

# LOYOLA HIGH SCHOOL, PATNA-800010

## SYLLABUS FOR CLASS-11 SCIENCE (2025-2026)

<b>ENGLISH</b>			
MONTH	Units/Subunits/ Topics/ Chapters to be Covered	Details of Activity/ Practice al / Projects to be given	Unit Tests / Formative/ Tests/ Assignment
JUNE	READING 1. Reading Comprehension WRITING AND GRAMMAR 1. Advertisement and its types	1. Draft an advertisement for your school informing about upcoming events. 2. 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 (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	1. Write a poem on nature and submit it as an assignment. 2. 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	1. Prepare a Vlog capturing your daily life and interests. 2. Write an autobiography of rain. 3. Review any poetry of the Romantic era writers	HALF YEARLY (Portion from July to September)
NOV	READING 1. Practice Unseen Passages WRITING AND GRAMMAR 1. Tenses 2. Debates LITERATURE (Hornbill) 1. Childhood	1. Organise a debate competition in your class on the topic - Class Activity. "Gender War disrupts the society." 2. Share any anecdote from your childhood days. 3. Distinguish and share the experiences between the two phases - adulthood and childhood.	
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 (Portion from October to 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	1. Prepare a 'thank you card' for your father and add adjectives showing his qualities. 2. Prepare your own travelogue and share your memories in class. 3. 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	<ul style="list-style-type: none"> <li>• Practice of Grammar exercises and writing section</li> <li>• Revision for Annual Examination.</li> </ul>		ANNUAL EXAM FROM 16/02/26 Syllabus: All ( As prescribed from the teacher.)

# LOYOLA HIGH SCHOOL, PATNA-800010

## SYLLABUS FOR CLASS-11 SCIENCE (2025-2026)

<b>PHYSICS</b>			
MONTH	Units/Subunits/Topics/ Chapters to be Covered	Details of Activity/Practical/ Projects to be given.	Unit Tests /Formative Tests/Assignment
JUNE	<b>Unit I: Physical World and Measurements Chapter-1: Units and Measurements</b> Need for measurement: Units of measurement; systems of units; SI units, fundamental and derived units. Dimensions of physical quantities, dimensional analysis and its applications. Significant figures, Determining the uncertainty in result.		
JULY	<b>Unit II: Kinematics</b> <b>Chapter-2: Motion in a Straight Line</b> Frame of reference, Motion in a straight line, Elementary concepts of differentiation and integration for describing motion, uniform and non- uniform motion, average speed and average velocity and instantaneous velocity, Uniformly accelerated motion, velocity - time and position-time graphs. Relations for uniformly accelerated motion (graphical and calculus treatment). <b>Chapter-3: Motion in a Plane</b> Scalar and vector quantities; position and displacement vectors, general vectors and their notations; equality of vectors, multiplication of vectors by a real number; addition and subtraction of vectors, Unit vector; resolution of a vector in a plane, rectangular components, Scalar and Vector product of vectors.	<b>EXPERIMENT:</b> A1. 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. A2. To measure diameter of a given wire and thickness of a given sheet using screw gauge. <b>Activities:</b> A1. To make a paper scale of given least count, e.g., 0.2cm, 0.5 cm. A2. To determine mass of a given body using a metre scale by principle of moments.	
AUG	<b>Chapter-3: Motion in a Plane (Contd)</b> Motion in a plane, cases of uniform velocity and uniform acceleration- projectile motion, uniform circular motion. <b>Unit III: Laws of Motion</b> <b>Chapter-4: Laws of Motion</b> Intuitive concept of force, Inertia, Newton's first law of motion; momentum and Newton's second law of motion; impulse; Newton's third law of motion. Law of conservation of linear momentum and its applications. Equilibrium of concurrent forces, Static and kinetic friction, laws of friction, rolling friction, lubrication. Dynamics of uniform circular motion: Centripetal force, examples of circular motion (vehicle on a level circular road, vehicle on a banked road).	<b>EXPERIMENT:</b> A4. To determine radius of curvature of a given spherical surface by a spherometer. A7. Using a simple pendulum, plot its graph and use it to find the effective length of second's pendulum. <b>Activities:</b> A4. To measure the force of limiting friction for rolling of a roller on a horizontal plane.	MONDAY TEST -I 25/08/2025 Syllabus: <b>Chapter-1: Units and Measurements</b> <b>Chapter-3: Motion in a Plane</b>
SEPT	<b>Unit IV: Work, Energy and Power</b> <b>Chapter- 5: Work, Energy and Power</b> Work done by a constant force and a variable force; kinetic energy, work- energy theorem, power. Notion of potential energy, potential energy of a spring, conservative forces: non-conservative forces, motion in a vertical circle; elastic and inelastic collisions in one and two dimensions. <b>Unit V: Motion of System of Particles and Rigid Body</b> <b>Chapter-6: System of Particles and Rotational Motion</b> Centre of mass of a two-particle system, momentum conservation and Centre of mass motion. Centre of mass of a rigid body; centre of mass of a uniform rod.	<b>EXPERIMENT:</b> <b>B5.</b> To determine the coefficient of viscosity of a given viscous liquid by measuring terminal velocity of a given spherical body.  <b>B8.</b> To study the relation between frequency and length of a given wire under constant tension using sonometer.	
OCT	<b>Chapter-6: System of Particles and Rotational Motion (Contd)</b> Moment of a force, torque, angular momentum, law of conservation of angular momentum and its applications. Equilibrium of rigid bodies, rigid body rotation and equations of rotational motion, comparison of linear and rotational motions. Moment of inertia, radius of gyration, values of moments of inertia for simple geometrical objects (no derivation).	<b>B10.</b> To find the speed of sound in air at room temperature using a resonance tube by two resonance positions.	<b>HALF YEARLY</b> From 06/10/2025 <b>Syllabus:</b> Unit I: Physical World and Measurements Chapter-1: Units and Measurements <b>TO</b> Unit V: Motion of System of Particles and Rigid Body
NOV	<b>Unit VI: Gravitation</b> <b>Chapter - 7: Gravitation</b> Kepler's laws of planetary motion, universal law of gravitation. Acceleration due to gravity and its variation with altitude and depth. Gravitational potential energy and gravitational potential, escape speed, orbital velocity of a satellite, energy of an orbiting satellite.	<b>EXPERIMENT:</b> B1. To determine Young's modulus of elasticity of the material of a given wire.  <b>ACTIVITIES:</b> B4. To study the effect of detergent on surface tension of water by observing capillary rise.	

