

ANALYTICAL GEOMETRY (3D) AND INTEGRAL CALCULUS

UNIT I

Standard equation of a plane – intercept form-normal form-plane passing through given points – angle between planes –plane through the line of intersection of two planes- Equation of the straight line – Shortest distance between two skew lines- Equation of the line of shortest distance

UNIT II

Sphere – Standard equation –Length of a tangent from any point-Sphere passing through a given circle – intersection of two spheres – Tangent plane.

UNIT III

Integration by parts – definite integrals & reduction formula

UNIT IV

Double integrals – changing the order of Integration – Triple Integrals.

UNIT V

Beta & Gamma functions and the relation between them –Integration using Beta & Gamma functions

TEXT BOOK(S)

- [1] T.K.Manickavasagam Pillai & others, Analytical Geometry, S.V Publications -1985 Revised Edition.
- [2] T.K.Manickavasagam Pillai & others, Integral Calculus, SV Publications.
 - UNIT – I - Chapter 2 Sections 13 to 21 & Chapter 3 Sections 24 to 31 of [1]
 - UNIT – II - Chapter 4 Sections 35 to 42 of [1]
 - UNIT – III- Chapter 1 Sections 11 , 12 & 13 of [2]
 - UNIT – IV - Chapter 5 Sections 2.1 , 2.2 & Section 4 of [2]
 - UNIT – V - Chapter 7 Sections 2.1 to 5 of [2]