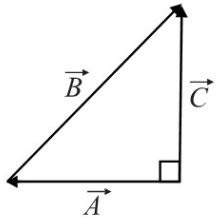
# Yakeen NEET 2.0 2026

## Physics by Saleem Sir

DPP: 1

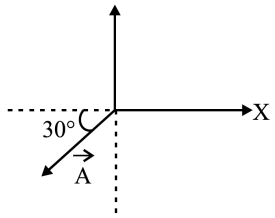
## Vectors

**Q1** In the adjoining vector diagram, what is the angle between $\vec{A}$ and $\vec{B}$ ? (Given: $C = B/2$).




(A) 30°
(B) 60°
(C) 120°
(D) 150°

**Q2** Vector $\vec{A}$ is shown in figure. The angle made by $\vec{A}$ with positive X-axis is:




(A) 30°
(B) 90°
(C) 210°
(D) 60°

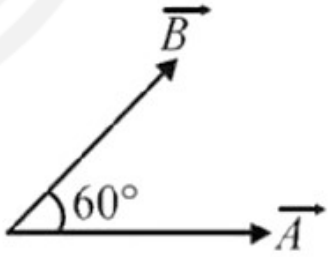
**Q3** The resultant of $\vec{A} + \vec{B}$ is $\vec{R}_1$. On reversing the vector $\vec{B}$ the resultant becomes $\vec{R}_2$. What is the value of $R_1^2 + R_2^2$?
(A) $A^2 + B^2$
(B) $A^2 - B^2$
(C) $2\left(A^2 + B^2\right)$
(D) $2\left(A^2 - B^2\right)$

**Q4** Which of the following pair of forces will never give a resultant force of $2\mathrm{N}$ ?
(A) $2\ \mathrm{N}$ and $2\ \mathrm{N}$
(B) $1\ \mathrm{N}$ and $1\ \mathrm{N}$
(C) $1\ \mathrm{N}$ and $3\ \mathrm{N}$
(D) $1\ \mathrm{N}$ and $4\ \mathrm{N}$

**Q5** The vector sum of the forces of 10 newton and 6 newton can be
(A) $2\ \mathrm{N}$
(B) $8\ \mathrm{N}$
(C) $18\ \mathrm{N}$
(D) $20\ \mathrm{N}$

**Q6** The minimum number of vectors of equal magnitude required to produce a zero resultant is:
(A) 2
(B) 3
(C) 4
(D) More than 4

**Q7** If $\left|\vec{A}\right| = 4$ units and $\left|\vec{B}\right| = 3$ units then find $|\vec{A} - \vec{B}| = ?$




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

**Q8** Two vectors $\mathbf{A}$ and $\mathbf{B}$ have equal magnitudes. The magnitude of $(\mathbf{A} + \mathbf{B})$ is '$n$' times the

magnitude of $(\mathbf{A}-\mathbf{B})$. The angle between $\mathbf{A}$ and $\mathbf{B}$ is

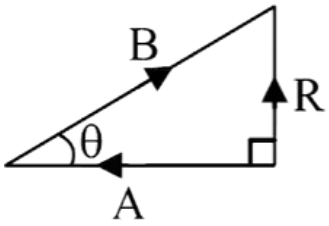
(A) $\sin^{-1}\left(\frac{n^2-1}{n^2+1}\right)$

(B) $\sin^{-1}\left(\frac{n-1}{n+1}\right)$

(C) $\cos^{-1}\left(\frac{n^2-1}{n^2+1}\right)$

(D) $\cos^{-1}\left(\frac{n-1}{n+1}\right)$

**Q9** 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 $\theta$ is:

(A) $30^\circ$

(B) $45^\circ$

(C) $60^\circ$

(D) $75^\circ$

**Q10** Two forces equal in magnitude, have resultant magnitude equal to either of the two. The angle between the forces is:

(A) $0^\circ$

(B) $60^\circ$

(C) $90^\circ$

(D) $120^\circ$

# Answer Key

| | | | |
|---|---|---|---|
| Q1 | (D) | Q6 | (A) |
| Q2 | (C) | Q7 | (C) |
| Q3 | (C) | Q8 | (C) |
| Q4 | (D) | Q9 | (B) |
| Q5 | (B) | Q10 | (D) |