

[For both English/Hindi Medium Students]

PHYSICS

Unit No. Topic Covered

- 01 Basic Mathematics used in Physics, Vectors, Units, Dimensions and Measurement, Electrostatics
- 02 Kinematics, Current electricity
- 03 Laws of Motion and Friction, Capacitors
- 04 Work, Energy & Power, Magnetic effect of current, Magnetism and Matter
- 05 Centre of Mass & Collisions, Electromagnetic Induction (EMI)
- 06 Rotational Motion, Alternating current (AC)
- 07 Thermal Physics (Thermal Expansion, Calorimetry, Heat Transfer, KTG & Thermodynamics, Second law of Thermodynamics, Carnot engine and its efficiency), Ray optics and optical Instruments
- 08 Properties of matter and Fluid Mechanics, Gravitation, Wave optics (Nature of Light, Interference, Diffraction & Polarisation), Electromagnetic Waves
- 09 Simple Harmonic Motion, Modern Physics
- 10 Waves (String & Sound waves), Practical Physics, Electronics and Communication systems

CHEMISTRY

Unit No. Topic Covered

- 01 Mole Concept, Atomic structure, Organic nomenclature, Handbook of Basic principles of practical organic chemistry
- 02 Periodic properties, Basic inorganic nomenclature, Chemical thermodynamics & Thermochemistry
- 03 GOC (application of electronic effect, aromaticity, application of Inductive, Resonance, Hyperconjugation effect on stability of intermediates, acidic & basic strength).
- 04 Chemical Bonding, Solid state, Chemical kinetics
- 05 Isomerism, Chemical Equilibrium, State of matter (gaseous state), Redox & equivalent concept
- 06 Ionic Equilibrium, Acid Base theory, Reaction intermediate.

- 07 Co-ordination compound, s-block elements & hydrogen, Boron & Carbon family.
- 08 Haloalkane, Aryl Halide (Substitution & Elimination), Electrochemistry & Solution, Ores & Metallurgy.
- 09 Alkane, Alkenes & Alkynes, Aromatic hydrocarbon, Organic compounds containing oxygen & nitrogen, Qualitative analysis.
- 10 Biomolecules (Carbohydrates, Amino Acid, Proteins), Polymer, Practical organic chemistry (Identification of elements & functional groups), Chemistry in everyday life, Environmental chemistry, Surface chemistry, d&f block element, p-block (nitrogen, oxygen, fluorine & noble gas) family.

MATHEMATICS

Unit No. Topic Covered

- 01 Logarithms, Trigonometric Ratios and Identities, Matrices & Determinants
- 02 Quadratic Equations & Linear Inequalities, Functions and Inverse Trigonometric Function
- 03 Trigonometric Equations, Height and Distance, Differential Calculus (Limit, Continuity, Differentiability, Differentiation)
- 04 Point and Straight Line, Indefinite integration
- 05 Circle, Definite integration
- 06 Sequences and Series, Application of Derivatives (Maxima & Minima, Monotonicity, Tangent & Normal)
- 07 Permutation & Combination and Binomial Theorem, Vectors
- 08 Complex Numbers, Principle of Mathematical Induction, Three Dimensional geometry
- 09 Parabola, Ellipse & Hyperbola, Area under the curve and Differential Equations
- 10 [Sets, Relation, Statistics, Mathematical Reasoning], Probability