

Yakeen NEET 2.0 2026

Physics by Saleem Sir

DPP: 2

Vectors

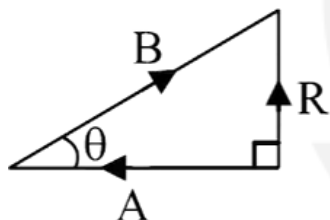
Q1 If $\vec{A} = 4\hat{i} + 2\hat{j} - 3\hat{k}$ and $\vec{B} = \hat{i} + 3\hat{j} + 2\hat{k}$ then find $\vec{A} \cdot \vec{B}$

- (A) 10 (B) 4
(C) 3 (D) 14

Q2 If a particle moves from point $P(2, 3, 5)$ to point $Q(3, 4, 5)$. Its displacement vector be

- (A) $\hat{i} + \hat{j} + 10\hat{k}$
(B) $\hat{i} + \hat{j} + 5\hat{k}$
(C) $\hat{i} + \hat{j}$
(D) $2\hat{i} + 4\hat{j} + 6\hat{k}$

Q3 In vector diagram shown in figure where (\vec{R}) is the resultant of vectors (\vec{A}) and (\vec{B}) .



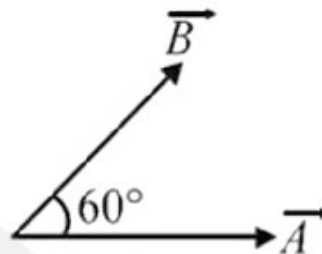
If $R = \frac{B}{\sqrt{2}}$, then value of angle θ is:

- (A) 30°
(B) 45°
(C) 60°
(D) 75°

Q4 The resultant of two forces $2P$ and $\sqrt{2}P$ is $\sqrt{10}P$. The angle between the forces is

- (A) 30°
(B) 60°
(C) 45°
(D) 90°

Q5 If $|\vec{A}| = 4$ units and $|\vec{B}| = 3$ units then find $|\vec{A} - \vec{B}| = ?$



- (A) $\sqrt{15}$
(B) $\sqrt{18}$
(C) $\sqrt{13}$
(D) $\sqrt{37}$

Q6 A vector $\vec{A} = 6\hat{i} + 8\hat{j}$ is inclined at angle θ with the x-axis. The angle θ is:

- (A) 45° (B) 60°
(C) 30° (D) 53°

Q7 The vector $\vec{A} = 6\hat{i} - 8\hat{j} + 10\hat{k}$ makes an angle θ with the positive x-axis. What is the value of $\cos \theta$?

- (A) $\frac{6}{\sqrt{6^2+8^2+10^2}}$
(B) $\frac{6}{14}$
(C) $\frac{6}{12}$
(D) $\frac{10}{\sqrt{6^2+8^2+10^2}}$

Q8 An aeroplane is heading north east at a speed of 141.4 ms^{-1} . The northward component of its velocity is

- (A) 141.4 ms^{-1}
(B) 100 ms^{-1}



- (C) Zero
(D) 50 ms^{-1}

Q9 The angle made by the vector $\vec{A} = \sqrt{3}\hat{i} + \hat{j}$ with y-axis

- (A) 60°
(B) 30°
(C) 45°
(D) 160°

Q10 If the horizontal component of velocity vector \vec{v} making an angle 60° with the horizontal direction is 5 m/s , then the value of \vec{v} is:

- (A) $5\sqrt{3} \text{ ms}^{-1}$
(B) 10 ms^{-1}
(C) $\frac{10}{\sqrt{3}} \text{ ms}^{-1}$
(D) 5 ms^{-1}



Answer Key

Q1 (B)

Q2 (C)

Q3 (B)

Q4 (C)

Q5 (C)

Q6 (D)

Q7 (A)

Q8 (B)

Q9 (A)

Q10 (B)



[Android App](#)

| [iOS App](#)

| [PW Website](#)

