Department Of Computer Science
MCA (Computer Science)
Fundamental of Vectors
Assignment-3

Last Date of submission:13th December,2022

1) Find the distance between the points $P(1, -1,3)$ and $Q(2,1, -7)$.

2) Find the distance between the points $A(-1,3, -2)$ and $B(1,2,0)$.

3) Find the sum of the vectors $(-1,0,7)$ and $(3,2,1)$.

4) If $u = (1,3,5)$ and $v = (-3,1,1)$ then find $u \cdot v$.

5) If $u = (2, \alpha, 1)$ and $v = (4, -2, -2)$ then find the real number α such that the vector u and v are orthogonal.

6) Let $u = (1,2,3)$ and $v = (-2,3,0)$ then find scalar projection of u on v and vector projection of u along v.

7) Describe Gramm-Schmidt orthogonalization process.

8) Use the Gram-Schmidt process of orthonormalization to construct an orthogonal basis of the subspace of R^3 generated by $(1,0,3)$ and $(2,1,1)$.