Chapter No. 2

1. The magnitude of **i.(jxk)** is equal to

   a. 0 b. 1 c. -1 d. **i**

2. The direction of a vector in space is specified by

   a. 1-angle b. 2-angles c. 3-angles d. 4-angles

3. $\hat{i}$. ($\hat{j}$ x $\hat{k}$) is equal to:

   (A) $\hat{k}$ (B) 1 (C) 2 (D) 0

4. The magnitudes of rectangular components of a vector are equal, if its angle with x-axis is:

   (A) 0^0 (B) 30^0 (C) 90^0 (D) 120^0

5. Position vector of a point P (a, b, c) in Y-Z plane is given by:

   (A) $\vec{r} = a\hat{i} + b\hat{j}$ B) $\vec{r} = a\hat{i} + c\hat{k}$ (C) $\vec{r} = b\hat{j} + c\hat{k}$ (D) $\vec{r} = a\hat{i} + b\hat{j} + c\hat{k}$

6. Mathematically unit vector is given by:

   (A) $\hat{A} = A\,\vec{A}$ (B) $\hat{A} = \frac{A}{\vec{A}}$ (C) $\hat{A} = \vec{A}$/A (D) $\hat{A} = \vec{A}\,\vec{A}$

7. Self product of a vector $\vec{A}$ is equal to:

   (A) A^2 (B) Zero (C) One (D) $\hat{i}.\hat{j}$

8. Which pair of following forces give a resultant which can be equal to zero?

   (A) 2 N and 2 N (B) 1 N and 4 N (C) 2 N and 5 N (D) 1 N and 2 N

9. The resultant magnitude of 6 N force acting at right angle to a 8 N force is:

   (A) 2 N (B) 14 N (C) 8 N (D) 10 N

10. The magnitude of vector product of two non-zero vectors $\vec{A}$ and $\vec{B}$ making an angle ϴ with each other is:

    (A) AB sinϴ $\hat{n}$ (B) AB sinϴ (C) AB cosϴ (D) AB

11. If resultant of two forces of magnitude of F is also F, then angle between forces is

    (A) 30° (B) 60° (C) 90° (D) 120°