

SYLLABUS OF ALLEN - AIEEE

PHYSICS

Section - 1

Electrostatics; Capacitors.

Current electricity.

Magnetic effect of current and Magnetism.

Electromagnetic Induction (EMI), EM Waves, Alternating current.

Ray optics and optical Instruments,

Wave optics (Nature of Light & Interference).

Modern Physics and Nuclear Physics; Practical Physics, Electronics and Principle of Communication.

Section - 2

Basic mathematics used in physics, Vectors, Units, Dimensions and Measurement; Kinematics.

Laws of motion and Friction, Work, Energy & Power.

Centre of Mass & Collisions and Rotational Motion.

Gravitation and Fluid Mechanics.

Thermal Physics (K. T. G., Thermodynamics & Heat Transfer).

SHM and Wave Motion.

CHEMISTRY

Section - 1

Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory

Chemical Kinetics, Electrochemistry and Solution

Transition Element and Metallurgy

Alkane, Alkene, Alkyne, Aromatic Hydrocarbon

Organic Compound Containing Halogen, Oxygen and Nitrogen, Polymers

Surface Chemistry, Purification and characterisation of organic compounds, Biomolecules, Chemistry in Everyday Life and Principles related to practical chemistry.

Section - 2

Mole Concept and Atomic Structure

Periodic Properties & Chemical Bonding

State of Matter (Gaseous State & Solid State)

Redox & Equivalent Concept

s & p-Block Elements; Hydrogen

Organic Nomenclature & Basic Principles-Isomerism, GOC

Chemical Thermodynamics

MATHEMATICS

Section - 1

Point, Straight Line & Circle

Parabola, Ellipse & Hyperbola

Area under the curve and Differential Equations

Vectors and Three Dimensional geometry

Complex Numbers, Mathematical Reasoning, Statistics

Permutation & Combination and Probability

Section - 2

Quadratic Equations, Sequences and Series

Matrices & Determinants, Set, Relation

Functions, Limit & Continuity

Differential Calculus (Differentiability, Differentiation, Maxima & Minima, Monotonicity, Tangent & Normal)

Trigonometry, Binomial Theorem

Principle of Mathematical Induction

Indefinite & Definite integration