**ASSIGNMENT NO.- 12[Ch-10(Vector Algebra)]**

**Class -XII**

1. If and ,find a unit vector in the directon of .

2. Find a unit vector parallel to the sum of the vectors and

3. If the points with position vectors and are collinear,find the value

of λ.

4. Find the projection of the vector on the vector

5. Find the angle between the vectors and .

6. The scalar product of the vector with a unit vector along the sum of vectors

and is equal to one.Find the value of λ and hence find the unit

vector along .

7. If the points and are collinear,find the value of

8. Find a vector of magnitude 5 units and parallel to the resultant of vectors and

9. Find λ,for which and are orthogonal.

10. Find the value of ,if .

11. If and ,then find the value of

12. Find a unit vector perpendicular to both and ,where and and

13. Find the angle between two vectors and ,if .

14. Find the area of the parallelogram determined by the vectors : and

15. Prove that in any triangle ABC , where are the magnitudes of the sides

opposite to the vertices A,B,C respectively.

16. The volume of a parallelopiped whose edges are represented by ,3 ,

is 546.Find the value of λ.

17. If the edges and meet at a vertex ,

find the volume of the parallelopiped.

18. Find the volume of tetrahedron whose vertices are: and

19. If and are such that is perpendicular to

,then find the value of λ.

20. Vectors and are such that and and ,find the angle

between and