ARJUNA (NEET)

Kinematics

DPP-10

1. Which of the following is/are vector quantity?
(a) work (b) moment of inertia
(c) velocity (d) momentum
(A) a, b, d (B) b, c, d
(C) b, d (D) c, d

2. Which quantity can be added with a velocity vector ?
(A) Displacement (B) Time
(C) Speed (D) None of these

3. If $\vec{B} = n\vec{A}$ and $\vec{A}$ is antiparallel with $\vec{B}$, then n is :
(A) a vector
(B) negative and dimensionless number
(C) a scalar
(D) a positive scalar

4. A vector does not change when we:
(A) rotate the coordinate axis
(B) slide the vector without changing its orientation
(C) rotate vector
(D) all of the above

5. Which of the following is a vector ?
(A) Time
(B) Pressure
(C) Small angular displacement
(D) Current

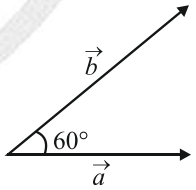
6. If $\vec{A}$ is a vector having magnitude 4 units due east. What is the magnitude and direction of a vector $4\vec{A}$.
(A) 4 units due east
(B) 4 units due west
(C) 16 units due west
(D) 16 units due east

7. A vector $\vec{A}$ is rotated through an angle 2π, the magnitude of new vector is :
(A) 2A (B) A
(C) A/2 (D) none of these

8. A vector is not changed if :
(A) it is displaced parallel to itself
(B) it is rotated through an arbitrary angle
(C) it is cross-multiplied by a unit vector
(D) it is multiplied by a arbitrary scalar

9. Which one of the following statement is false :
(A) Mass, speed and energy are scalars
(B) Momentum, force and torque are vectors
(C) Distance is a scalar while displacement is a vector
(D) A vector has only magnitude where as a scalar has both magnitude and direction

10. Use the formulae and find out magnitude of resultant of $\vec{a}$ and $\vec{b}$.



$|\vec{a}| = 5, |\vec{b}| = 4$
(A) $\sqrt{65}$ (B) $\sqrt{61}$
(C) $\sqrt{66}$ (D) $\sqrt{62}$

11. Following sets of three forces act on a body. Whose resultant can not be zero ?
(A) 10, 10, 10 (B) 10, 10, 20
(C) 10, 20, 20 (D) 10, 20, 40

ANSWERS KEY

1. **(D)**
2. **(A)**
3. **(B)**
4. **(B)**
5. **(C)**
6. **(D)**
7. **(B)**
8. **(A)**
9. **(D)**
10. **(B)**
11. **(D)**

Note - If you have any query/issue

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