CLASS 12

## **VECTOR ALGEBRA**

## INTRODUCTION OF VECTOR ALGEBRA AND SOME BASIC CONCEPT

## EXERCISE

- **Q.1** Classify the following measures as scalars and vectors.
  - 1) 10 kg 2) 2 meters north-west 3) 40°
  - 4) 40 watt 5)  $10^{-19}$  coulomb
- **Q.2** How to define a vector?
- **Q.3** What is the starting point of a vector?
- **Q.4** Is the position a vector?
- **Q.5** what is a negative vector?
- **Q.6** What are the Uses of Vector Algebra?
- **Q.7** What are the Properties of Vectors in Vector Algebra?
- **Q.8** What is the condition for two vectors to be perpendicular?
- **Q.9** Find the magnitude of the vector  $\vec{a} = 5i 3j + k$ , using the formula from vector algebra.
- **Q.10** Let's say two vector are defined as  $\vec{b} = \vec{e} \vec{c} + 2\vec{d}$  and  $\vec{a} = 3\vec{e} \vec{d} + 2\vec{c}$ . Find,  $\vec{b} + \vec{a}$

## **ANSWER KEY**

- **9.** Therefore, the magnitude of the vector is  $\sqrt{35}$ .
- **10.**  $\Rightarrow \vec{b} + \vec{a} = 4\vec{e} + \vec{c} + \vec{d}$