**ASSIGNMENT NO.-12(INTRODUCTION TO 3D-GEOMETRY)**

**(MATHEMATICS)**

1. Find the distance between the points and

2. Prove that the area of the triangle whose vertices are and

is independent of

3. For what value of are the points and are collinear?

4. Two vertices of a triangle are and If its centroid is find the third vertex.

5. If the coordinates of the mid-points of the sides of a triangle are and Find

the coordinates of its vertices.

6. Find the equation to the locus of a point equidistant from the points and

7. Find the locus of a point such that the sum of its distances from the points and is 6.

8. Find the coordinates of the circumcentre of a triangle whose vertices are and

Also,find its circum-radius.

9. Find the area of the quadrilateral ABCD whose vertices are respectively

and

10. Determine the point in XY-plane which is equidistant from three points and

11. Find the ratio in which the join of and is divided by the plane

Also,find the coordinates of the point of division.

12. Using section formula ,prove that the three points A(-2,3,5) ,B(1,2,3) and C(7,0,-1) are collinear.