

## ECAT Pre General Science Physics Chapter 2 Vectors and Equilibrium

Sr	Questions	Answers Choice
1	Two vectors having different magnitudes:	A. Have their directions opposite B. May have their resultant zero C. Cannot have their resultant zero D. None of these
2	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:	A. Zero to 3 N B. 1 N to 13 N C. 13 N to 3 N D. None of these
3	If the vector 5 N lies along with x-axis, then its component along y-axis will be:	A. Zero B. 5 N C. 7 N D. 10 N
4	The vector in space has:	A. One Component B. Two Components C. Three Components D. Non of these
5	The change of order of vectors in a dot product of two vectors:	A. Changes its value B. Doesn't change its value C. Changes the direction product quantity D. None of these
6	If two forces of magnitudes 3.5 and 2.5 N act on a body such that the angle between the forces is zero, then magnitude of the resultant will be:	A. 1.0 N B. 6 N C. 3.5 N D. 12 N
7	The direction of vector in space is specified by:	A. One angle B. Two angles C. Three angles D. None of above
8	By convention, torques producing clockwise rotation are taken as:	A. Positive B. Negative C. Zero D. None of these
9	Which of the following is scalar quantity?	A. Electric potential B. Velocity C. Momentum D. Force
10	Parallel vectors of same magnitudes:	A. Are equal B. Are unequal C. When added give the some equal to zero D. Give the answer equal to zero
11	The resultant of two velocities 3 m/sec and 400 cm/sec making an angle 90° with each other is:	A. 20 m/sec B. 5 m/sec C. 3 m.sec D. None of these
12	An vector of 10 N makes an angle of 45° with x-axis. Angle between its rectangular components will be:	A. 45° B. 90° C. 135° D. 180°

C. 1.33  
D. Zero

13 A vector which has magnitude 'one' is called:

- A. Resultant vector
- B. A unit vector
- C. Position vector
- D. None of these

14 The rectangular components of a vector are equal in magnitude when the vector makes and angle \_\_\_\_\_ with their x-component:

- A. 0°
- B. 30°
- C. 45°
- D. 60°

15 Scalar product is also called:

- A. Cross product
- B. Dot product
- C. Product scalar
- D. Product vector

16 All trigonometric functions (sine, cosine, tangent etc) are positive in:

- A. 1st quadrant
- B. 2nd quadrant
- C. 3rd quadrant
- D. 4th quadrant

17 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

18 Torque is also called:

- A. Momentum
- B. Linear inertia
- C. Moment of a force
- D. Mass

19 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

20 Two forces each of 10 N act on a body, if the force are inclined at 30° and 60° respectively with x-axis, then x-component of their resultant is:

- A. 20 N
- B. 13.66 N
- C. 10 N
- D. 8.66 N