

Syllabus For

XII – IIT (Advanced Type) Combined Test

Date : 27.07.2014 (Part–I)

PHYSICS

Complete NCERT - XI Syllabus plus :

Electric field, Electric potential, Gauss's Law. Ray optics, reflection and refraction at a plane surface. reflection and refraction at a curved surface. refraction through a thin lens. total internal reflection, composition of two lenses (equivalent lens), refraction through a thin prism, dispersion of light.

CHEMISTRY

Complete NCERT - XI Syllabus plus :

Solid state, Solution, Organic effect (*Resonance, Inductive effect, hyper-conjugation.....*), Aromatic, anti aromatic, non aromatic, Alkyl and aryl halides. Transition metals, Co-ordination compounds.

MATHEMATICS

Progressions,
Binomial Theorem,
Permutations and Combinations
Matrices and determinants,
Vectors,

Trigonometric equations, Quadratic equations.

Co-ordinate Geometry: Distance between two points, slope of a line joining two points, ratio formula for internal and external division. Equation of locus of a moving point. Equations of a straight Line – two point form, point slope form, intercept form, slope–intercept form, Parametric form of a straight line, Normal form of a straight line. Angle between lines. Distance of a point from a straight line. Equation of angular bisectors of two straight lines.

Functions: Domain and Range functions, One-one and onto functions, Even, Odd and Periodic properties of functions, Inverse function of a function, Exponential, Logarithmic and Inverse trigonometric functions.

Differentiation: Sum, difference product and quotient rule, Chain rule of differentiation. Successive differentiation.

Indefinite Integration: method of substitution and Integration by parts.