Revised Syllabus for Aptitude Test of Class XI

Physics

1. Dimensional analysis
4. Properties of Matter:
5. Elasticity, Surface tension, Viscosity, Bernoulli’s theorem, Hydrostatics.
6. Heat:
8. Light:
10. Electricity:
12. Radioactivity, Nuclear energy, Nuclear fission, Nuclear Fusion.

Mathematics

1. Number system.
2. Ratio-proportion, Variation, Factorization up to the form: \((a^3 + b^3 + c^3 - 3abc)\)
4. Coordinate Geometry (Basic Coordinates, Distance Formula, Section Formula, Area of Triangle, Quadrilateral and Locus).
5. Polynomials (Remainder Theorem and Factor Theorem), Function.
6. Profit-loss, Interests (Simple & Compound), Uniform Rate of Change, Partnership Business.
7. Statistics: Graphical Representation, Mean, Median, Ogive, Mode.
9. Surface Area, Volume of Solid Objects: Cuboid, Cylinder, Sphere, Cone.
10. Mensuration: Perimeter and Area of Triangles, Quadrilateral, Circles.
12. Concept of Probability (Classical Definition).

Chemistry

1. Atomic structure (Thomson Model, Bohr’s Model, Sommerfeld’s Model, Orbital electronic configuration, Wave mechanics (radial distribution function, Nodes)
2. Periodic Table (Periodic trends, Calculation of effective nuclear charge, Ionization potential, Electronegativity, Electron affinity)
3. Chemical bonding (Electrovalent bonding, Concept of lattice energy, Comparison of lattice energy and Solvation energy and Solubility, Covalent bonding, Co-ordinate covalent bonding, Concept of hybridization (non-equivalent hybridisatory), VSEPR Theory, H-Bonding, Dipolemoment)
5. Red-ox and Equivalent weight.