## PHYSICS

<table>
<thead>
<tr>
<th>Test No.</th>
<th>Topic Covered</th>
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| 01       | Basic Mathematics used in Physics, Vectors, Units, Dimensions and Measurement, Electrostatics  
Kinematics (Motion along a straight line and Motion in a plane), Current electricity  
Laws of Motion and Friction, Capacitors |
| 02       | Work, Energy & Power, Circular Motion, Magnetic effect of current and Magnetism  
Conservation Laws-Collisions and Centre of Mass, Electromagnetic Induction (EMI)  
Rotational Motion, Alternating current |
| 03       | Thermal Physics (Thermal Expansion, Calorimetry, Heat Transfer, KTG & Thermodynamics), Ray optics and optical Instruments  
Properties of matter and Fluid Mechanics, Gravitation, Wave optics (Nature of Light, Interference, Diffraction & Polarisation), EM Waves  
Oscillations (SHM, damped and forced oscillations & Resonance), Modern Physics  
Wave Motion and Doppler’s Effect, Electronics and Communication systems |
| 04       | Full Syllabus |
| 05       | Full Syllabus |

## CHEMISTRY

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| 01       | Mole Concept, Atomic structure, Organic nomenclature, Basic principles of practical organic chemistry.  
Periodic properties, Basic inorganic nomenclature, Chemical thermodynamics & Thermochemistry  
GOC (complete) |
| 02       | Chemical Bonding, Solid state, Chemical kinetics  
Isomerism, Chemical Equilibrium, State of matter (gaseous state), Redox & equivalent concept  
Ionic Equilibrium, Acid Base theory, Nuclear chemistry, Reaction intermediate. |
| 03       | Co-ordination compound, s-block elements & hydrogen, Boron & Carbon family  
Haloalkane, Aryl Halide (Substitution & Elimination), Electrochemistry & Solution, Ores & Metallurgy  
Alkane, Alkenes & Alkynes, Aromatic hydrocarbon, Organic compounds containing oxygen & nitrogen, Qualitative analysis  
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 |
| 04       | Full Syllabus |
| 05       | Full Syllabus |

## MATHEMATICS

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