

Syllabus For
PMT Combined Test (PT–VI)
Target Batches
Test Date: 09.02.2020

PHYSICS

Unit dimension and error analysis, vector, average speed, average velocity, average acceleration, instantaneous velocity and acceleration, variable acceleration, graphs, projectile motion, Newton's Law of motion, friction, circular motion, work power and energy.

Motion of charged particle in magnetic field, force on current carrying conductor in magnetic field, magnetic moment, torque, potential energy of magnetic dipole.

Electrostatics–Coulomb's law and concept of electric field, motion of charge particle in the electric field, electric potential, electric potential energy, electric dipole and its behaviour in electric field, torque, magnetic dipole moment, force on a current carrying conductor in magnetic field, magnetic force, calculation of magnetic field, faraday law, motional EMF, self induction and mutual induction, elasticity, charging of capacitor, photo electric effect, hydrogen atom, pressure in fluid, ray optics, wave optics.

CHEMISTRY

- Some basic concept of chemistry, Nomenclature of organic compound, Isomerism in organic compound, Solution
- Hydrocarbon, Alkyl/aryl halide, alcohol phenol ether, aldehyde and ketones, carboxylic acid, amines
- Solid state, electrochemistry, Chemical kinetic, thermodynamics
- Classification of elements and periodicity in properties, chemical bonding, redox reaction, hydrogen, p–block elements, coordination compounds, d & f block elements.
- **Named reactions** : Friedel-Crafts alkylation and acylation, Reimer-Tieman reaction, Kolbe reaction. Grignard reactions, Williamson's Synthesis, aldol-condensation, Perkin reaction, Cannizzaro reaction, haloform reaction, Sandmeyer and related reactions of diazonium salts, Carbylamine reaction
- Environmental chemistry, polymer, Biomolecule

BOTANY

Complete course except ecology.

ZOOLOGY

Tissue, digestion, respiration, circulation, excretion, movement and locomotion, Nervous system, endocrine system, Human reproduction, human evolution (till morphological and anatomical evidences).