ARJUNA (NEET)

Vector

DPP-12

1. Two force $\vec{F}_1$ = 5N due east and F_2 = 10 N due north then resultant of these two force is
(A) $5\sqrt{5}$ N (B) 15 N
(C) 5 N (D) $\sqrt{5}$ N

2. Two vector of magnitude 2 then resultant of these two vector may be ?
(A) 2 (B) 8
(C) 5 (D) 6

3. Two vector of magnitude same A and resultant of these two vector is also A then angle between these two vector must be
(A) 45° (B) 90°
(C) 120° (D) 180°

4. Two vector of magnitude equal to each other and 10 then resultant of these two vector at 60° is
(A) $10\sqrt{3}$ (B) 10
(C) 0 (D) 20

5. Which of the following relation is correct between $\vec{A},\vec{B}\,\&\,\vec{C}$ if $\vec{C}=\vec{A}+\vec{B}$
(A) B + A < C < B – A
(B) A ≤ C ≥ B
(C) A – B ≤ C ≤ A + B
(D) A – B < C < A + B

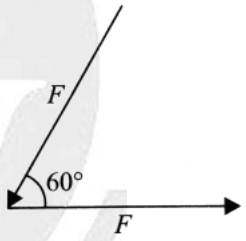
6. If $\vec{R}=\vec{A}+\vec{B}$ and $|\vec{R}|=|\vec{A}|=|\vec{B}|$ then angle between $\vec{A}$ and $\vec{B}$ may be
(A) 90° (B) 120°
(C) 60° (D) 45°

7. If $\vec{R}=\vec{A}+\vec{B}$ and $R^2 = A^2 + B^2$ then angle between $\vec{A}$ and $\vec{B}$ may be
(A) 90° (B) 60°
(C) 120° (D) 80°

8. If $\vec{R}=\vec{A}+\vec{B}$ and $R = A + B$ then angle between $\vec{A}$ & $\vec{B}$ must be
(A) 90° (B) 60°
(C) 0° (D) 180°

9. Given $\vec{A}=2\hat{i}+3\hat{j}$, the angle between $\vec{A}$ and *Y*-axis is
(A) $\sin^{-1}\frac{2}{3}$ (B) $\cos^{-1}\frac{2}{3}$
(C) $\tan^{-1}\frac{2}{3}$ (D) $\tan^{-1}\frac{3}{2}$

10. Two forces, each numerically equal to 5 N, are acting as shown in the figure. Then the resultant is



(A) 2.5 N (B) 5 N
(C) $5\sqrt{3}$ N (D) 10 N

11. Two forces of magnitudes *F* and $\sqrt{3}$ *F* act at right angles to each other. Their resultant makes an angle β with *F*. The value of β is
(A) 30° (B) 45°
(C) 60° (D) 135°

12. A truck travelling due north at 20 ms^{-1} turns west and travels with same speed. What are the changes in velocity ?
(A) $20\sqrt{2}$ ms^{-1} south-west
(B) 40 ms^{-1} south-west
(C) $20\sqrt{2}$ ms^{-1} north-west
(D) 40 ms^{-1} north-west

ANSWERS KEY

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

Note - If you have any query/issue

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