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## SYLLABUS FOR CLASS-11 SCIENCE (2025-2026)

	<p><b>Unit VII: Properties of Bulk Matter</b>  <b>Chapter-8: Mechanical Properties of Solids</b>  Elasticity, Stress-strain relationship, Hooke's law, Young's modulus, bulk modulus, shear modulus of rigidity (qualitative idea only), Poisson's ratio; elastic energy. Application of elastic behavior of materials (qualitative idea only).  <b>Chapter-9: Mechanical Properties of Fluids</b>  Pressure due to a fluid column; Pascal's law and its applications (hydraulic lift and hydraulic brakes), effect of gravity on fluid pressure.</p>	B6. To study the effect of load on depression of a suitably clamped metre scale loaded at (i) its end (ii) in the middle.	
DEC	<p><b>Chapter-9: Mechanical Properties of Fluids (Contd)</b>  Viscosity, Stokes' law, terminal velocity, streamline and turbulent flow, critical velocity, Bernoulli's theorem and its simple applications (Torricelli's law and Dynamic lift). Surface energy and surface tension, angle of contact, excess of pressure across a curved surface, application of surface tension ideas to drops, bubbles and capillary rise.  <b>Chapter-10: Thermal Properties of Matter</b>  Heat, temperature, thermal expansion; thermal expansion of solids, liquids and gases, anomalous expansion of water; specific heat capacity; Cp, Cv - calorimetry; change of state - latent heat capacity.  Heat transfer-conduction, convection and radiation, thermal conductivity, qualitative ideas of Blackbody radiation, Wein's displacement Law, Stefan's law.  <b>Unit X: Oscillations and Waves</b>  <b>Chapter-13: Oscillations</b>  Periodic motion - time period, frequency, displacement as a function of time, periodic functions and their applications.  Simple harmonic motion (S.H.M), uniform circular motion and its equations of motion; phase; oscillations of a loaded spring- restoring force and force constant; energy in S.H.M.  Kinetic and potential energies; simple pendulum derivation of expression for its time period.</p>	<p><b>ACTIVITIES:</b>  B2. To observe and explain the effect of heating on a bi-metallic strip.</p>	<p>MONDAY TEST -II  01/12/2025  <b>Syllabus:</b>  Unit VI: Gravitation  <b>AND</b>  Unit VII: Properties of Bulk Matter</p>
JAN	<p><b>Chapter-14: Waves</b>  Wave motion: Transverse and longitudinal waves, speed of travelling wave, displacement relation for a progressive wave, principle of superposition of waves, reflection of waves, standing waves in strings and organ pipes, fundamental mode and harmonics, Beats  <b>Unit VIII: Thermodynamics</b>  <b>Chapter-11: Thermodynamics</b>  Thermal equilibrium and definition of temperature, zeroth law of thermodynamics, heat, work and internal energy. First law of thermodynamics, Second law of thermodynamics: Thermodynamic state variable and equation of state. Change of condition of gaseous state - isothermal, adiabatic, reversible, irreversible, and cyclic processes.  <b>Unit IX: Behavior of Perfect Gases and Kinetic Theory of Gases</b>  <b>Chapter-12: Kinetic Theory</b>  Equation of state of a perfect gas, work done in compressing a gas.  Kinetic theory of gases - assumptions, concept of pressure. Kinetic interpretation of temperature; rms speed of gas molecules; degrees of freedom, law of equi-partition of energy (statement only) and application to specific heat capacities of gases; concept of mean free path, Avogadro's number.</p>		
FEB	REVISION		ANNUAL EXAM FROM 16-02-2026

