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Class 11Sc Sub Physics Dt 15 10 XX

Answer the following questions :-

1 Two vectors of magnitude  $A$  and  $\sqrt{3}A$  are perpendicular to each other. What is the angle which their resultant makes with vector  $A$ ?

2 Can a body possess velocity at the same time in horizontal and vertical directions?

3 Is it true that instantaneous velocity of a projectile is tangential to its parabolic path?

4 A body is projected at an angle  $45^\circ$  with a velocity of  $9.8 \text{ m/s}$ . What will be its horizontal range?

5 A ball is thrown at an angle  $45^\circ$  to the horizontal with kinetic energy  $K$ . What is the K. E. at the highest point of trajectory?

6 Define the following :- a unit vector b displacement c dot product of two vectors. d projectile motion e modulus of a vector.

7 MCQs:-

1 Two equal vectors have a resultant equal to either. The angle between them is

**A 60      B 90      C 180      D 120**

**II The acceleration of a body moving with constant velocity is**

**A positive      B negative      C zero      D none**

**III The horizontal range of a projectile is  $4\sqrt{3}$  times of its maximum height. The angle of projection will be**

**A 60                  B 90                  C 30                  D 45**

**IV The ratio of magnitude of displacement and distance in case of motion in one dimension is**

**A equal to 1    B less than 1    C more than 1    D none**

**V The slope of v-t graph of a body measures**

**A velocity**

**B displacement**

**C momentum**

**D acceleration**

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