

# SYLLABUS OF ALLEN - IIT-JEE

## PHYSICS

Basic mathematics used in physics, Vectors, Unit & Dimensions; Kinematics.

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

Centre of Mass & Collisions and Rotational Motion.

Gravitation and Fluid Mechanics.

Thermal Physics.

SHM and Wave Motion.

Electrostatics; Capacitors.

Current electricity.

Magnetic effect of current and Magnetism.

Electromagnetic Induction (EMI), Alternating current (AC).

Ray optics and optical Instruments,

Wave optics (Nature of Light & Interference).

Atomic and Nuclear Physics; Practical Physics.

## CHEMISTRY

Mole Concept and Atomic Structure

Periodic Properties & Chemical Bonding

State of Matter (Gaseous State), Redox & Equivalent Concept

s & p-Block Elements

Organic Nomenclature & Basic Principles-Isomerism, GOC

Chemical Thermodynamics & Thermochemistry

Chemical Equilibrium, Ionic Equilibrium, Acid-Base Theory

Chemical Kinetics, Nuclear Chemistry, Electrochemistry and Solution

Transition Element and Metallurgy

Alkane, Alkene, Alkyne, Aromatic Hydrocarbon

Organic Compound Containing Halogen, Oxygen and Nitrogen

Solid State, Surface Chemistry, Carbohydrates, Amino Acids & Peptides, Practical Organic Chemistry, Principles of Qualitative Analysis

## MATHEMATICS

Logarithms, Quadratic Equations, Trigonometric Ratios and Identities

Matrices & Determinants and Trigonometric Equations

Functions and Inverse Trigonometric Function

Differential Calculus (Limit, Continuity, Differentiability, Differentiation)

Solution of Triangles, Sequences and Series, Application of Derivatives (Maxima & Minima, Monotonicity, Tangent & Normal)

Indefinite & Definite integration

Point, Straight Line & Circle

Area under the curve and Differential Equations

Parabola, Ellipse & Hyperbola

Vectors and Three Dimensional geometry

Binomial Theorem and Complex Numbers

Permutation & Combination and Probability