

[For both English/Hindi Medium Students]

## PHYSICS

### Test No. Topic Covered

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|-------|---|
| 01    | Basic Mathematics used in Physics, Vectors, Units, Dimensions and Measurement, Electrostatics   |
| 02    | Kinematics, Current electricity   |
| 03    | Laws of Motion and Friction, Capacitors   |
| 04    | Review Test - 1: Syllabus of Test No. 1, 2 & 3  |
| 05    | Work, Energy & Power, Magnetic effect of current, Magnetism and Matter  |
| 06    | Centre of Mass & Collisions, Electromagnetic Induction (EMI)  |
| 07    | Review Test - 2: Syllabus of Test No. 1 to 6  |
| 08    | Rotational Motion, Alternating current (AC)   |
| 09    | Thermal Physics (Thermal Expansion, Calorimetry, Heat Transfer, KTG & Thermodynamics, Second law of Thermodynamics, Carnot engine and its efficiency), Ray optics and optical Instruments |
| 10    | Properties of matter and Fluid Mechanics, Gravitation, Wave optics (Nature of Light, Interference, Diffraction & Polarisation), Electromagnetic Waves                                     |
| 11    | Review Test - 3: Syllabus of Test No. 8, 9 & 10   |
| 12    | Simple Harmonic Motion, Modern Physics  |
| 13    | Waves (String & Sound waves), Practical Physics, Electronics and Communication systems  |
| 14    | Review Test - 4: Syllabus of Test No. 8 to 13   |
| 15-28 | Full Syllabus   |

## CHEMISTRY

### Test No. Topic Covered

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| 01 | Mole Concept, Atomic structure, Organic nomenclature, Basic principles of practical organic chemistry. |
| 02 | Periodic properties, Basic inorganic nomenclature, Chemical thermodynamics & Thermochemistry           |
| 03 | GOC (complete)   |
| 04 | Review Test - 1: Syllabus of Test No. 1, 2 & 3   |
| 05 | Chemical Bonding, Solid state, Chemical kinetics   |
| 06 | Isomerism, Chemical Equilibrium, State of matter (gaseous state), Redox & equivalent concept           |
| 07 | Review Test - 2: Syllabus of Test No. 1 to 6   |
| 08 | Ionic Equilibrium, Acid Base theory, Reaction intermediate.  |
| 09 | Co-ordination compound, s-block elements &   |

hydrogen, Boron & Carbon family.

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| 10    | Haloalkane, Aryl Halide (Substitution & Elimination), Electrochemistry & Solution, Ores & Metallurgy.  |
| 11    | Review Test - 3: Syllabus of Test No. 8, 9 & 10  |
| 12    | Alkane, Alkenes & Alkynes, Aromatic hydrocarbon, Organic compounds containing oxygen & nitrogen, Qualitative analysis.   |
| 13    | 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. |
| 14    | Review Test - 4: Syllabus of Test No. 8 to 13  |
| 15-28 | Full Syllabus  |

## MATHEMATICS

### Test 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, Height and Distance, Differential Calculus (Limit, Continuity, Differentiability, Differentiation) |
| 04    | Review Test - 1: Syllabus of Test No. 1, 2 & 3  |
| 05    | Point and Straight Line, Indefinite integration   |
| 06    | Circle, Definite integration  |
| 07    | Review Test - 2: Syllabus of Test No. 1 to 6  |
| 08    | Sequences and Series, Application of Derivatives (Maxima & Minima, Monotonicity, Tangent & Normal)                          |
| 09    | Permutation & Combination and Binomial Theorem, Vectors   |
| 10    | Complex Numbers, Principle of Mathematical Induction, Three Dimensional geometry,   |
| 11    | Review Test - 3: Syllabus of Test No. 8, 9 & 10   |
| 12    | Parabola, Ellipse & Hyperbola, Area under the curve and Differential Equations  |
| 13    | [Sets, Relation, Statistics, Mathematical Reasoning], Probability   |
| 14    | Review Test - 4: Syllabus of Test No. 8 to 13   |
| 15-28 | Full Syllabus   |