ZEST 2026 · SYLLABUS

Class 11th

Physics · Chemistry · Mathematics

ZEST
Zigyan Entrance cum Scholarship Test

FULL SYLLABUS

All chapters

Full Syllabus Test

28 chapters · 3 subject areas

FULL SYLLABUS FULL SYLLABUS TEST

PHYSICS

10 chapters

01	**Units** — NCERT Ch. 1 The International System of Units
02	**Dimensions** — NCERT Ch. 1 Dimensions of Physical Quantities · Dimensional Formulae and Dimensional Equations · Dimensional Analysis and Its Applications · Checking the Dimensional Consistency of Equations · Deducing Relation Among the Physical Quantities
03	**Errors** — NCERT Ch. 1 Significant Figures · Rules for Arithmetic Operations with Significant Figures · Rounding Off the Uncertain Digits · Determining the Uncertainty in the Results of Arithmetic Calculations
04	**Kinematics** — NCERT Ch. 2 & 3 Instantaneous Velocity and Speed · Acceleration · Kinematic Equations for Uniformly Accelerated Motion · Relative Velocity · Scalars and Vectors · Position and Displacement Vectors · Multiplication of Vectors by Real Numbers · Addition and Subtraction of Vectors — Graphical Method · Resolution of Vectors · Vector Addition — Analytical Method · Motion in a Plane · Motion in a Plane with Constant Acceleration · Projectile Motion
05	**Newton's Laws of Motion** — NCERT Ch. 4 Aristotle's Fallacy · The Law of Inertia · Newton's First Law of Motion · Newton's Second Law of Motion · Impulse · Newton's Third Law of Motion · Conservation of Momentum · Equilibrium of a Particle · Common Forces in Mechanics · Solving Problems in Mechanics
06	**Friction** — NCERT Ch. 4 Friction · Rolling Friction
07	**Circular Motion** — NCERT Ch. 3 & 4 Uniform Circular Motion · Circular Motion · Motion of a Car on a Level Road · Motion of a Car on a Banked Road
08	**Work, Power and Energy** — NCERT Ch. 5 The Scalar Product · Notions of Work and Kinetic Energy: The Work-Energy Theorem · Work · Kinetic Energy · Work Done by a Variable Force · The Work-Energy Theorem for a Variable Force · The Concept of Potential Energy · The Conservation of Mechanical Energy · The Potential Energy of a Spring · Power · Collisions · Elastic and Inelastic Collisions · Collisions in One Dimension · Collisions in Two Dimensions
09	**Centre of Mass** — NCERT Ch. 6 Centre of Mass · Motion of Centre of Mass · Linear Momentum of a System of Particles
10	**Rotational Motion (Moment of Inertia)** — NCERT Ch. 6 Vector Product of Two Vectors · Angular Velocity and Its Relation with Linear Velocity · Angular Acceleration · Torque and Angular Momentum · Moment of Force (Torque) · Angular Momentum of a Particle · Equilibrium of a Rigid Body · Principle of Moments · Centre of Gravity · Moment of Inertia · Kinematics of Rotational Motion About a Fixed Axis · Dynamics of Rotational Motion About a Fixed Axis · Angular Momentum in Case of Rotation About a Fixed Axis · Conservation of Angular Momentum

CHEMISTRY

7 chapters

01 Quantum Numbers

NCERT Ch. 2

Towards Quantum Mechanical Model of the Atom · Dual Behaviour of Matter · Heisenberg's Uncertainty Principle · Quantum Mechanical Model of Atom · Orbitals and Quantum Numbers · Shapes of Atomic Orbitals · Energies of Orbitals

02 Periodic Table

NCERT Ch. 3

Why Do We Need to Classify Elements? · Genesis of Periodic Classification · Modern Periodic Law and the Present Form of the Periodic Table · Nomenclature of Elements with Atomic Numbers > 100 · Electronic Configurations of Elements and the Periodic Table · Electronic Configurations and Types of Elements: s-, p-, d-, f- Blocks · The s-Block Elements · The p-Block Elements · The d-Block Elements (Transition Elements) · The f-Block Elements (Inner-Transition Elements) · Periodic Trends in Properties of Elements · Trends in Physical Properties · Periodic Trends in Chemical Properties · Periodic Trends and Chemical Reactivity

03 Chemical Bonding & Mole Concept

NCERT Ch. 1 & 4

Atomic and Molecular Masses · Mole Concept and Molar Masses · Percentage Composition · Stoichiometry and Stoichiometric Calculations · Limiting Reagent · Kössel-Lewis Approach to Chemical Bonding · Ionic or Electrovalent Bond · Bond Parameters · The Valence Shell Electron Pair Repulsion (VSEPR) Theory · Valence Bond Theory · Hybridisation · Molecular Orbital Theory · Bonding in Some Homonuclear Diatomic Molecules · Hydrogen Bonding

