

[For both English/Hindi Medium Students]

PHYSICS

Unit No. Topic Covered

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| 01 | Basic Mathematics used in Physics, Vectors, Units, Dimensions and Measurement, Electrostatics |
| 02 | Kinematics (Motion along a straight line and Motion in a plane), Current electricity |
| 03 | Laws of Motion and Friction, Capacitors |
| 04 | Work, Energy & Power, Circular Motion, Magnetic effect of current and Magnetism |
| 05 | Conservation Laws-Collisions and Centre of Mass, Electromagnetic Induction (EMI) |
| 06 | Rotational Motion, Alternating current |
| 07 | Thermal Physics (Thermal Expansion, Calorimetry, Heat Transfer, KTG & Thermodynamics), Ray optics and optical Instruments |
| 08 | Properties of matter and Fluid Mechanics, Gravitation, Wave optics (Nature of Light, Interference, Diffraction & Polarisation), EM Waves |
| 09 | Oscillations (SHM, damped and forced oscillations & Resonance), Modern Physics |
| 10 | Wave Motion and Doppler's Effect, Electronics and Communication systems |

CHEMISTRY

Unit No. Topic Covered

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| 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, Nuclear chemistry, Reaction intermediate. |

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| 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 & p-block element, p-block (nitrogen, oxygen, fluorine & noble gas) family. |

MATHEMATICS

Unit No. Topic Covered

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| 01 | **Logarithms, Trigonometric Ratios and Identities, Matrices & Determinants |
| 02 | Quadratic Equations & Linear Inequalities, Functions and Inverse Trigonometric Function |
| 03 | Trigonometric Equations, **Solution of Triangle Height & 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 |

**Marked topic / topics are only in JEE (Advanced)