

Syllabus For
XII - IIT (Advanced Type) Combined Test

Date: 17.08.2014 (Part-II)

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 and function, 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.