PHYSICS

Mechanics: Physical Quantity, Kinematics, Dynamics, Energy, Rotational motion, Gravitation, Structure and Properties of Matter, Elasticity, Viscosity, Surface tension.

Heat & Thermodynamics: Heat and temperature, Transmission of heat, Basic assumption of kinetic theory of gasses, Thermodynamics.

Optics: Reflection, Refraction, Speed of light, Dispersion of light, Optical Instrument, Photometry.

Waves: Wave motion, Sound, Electromagnetic waves.

Electrostatics and D. C. Circuits: Simple Electrostatic Phenomenon, Charge flow, Resistance, Effect of Current, Capacitors.

Magnetic field and Current: Magnetic field, Force on conductor, Magnetic materials, Electromagnetic induction, Alternating current

Modern Physics: Electron, Photons, Electronic, Atoms, Nucleus, Radioactivity, Elementary particles.

CHEMISTRY

General & Physical Chemistry: Language of Chemistry, Gaseous state of matter, Liquid state of matter, Solid state of matter, Laws of Stoichiometry, Avogadro's Hypothesis and its important applications, Atomic Structure, Quantum numbers, Chemial Bonding, Oxidation and Reduction, Periodic Table, Acids, Bases and Salts, Acidimetry and Alkalimetry, Electrochemistry, Electrode potential, Chemical Kinetics, Chemical Equilibrium, LeChatelier's Principle, Chemical Thermodynamics, Entropy and spontaneity.

Inorganic Chemistry: Hydrogen, Oxygen and Nitrogen, Carbon, Sulphur and its compound, Halogen and halogen acids, Introduction to Metals, Alkali and alkaline earth metals, Coinage metals, Heavy metals.

Organic Chemistry: Introduction to Organic Chemistry, Hydrocarbons, Organic halogen compounds, Alcohols, Ethers, Carbonyl Compounds, Carboxylic Acids, Amines, Aromatic Hydrocarbons, Aniline and Nitrobenzene, Carbohydrates, Proteins, Nucleic Acids, Lipids, Polymers, Pesticides, Dyes and Drugs.

MATH

- Representation of Data
- Measures of Location and Spread
- Probability
- Permutation and Combination
- Probability Distributions
- Binomial Distributions
- Expectation and Variance of a random variable
- Normal Distribution
- Surds and indices
- Functions and Graphs
- Quadratics and Inequalities
- Differentiation
- Application of Differentiation
- Sequences
- Binomial Theorem
- Trignometry
- Extending Differentiation
- Vectors
- Geometric Sequences
- Second Derivative
- Integration
- Volume of revolution
- Polynomial
- The Modulus function
- Exponential and Logarithmic function
- Differentiating Exponential and Logarithmic functions
- Differentiating Trignometric Function
- Determinants
- Matrices
- Equation of Straight Lines
- A pair of lines
- System of linear equations
- System of Linear Inequalities and Graphs
- Complex Numbers
- Limits and Continuity
- Coordinate Space
- Plane
- Concept of Sets
- Relation
- Functions

BIOLOGY

- Introduction to Biology
- Cell, cell-division and life components
- Origin of Life
- Theory of Evolution by Natural Selection
- Human Evolution
- Heredity and variation
- Regulation of replication, Transcription, Translation and Expression of Genetic Material
- Concept of Taxonomy
- Monera
- Viruses
- Protista
- Mycota
- Plantae
- Morphology, Reproduction, Growth and Development of Flowering Plant
- Photosynthesis
- Transpiration
- Animalia
- Study of Earthworm
- Study of Frog
- Animal Tissues
- Animal Nutrition and Digestive system
- Respiratory system
- Circulation of body fluids
- Excretion and osmoregulation
- Nervous system
- Endocrine system
- Animal reproduction and embryonic development
- Aminocentesis
- Growth, Repair, Regeneration, Ageing and death
- Animal Behaviour
- Concept of ecosystem
- Environmental pollution
- Green-house effect and global warming
- Conservation of Natural resources
- Pesticides
- Biofertilizers and biological pest control
- Biotechnology
- Domestication of plants and crop improvements
- Bioenergy
- Mental health, addiction and community health