

Physics ECAT Pre Engineering Chapter 2 Vectors and Equilibrium

Sr	Questions	Answers Choice
1	If x-component of a vector is -3 N and y-component is 3 N, then angle of resultant vector will x-axis is:	<p>A. 45°</p> <p>B. 315°</p> <p>C. 135°</p> <p>D. 225°</p>
2	If the vector 5 N lies along with x-axis, then its component along y-axis will be:	<p>A. Zero</p> <p>B. 5 N</p> <p>C. 7 N</p> <p>D. 10 N</p>
3	Parallel vectors of same magnitudes:	<p>A. Are equal</p> <p>B. Are unequal</p> <p>C. When added give the some equal to zero</p> <p>D. Give the answer equal to zero</p>
4	All trigonometric functions (since, cosine tangent etc.) are positive in:	<p>A. 1st Quadrant</p> <p>B. 2nd Quadrant</p> <p>C. 3rd Quadrant</p> <p>D. 4th Quadrant</p>
5	Two forces each of the magnitude F act perpendicular to each other. The angle made by the resultant force with the horizontal will be:	<p>A. 30°</p> <p>B. 45°</p> <p>C. 60°</p>

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6	Two vectors to be combined have magnitudes of 60 N and 35 N. Pick the possible answer:	A. 100 N B. 70 N C. 20 N D. Zero
7	When the magnitude of two component vectors are equal to that of their resultant, then the angle between the components is:	A. 60° B. 90° C. 120° D. 150°
8	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
9	Choose the set of physical quantities, which have both numerical and directional properties:	A. Velocity, mass B. Speed, acceleration C. acceleration weight D. Distance, force
10	The perpendicular distance from the axis of rotation to the line of action of force is called:	A. Moment arm B. Moment of a force C. Torque D. Non of these
11	The sum of two or more vectors is equal to a single vector which is called:	A. Component vector B. Resultant vector C. Product vector D. None of these
12	A force of 5 n is acting Y-axis. Its component along X-axis is:	A. 7 N B. 5 N C. Zero D. 10 N
13	By convention, torques producing clockwise rotation are taken as:	A. Positive B. Nagative C. Zero D. None of these
		A. Increasing the angle between them

14	The magnitude of the resultant of two forces may be increased by:	<p>B. Decreasing the angle between them</p> <p>C. Drawing a triangle to represent them</p> <p>D. None of these</p>
15	A vector of magnitude 5 N is added to a vector of magnitude 8 N while the orientations are changeable. Range of their possible sum will be very from:	<p>A. Zero to 3 N</p> <p>B. 1 N to 13 N</p> <p>C. 13 N to 3 N</p> <p>D. None of these</p>
16	A vector which has magnitude 'one' is called:	<p>A. Resultant vector</p> <p>B. A unit vector</p> <p>C. Position vector</p> <p>D. None of these</p>
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18	Torque is also called:	<p>A. Momentum</p> <p>B. Linear inertia</p> <p>C. Moment of a force</p> <p>D. Mass</p>
19	A person starts his journey from a point O, travels 4 Km SW, then 4 Km NW, and finally 4 Km north-east. At what distance is he now from point O?	<p>A. 0 Km</p> <p>B. 4 Km</p> <p>C. 8 Km</p> <p>D. 12 Km</p>
20	Two forces of 10 N and 8 N are applied simultaneously to a body. the maximum value of their resultant is:	<p>A. 2 N</p> <p>B. - 2 N</p> <p>C. 18 N</p> <p>D. 36 N</p>