04 Structure of Atom

NCERT Ch. 2

Discovery of Sub-atomic Particles · Atomic Models · Thomson Model of Atom · Rutherford's Nuclear Model of Atom · Developments Leading to the Bohr's Model of Atom · Wave Nature of Electromagnetic Radiation · Particle Nature of Electromagnetic Radiation: Planck's Quantum Theory · Evidence for the Quantized Electronic Energy Levels: Atomic Spectra · Bohr's Model for Hydrogen Atom · Explanation of Line Spectrum of Hydrogen · Limitations of Bohr's Model · Filling of Orbitals in Atom · Electronic Configuration of Atoms · Stability of Completely Filled and Half Filled Subshells

05 Redox and Chemical Equilibrium

NCERT Ch. 7 & 6

Classical Idea of Redox Reactions – Oxidation and Reduction Reactions · Redox Reactions in Terms of Electron Transfer Reactions · Oxidation Number · Types of Redox Reactions · Balancing of Redox Reactions · Redox Reactions and Electrode Processes · Equilibrium in Physical Processes · Equilibrium in Chemical Processes – Dynamic Equilibrium · Law of Chemical Equilibrium and Equilibrium Constant · Homogeneous Equilibria · Heterogeneous Equilibria · Applications of Equilibrium Constants · Equilibrium Constant K, Reaction Quotient Q and Gibbs Energy G · Factors Affecting Equilibria

06 States of Matter

07 Ionic Equilibrium

NCERT Ch. 6

Ionic Equilibrium in Solution · Acids, Bases and Salts · Arrhenius Concept of Acids and Bases · The Brönsted-Lowry Acids and Bases · Lewis Acids and Bases · Ionization of Acids and Bases · The Ionization Constant of Water and its Ionic Product · The pH Scale · Ionization Constants of Weak Acids · Common Ion Effect in the Ionization of Acids and Bases · Hydrolysis of Salts and the pH of their Solutions · Buffer Solutions · Solubility Equilibria of Sparingly Soluble Salts · Solubility Product Constant

MATHEMATICS

11 chapters

01	**Basic Mathematics & Set Theory**	NCERT Ch. 1 & 2
	Sets and Their Representations · The Empty Set · Finite and Infinite Sets · Equal Sets · Subsets · Intervals as Subsets of R · Universal Set · Venn Diagrams · Operations on Sets · Complement of a Set · Cartesian Products of Sets · Relations · Functions · Some Functions and Their Graphs	
02	**Logarithm**	
03	**Compound Angle**	NCERT Ch. 3
	Trigonometric Functions of Sum and Difference of Two Angles	
04	**Quadratic Equation and Inequality**	NCERT Ch. 5
	Inequalities · Algebraic Solutions of Linear Inequalities in One Variable	
05	**Sequence and Series**	NCERT Ch. 8
	Sequences · Series · Geometric Progression (G.P.) · General Term of a G.P. · Sum to n Terms of a G.P. · Geometric Mean (G.M.) · Relationship Between A.M. and G.M.	
06	**Trigonometric Equations**	NCERT Ch. 3
	Angles · Degree Measure · Radian Measure · Relation between Radian and Real Numbers · Relation between Degree and Radian · Trigonometric Functions · Sign of Trigonometric Functions · Domain and Range of Trigonometric Functions	
07	**Determinants**	NCERT Class XII · Ch. 4
	Determinant · Determinant of a Matrix of Order One · Determinant of a Matrix of Order Two · Determinant of a Matrix of Order 3 x 3 · Area of a Triangle · Minors and Cofactors · Adjoint and Inverse of a Matrix · Adjoint of a Matrix · Applications of Determinants and Matrices · Solution of System of Linear Equations Using Inverse of a Matrix	
08	**Straight Line**	NCERT Ch. 9
	Slope of a Line · Slope of a Line when Coordinates of Any Two Points Are Given · Conditions for Parallelism and Perpendicularity of Lines · Angle between Two Lines · Various Forms of the Equation of a Line · Horizontal and Vertical Lines · Point-Slope Form · Two-Point Form · Slope-Intercept Form · Intercept Form · Distance of a Point from a Line · Distance between Two Parallel Lines	
09	**Pair of Straight Line**	
10	**Circles**	NCERT Ch. 10
	Sections of a Cone · Circle	
11	**Permutation & Combination**	NCERT Ch. 6
	Fundamental Principle of Counting · Permutations · Permutations When All the Objects Are Distinct · Factorial Notation · Derivation of the Formula for nPr · Permutations When All the Objects Are Not Distinct Objects · Combinations	

Topics follow the latest NCERT textbooks for Class XI (Physics, Chemistry, Mathematics) and Class XII Mathematics (Determinants). Items with no NCERT counterpart are listed without topics.