principle of counting. Factorial <i>n.</i> (n!) Permutations and combinations, derivation of   |                                     |
|                  | Formulae for , and their connections, simple applications. $^{\rm n}$ P <sub>r</sub> , $^{\rm n}$ C <sub>r</sub>   |                                     |
|                  | 4. Binomial Theorem  |                                     |
| SEPT             | $Historical\ perspective, statement\ and\ proof\ of\ the\ binomial\ theorem\ for\ positive\ integral\ indices.\ Pascal's$  |                                     |
|                  | triangle, simple applications.   |                                     |
|                  | <b>5. Sequence and Series</b> 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   |                                     |
|                  | Unit-III: Coordinate Geometry  | HALF YEARLY                         |
| OCT              | 1. Straight Lines  | From 06/10/2025                     |
|                  | Brief recall of two-dimensional geometry from earlier classes. Slope of a line and angle between two lines. Various forms & equation   |                                     |
| NOW              | Equations of a line: parallel to axis, point -slope form, slope-intercept form, two-point form, intercept  |                                     |
| NOV              | form. Distance of a point from a line.   |                                     |
|                  | 2. Conic Sections  |                                     |
| DEC              | 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.  |                                     |
|                  | 3. Introduction to Three-dimensional Geometry  | 2nd weekly Test:                    |
|                  | Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between  | 19 <sup>th</sup> January.           |
|                  | two points, section formula Unit-IV: Calculus  | Syllabus :<br>Unit III :            |
| JAN              | 1. Limits and Derivatives  | St. lines , Conic                   |
|                  | Derivative introduced as rate of change both as that of distance function and geometrically. Intuitive idea  | Sections, 3D geometry               |
|                  | of limit. Limits of polynomials and rational functions trigonometric, exponential and logarithmic  | Unit IV : Calculus                  |
|                  | functions. Definition of derivative relate it to slope of tangent of the curve, derivative of sum, difference, product and quotient of functions , polynomial and trigonometric functions.                           |                                     |
|                  | Unit-V Statistics and Probability  | ANNUAL EXAM From                    |
|                  | 1. Statistics  | 16/02/2026                          |
|                  | Measures of Dispersion: Range, Mean deviation, variance and standard deviation of ungrouped/grouped  |                                     |
| FEB              | data.  2. 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.  |                                     |