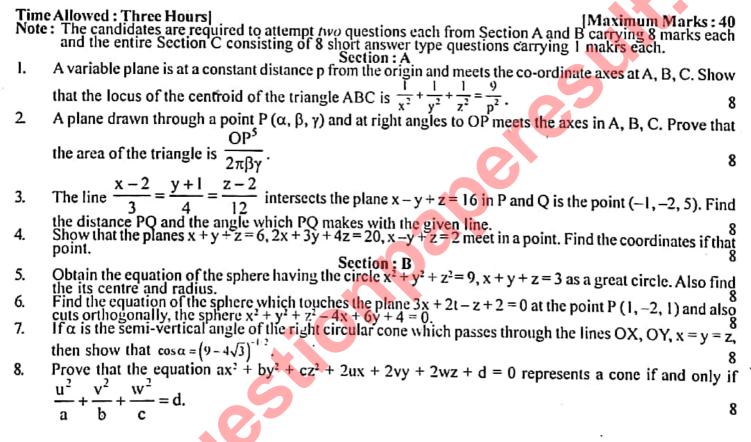
ANALYTIC GEOMETRY-VI Semester – II





- 9. Do as directed:

 - Find the equation of the plane through the points (-1, 1, 1) and (1, -1, 1), perpendicular to the plane x + 2y + 2z = 5. Find the equation of the plane which is parallel to the x axis and has intercepts 5 and 7 on the y and z-axis, respectively. (ii)
 - Find the conditions that the line $\frac{x-x_1}{\ell} = \frac{y-y_1}{m} = \frac{z-z_1}{n}$ is parallel to the plane Ax + By + Cz + D = 0. (iii)
 - Find the equation of the plane which is patrallel to the line $\frac{x-4}{1} = \frac{y+3}{-4} = \frac{z+1}{7}$ and passes (iv)
 - (v)
 - through the points (0, 0, 0) and (3, -1, 2)Find the equation of two tangent planes to the sphere $x^2 + y^2 + z^2 = 9$ which passes through the line x + y = 6, x 2z = 3. Show that the two sphee $x^2 + y^2 + z^2 + 6y + 2z + 8 = 0$ and $x^2 + y^2 + z^2 + 6x + 8y + 4z + 20 = 0$ are orthogonal
 - orthogonal. Show that the equation of the cone with vertex at the origin and base curve f(x, y) = 0, z = k is (vii)
- (viii) Find the conditions that the plane 1x + my + nz = 0 may touch the cone $4x^2 y^2 + 3z^2 = 0$. 1×8=8