# LOYOLA HIGH SCHOOL, PATNA-800010

## SYLLABUS FOR CLASS-11 SCIENCE (2025-2026)

<b>CHEMISTRY</b>			
<b>MONTH</b>	<b>Units/Subunits/Topics/ Chapters to be Covered</b>	<b>Details of Activity/Practical/ Projects to be given</b>	<b>Unit Tests /Formative Tests/Assignment</b>
JUNE	Unit -1 : General Introduction: Importance and scope of Chemistry, Nature of matter, laws of chemical combination, Dalton's atomic theory		
JULY	Unit - 1: 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. Unit - 2: Discovery of Electron, Proton and Neutron, atomic number, isotopes and isobars. Thomson's model and its limitations. Rutherford's model and its limitations, Bohr's model and its limitations, concept of shells and subshells, dual nature of matter and light, de Broglie's relationship, Heisenberg uncertainty principle, concept of orbitals, quantum numbers, shapes of s, p and d orbitals, rules for filling electrons in orbitals - Aufbau principle, Pauli's exclusion principle and Hund's rule, electronic configuration of atoms, stability of half-filled and completely filled orbitals.	Volumetric analysis	28/07/25 (Monday) Unit -01( some basic concepts of chemistry)
AUG	Unit - 3: 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, valiancy, Nomenclature of elements with atomic number greater than 100. Unit - 4: 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	Volumetric analysis	18/08/25(Monday) Unit -03 (Periodic classification of elements)
SEPT	Unit - 4: Molecular orbital theory of homonuclear diatomic molecules (qualitative idea only), Hydrogen bond. Unit - 5: 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 $\Delta U$ and $\Delta H$ , 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 non- spontaneous processes, criteria for equilibrium, Third law of thermodynamics (brief introduction). Unit - 6: Equilibrium in physical and chemical processes, dynamic nature of equilibrium, law of mass action, equilibrium constant, factors affecting equilibrium - Le Chatelier's principle.	Salt analysis	
OCT	Unit - 6: ionic equilibrium- ionization of acids and bases, strong and weak electrolytes, degree of ionization, ionization of poly basic acids, acid strength, concept of pH, hydrolysis of salts (elementary idea), buffer solution, Henderson Equation, solubility product, common ion effect (with illustrative examples).		HALF YEARLY From 06/10/2025 (Unit -01,02,03,04 and 05)
NOV	Unit - 7: Concept of oxidation and reduction, redox reactions, oxidation number, balancing redox reactions, in terms of loss and gain of electrons and change in oxidation number, applications of redox reactions. Unit -8: General introduction, classification and IUPAC nomenclature of organic compounds.	Salt analysis	
DEC	Unit -8: Electronic displacements in a covalent bond: inductive effect, electrometric effect, resonance and hyper conjugation. Homolytic and heterolytic fission of a covalent bond: free radicals, carbocations, carbanions, electrophiles and nucleophiles, types of organic reactions. Unit - 9: Aliphatic Hydrocarbons Alkanes - Nomenclature, isomerism, conformation (ethane only), physical properties, chemical reactions including free radical mechanism of halogenation, combustion and pyrolysis.	Salt analysis	08/12/25(Monday) Unit -07(Redox reactions)
JAN	Unit - 9: 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 mono substituted benzene, carcinogenicity and toxicity.		
FEB	REVISION	ANNUAL EXAM FROM : 16-02-2026	

