



PHYSICS

Chap.No. Topic Covered

1. Basic Mathematics used in Physics, Vectors, Units, Dimensions and Measurement.
2. Kinematics (Motion along a straight line and Motion in a plane)
3. Laws of Motion and Friction
4. Electrostatics & Capacitors
5. Current electricity
6. Work, Energy & Power, Circular Motion
7. Conservation Laws-Collisions and Centre of Mass
8. Magnetic effect of current and Magnetism
9. Electromagnetic Induction (EMI), Electromagnetic Waves
10. Rotational Motion
11. Alternating current
12. Thermal Physics (Thermal Expansion, Calorimetry, Heat Transfer, KTG & Thermodynamics)
13. Ray optics and optical Instruments
14. Properties of matter and Fluid Mechanics.
15. Gravitation
16. Wave optics (Nature of Light, Interference, Diffraction & Polarisation)
17. Oscillations (SHM, damped and forced oscillations & Resonance)
18. Modern Physics
19. Wave Motion and Doppler's Effect.
20. Semiconductor and Digital Electronics
21. *Principals of Communications

CHEMISTRY

Chap.No. Topic Covered

1. Some Basic Concept of Chemistry
2. Structure of Atom
3. Solid State
4. Classification of Elements and periodicity in Properties
5. Solutions
6. Chemical Bonding & molecular Structure
7. Electrochemistry
8. States of Matter: Gases and Liquids
9. Thermodynamics
10. Equilibrium (Chemical Equilibrium & Ionic Equilibrium)
11. Chemical Kinetics
12. Surface Chemistry

13. Redox Reactions
14. Hydrogen
15. Organic Chemistry- Some Basic Principles and Techniques
16. Hydrocarbons : Alkanes, Alkenes, Alkynes, Aromatic Hydrocarbons & Halogen Derivatives
17. General Principles and Processes of Isolation of Elements
18. p-Block Elements
19. s-Block Elements
20. d and f Block Elements, Coordination Compounds
21. Alcohols, Phenols and Ethers, Aldehydes, Ketones and Carboxylic Acids
22. Environmental Chemistry
23. Organic Compounds Containing Nitrogen
24. Polymers, Biomolecules, Proteins, Hormones, Vitamins, Nucleic Acids, Chemistry in Everyday Life

BIOLOGY

Chap.No. Topic Covered

1. Diversity In Living World (Plant Diversity)
2. Animal Kingdom (Animal Diversity)
3. Reproduction in Organisms & Sexual Reproduction in Flowering Plants
4. Reproductive System, Embryology and Reproductive Health
5. Structural Organization in Animals (Animal Tissues & Cockroach)
6. Structural Organization in Plants (Morphology of Flowering Plants & Anatomy of Flowering Plants)
7. Genetics
8. Biomolecules (Protoplasm) & Molecular Basis of inheritance
9. Biotechnology and Microbes in human welfare
10. Cell Biology (Cell Structure, Function & Cell Division)
11. Plant Physiology
12. Origin & Evolution of life & Mutation
13. Biology in Human welfare (Health & Diseases)
14. Biology in Human welfare (Domestication of Plants & Animals)
15. Human Physiology-I : Digestive System, Excretory System, Respiratory System & Circulatory System, Locomotion and Movement (Skeletal System, Limbs, Muscles)
16. Human Physiology-II : Nervous System, Endocrine Glands & Sensory Organs (Eye & Ear)
17. Organism & Environment and Demography