Yakeen NEET 2.0 (2026)

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DPP: 7

Vectors

Q1 A vector perpendicular to $(4\hat{\mathrm{i}} - 3\hat{\mathrm{j}})$ may be :
(A) $4\hat{\mathrm{i}} + 3\,\vec{\mathrm{j}}$
(B) $7\hat{k}$
(C) $6\hat{\mathrm{i}}$
(D) $3\hat{\mathrm{i}} - 4\hat{\mathrm{j}}$

Q2 Two forces of 12 N and 8 N act upon a body. The resultant force on the body has maximum value of:
(A) 4 N (B) 0 N
(C) 20 N (D) 8 N

Q3 The vector product of two vectors $\vec{a}$ and $\vec{b}$ is a vector $\vec{c}$ such that $\vec{c}$ is perpendicular to the plane containing $\vec{a}$ and $\vec{b}$ and the direction is given by:
(A) left hand rule
(B) left-handed screw rule
(C) index finger rule
(D) right-handed screw rule

Q4 The angle between $\vec{A} = \hat{i} + \hat{j}$ and $\vec{B} = \hat{i} - \hat{j}$ is:
(A) 45°
(B) 90°
(C) –45°
(D) 180°

Q5 **Assertion (A):** If $\vec{A} \cdot \vec{B} = \vec{B} \cdot \vec{C}$ then $\vec{A}$ may not always be equal to $\vec{C}$.

Reason (R): The dot product of two vectors involves cosine of the angle between the two vectors.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

Q6 If $\vec{A} = 4\hat{i} - 2\hat{j} + 6\hat{k}$ and $\vec{B} = -2\hat{j} - 6\hat{k}$, then angle made by vector $\vec{A} + \vec{B}$ with positive y-axis is:
(A) 30° (B) 135°
(C) 45° (D) 120°

Q7 There are two force vectors, one of 5 *N* and other of 12 *N*. At what angle the two vectors be added to get resultant vector of 17 *N*, 7 *N* and 13 *N* respectively:
(A) 0°, 180° and 90°
(B) 0°, 90° and 180°
(C) 0°, 90° and 90°
(D) 180°, 0° and 90°

Q8 A particle is simultaneously acted by two forces equal to 4 *N* and 3 *N*. The net force on the particle is:
(A) 7 *N*
(B) 5 *N*
(C) 1 *N*
(D) Between 1 *N* and 7 *N*

Q9 Which of the following relation is **correct** between $\vec{A}$, $\vec{B}$ & $\vec{C}$ if $\vec{C} = \vec{A} + \vec{B}$?

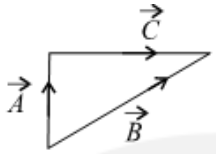
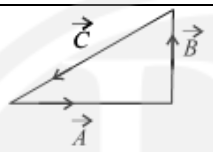
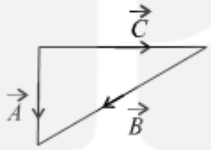
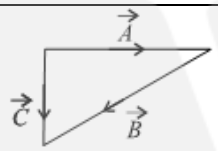
(A) $B + A < C < B - A$

(B) $A \leq C \geq B$

(C) $|A - B| \leq C \leq A + B$

(D) $A - B < C < A + B$

Q10 Match **List-I** with **List-II**.

List-I		List-II	
(I)	$\vec{C} - \vec{A} - \vec{B} = \vec{0}$	(A)	
(II)	$\vec{A} - \vec{C} - \vec{B} = \vec{0}$	(B)	
(III)	$\vec{B} - \vec{A} - \vec{C} = \vec{0}$	(C)	
(IV)	$\vec{A} + \vec{B} = -\vec{C}$	(D)	

Choose the **correct** answer from the options given below:

(A) I - A, II-D, III- B, IV-C

(B) I-D, II-C, III-A, IV-B

(C) I-C, II-B, III-D, IV-A

(D) I-D, II-A, III-C, IV-B

Answer Key

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