# LOYOLA HIGH SCHOOL, PATNA-800010

## SYLLABUS FOR CLASS-11 SCIENCE (2025-2026)

<b>BIOLOGY</b>			
<b>MONTH</b>	<b>Units/Subunits/Topics/ Chapters to be Covered</b>	<b>Details of Activity/Practical/ Projects to be given</b>	<b>Unit Tests /Formative Tests/Assignment</b>
JUNE	Unit-I Diversity of Living Organisms Chapter-1: The Living World Biodiversity; Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature		
JULY	Chapter-2: Biological Classification Five kingdom classification; Salient features and classification of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroid Chapter-3: Plant Kingdom Classification of plants into major groups; Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyta, Gymnosperms and Angiosperms. Chapter-4: Animal Kingdom Salient features and classification of animals, non-chordates up to phyla level and chordates upto class level		Spotting-1,2,3
AUG	Unit-II Structural Organization in Plants and Animals Chapter-5: Morphology of Flowering Plants Morphology of different parts of flowering plants. Chapter-6: Anatomy of Flowering Plants Anatomy and functions of tissue systems in dicots and monocots. Chapter-7: Structural Organisation in Animals Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog. Unit-III Cell: Structure and Function Chapter-8: Cell-The Unit of Life- Cell theory, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell organelles - structure and function.		04/08/2025 Chapter -1,2 Spotting-5 Experiment-1,2,3,4
SEPT	Chapter-9: Biomolecules Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, and nucleic acids; Enzyme - types, properties, enzyme action. Chapter-10: Cell Cycle and Cell Division Cell cycle, mitosis, meiosis and their significance		Spotting-4 Experiment-7
OCT	Unit-IV Plant Physiology Chapter-11: Photosynthesis in Higher Plants site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis;		HALF YEARLY From 06/10/2025 chapters-2,3,5,8,9,10
NOV	cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C <sub>3</sub> and C <sub>4</sub> pathways; factors affecting photosynthesis. Chapter-12: Respiration in Plants Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system .amphibolic pathways; respiratory quotient. Chapter-13: Plant Growth and Development -Phases of plant growth, plant hormones UNIT-V HUMAN PHYSIOLOGY Chapter 14. Breathing and Exchange of Gases Respiratory system in humans.		<b>Experiment-5,8,9.</b>
DEC	Chapter-15: Body Fluids and Circulation Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system . Chapter 16. Excretory Products and their Elimination -human excretory system – structure and function; urine formation		
JAN	Regulation of kidney functions; RAAS mechanism, disorders - kidney transplant. Chapter 17: Locomotion and Movement Chapter 18: Neural Control and Coordination Nervous system in humans.	PROJECT WORK	12/01/2026 chapters_11,12 Spotting-6
FEB	Chapter 19: Chemical Coordination and Integration Endocrine glands and hormones; human endocrine system, hypo and hyperactivity and related disorders		ANNUAL EXAM From 16/02/26(chapters- 11,12,13,14,15,16,17, 18,19

