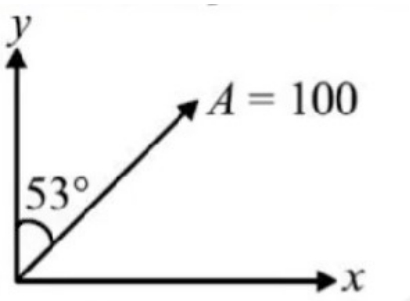
Yakeen NEET 2.0 2026

Physics By Manish Raj Sir

DPP: 2

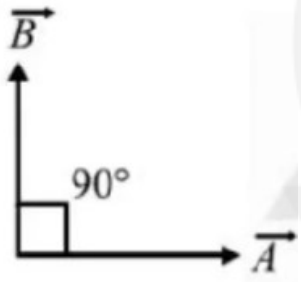
Vectors

Q1 Find x-component of vector $\vec{A}$.



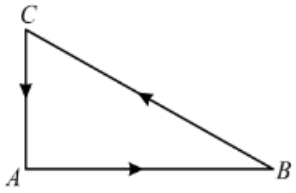
(A) 80
(B) 60
(C) 40
(D) 20

Q2 If $A = 10$ units and $B = 6$ units then find.
$|\vec{R}| = |\vec{A} + \vec{B}| = ?$



(A) $\sqrt{136}$
(B) $\sqrt{360}$
(C) $\sqrt{105}$
(D) None

Q3 Three forces start acting simultaneously on a particle moving with velocity $\vec{v}$. These forces are represented in magnitude and direction by the three sides of a triangle ABC as shown in the figure. The particle will now move with velocity



(A) greater than $\vec{v}$
(B) $|\vec{v}|$ in the direction of the largest force
(C) $\vec{v}$, remaining unchanged
(D) less than $\vec{v}$.

Q4 The angle between the direction of $\hat{\mathrm{i}}$ and $(\hat{\mathrm{i}} + \hat{\mathrm{j}})$ is
(A) 90°
(B) 0°
(C) 45°
(D) 180°

Q5 If $\vec{A} = 7\hat{i} - 2\hat{j} + 3\hat{k}$, what is the vector $-3\vec{A}$?
(A) $-21\hat{i} + 6\hat{j} - 9\hat{k}$
(B) $-7\hat{i} + 2\hat{j} - 3\hat{k}$
(C) $21\hat{i} - 6\hat{j} + 9\hat{k}$
(D) $-7\hat{i} + 6\hat{j} - 9\hat{k}$

Q6 If $\vec{A}$ is a vector of magnitude 5 units due east. What is the magnitude and direction of a vector $-5\vec{A}$?
(A) 5 units due east
(B) 25 units due west
(C) 5 units due west
(D) 25 units due east

Q7 If $\vec{r} = 0.2\hat{i} + a\hat{j} - 0.3\hat{k}$ is a unit vector, the value of a is
(A) $\sqrt{0.87}$

(B) 0.87
(C) 1.13
(D) $\sqrt{1.13}$

Q8 Two forces, each of magnitude *F* have a resultant of the same magnitude *F*. The angle between the two force is:
(A) 45° (B) 120°
(C) 150° (D) 60°

Q9 The resultant of two vectors of magnitudes 3 units and 4 units is $\sqrt{37}$. The angle between the two vectors is:
(A) 0° (B) 30°
(C) 60° (D) 90°

Q10 Two forces, each equal to *F* act at an angle 60°, their resultant is:
(A) *F*/2 (B) *F*
(C) $\sqrt{3}F$ (D) $\sqrt{5}F$

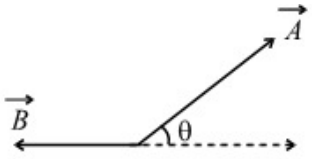
Q11 If $\vec{A} = 6\hat{i} - 8\hat{j} + 10\hat{k}$, then what will be magnitude of vector $\vec{A}$.

(A) 30 unit
(B) 20 unit
(C) 10 unit
(D) $10\sqrt{2}$ unit

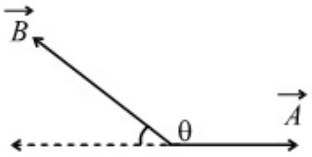
Q12 Which of the following is scalar?
(A) displacement (B) electric field
(C) acceleration (D) work

Q13 Let q be the angle between vectors and . Which of the following figures **correctly** represents the angle θ?

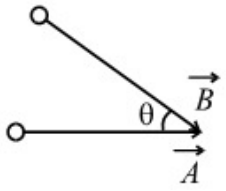
(A)



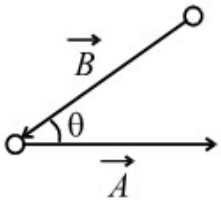
(B)



(C)



(D)



Answer Key

Q1	(A)
Q2	(A)
Q3	(C)
Q4	(C)
Q5	(A)
Q6	(B)
Q7	(A)
Q8	(B)
Q9	(C)
Q10	(C)
Q11	(D)
Q12	(D)
Q13	(C)