# LOYOLA HIGH SCHOOL, PATNA-800010

## SYLLABUS FOR CLASS-11 SCIENCE (2025-2026)

<b>MATHEMATICS</b>		
MONTH	Units/Subunits/Topics/ Chapters to be Covered	Unit Tests /Formative Tests/Assignment
JUNE	<b>Unit-I: Sets, Relation and Functions</b> <b>1. Sets</b> 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.	
JULY	<b>2. 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 $R \times R \times R$ ). 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. <b>3. 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 $\sin x$ , $\sin y$ , $\cos x$ & $\cos y$ and their simple applications. Deducing identities like the following: trigonometric identities.	
AUG	<b>Unit-II: Algebra</b> <b>1. Complex Numbers and Quadratic Equations</b> 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. <b>2. Linear Inequalities</b> Linear inequalities. Algebraic solutions of linear inequalities in one variable & two variable and their representation on the number line.	First weekly Test: 11 <sup>th</sup> Aug. Syllabus : Unit I : Sets , Relation , Functions including Trigonometry.
SEPT	<b>3. Permutations and Combinations</b> Fundamental principle of counting. Factorial $n$ . ( $n!$ ) Permutations and combinations, derivation of Formulae for , and their connections, simple applications. ${}^n P_r$ , ${}^n C_r$ <b>4. Binomial Theorem</b> 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	
OCT	<b>Unit-III: Coordinate Geometry</b> <b>1. Straight Lines</b> Brief recall of two-dimensional geometry from earlier classes. Slope of a line and angle between two lines. Various forms & equation	HALF YEARLY From 06/10/2025
NOV	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.	
DEC	<b>2. Conic Sections</b> 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.	
JAN	<b>3. Introduction to Three-dimensional Geometry</b> Coordinate axes and coordinate planes in three dimensions. Coordinates of a point. Distance between two points, section formula <b>Unit-IV: Calculus</b> <b>1. Limits and Derivatives</b> 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 , polynomial and trigonometric functions.	2nd weekly Test: 19 <sup>th</sup> January. Syllabus : Unit III : St. lines , Conic Sections, 3D geometry Unit IV : Calculus
FEB	<b>Unit-V Statistics and Probability</b> <b>1. Statistics</b> Measures of Dispersion: Range, Mean deviation, variance and standard deviation of ungrouped/grouped data. <b>2. Probability</b> 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.	ANNUAL EXAM From 16/02/2026

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## SYLLABUS FOR CLASS-11 SCIENCE (2025-2026)

<b>INFORMATICS PRACTICES</b>			
MONTH	Units/Subunits/Topics/ Chapters to be Covered	Details of Activity/Practical/ Projects to be given	Unit Tests /Formative Tests/ Assignment
JUNE	<b>Unit 3: Database concepts and the Structured Query Language</b> <ul style="list-style-type: none"> <li>Database Concepts: Introduction to database concepts and its need, Database Management System.</li> <li>Relational data model: Concept of the domain, tuple, relation, candidate key, primary key, alternate key.</li> </ul> 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.	1. create a database 2. 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	<b>Unit 3: Database concepts and the Structured Query Language</b> <b>Data Definition:</b> <ul style="list-style-type: none"> <li>CREATE DATABASE , CREATE TABLE,</li> <li>DROP, ALTER TABLE</li> </ul> <b>Data Query</b> SELECT FROM, WHERE with relational operators, BETWEEN, Logical operators, IS, NULL, IS NOT NULL <b>Data Manipulation:</b> 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 21-07-2025  Chapter : 7,8
AUG	<b>UNIT 1: Introduction to Computer System</b> 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	<b>UNIT 2: Introduction to Python</b> 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	
OCT	<b>Lists:</b> list operations - Creating, Initializing, Traversing, and Manipulating Lists, List Methods, and built-in Functions. <b>Dictionary:</b> 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 From 06/10/2025  Chapter : 1,7,8
NOV	<b>UNIT 2: Introduction to Python</b> Introduction to NumPy: Introduction, Creation of NumPy Arrays from List <b>Unit 4: Introduction to the Emerging Trends:</b> <ul style="list-style-type: none"> <li>Artificial, Intelligence, Machine Learning.</li> <li>Natural Language Processing,</li> <li>Immersive experience (AR, VR),</li> <li>Robotics,</li> <li>Big-data and its characteristics.</li> <li>Internet of Things (IoT), Sensors</li> </ul> Smart Cities.	Activities as specified in the NCERT book	
DEC	<b>Unit 4: Introduction to the Emerging Trends:</b> <ul style="list-style-type: none"> <li>Cloud Computing and Cloud Services (SaaS, IaaS, PaaS)</li> <li>Grid Computing</li> <li>Blockchain technology</li> </ul>	Activities as specified in the NCERT book	Monday Test-02 15-12-2025 Chapter : 3,4
JAN	<b>REVISION</b>		
FEB	<b>EXAMINATION</b>	<b>ANNUAL EXAM From 16/02/26</b>	