ECAT Pre General Science Physics Chapter 2 Vectors and Equilibrium Online Test

Sr	Questions	Answers Choice
1	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
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	A person starts his journey from a point 0, travels 4 Km SW, then 4 Km NW, and finally 4 Km north-east. At what distance is he now from point 0?	A. 0 Km B. 4 Km C. 8 Km D. 12 Km
4	Unit vector is used to specify:	A. Magnitude of a vector B. Dimensions of a vector C. Direction of a vector D. Position of a vector
5	The direction of vector in space is specified by:	A. One angle B. Two angles C. Three angles D. None of these
6	Two forces of 10N and 8N are applied simultaneously to a body. The maximum value of their resultant is:	A. 20 N B. -2 N C. 18 N D. 36 N
7	The direction of a vector in space requires:	A. X-axis B. X and Y-axes C. XYZ axes D. Y and Z-axes
8	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
9	Scalar product is also called:	A. Cross product B. Dot product C. Product scalar D. Product vector
10	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
11	The driection of vector si space is specified by:	A. One angle B. Two angles C. Three angles D. None of above
12	Tick the correct answer:	A. Torque is a vector quantity B. Torque is the turning effect of a force C. Torque is called moment of a force D. All of above
13	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
14	The change of order of vectors in a dot product of two vectors:	A. Changes its value B. Doesn't change it's value C. Changes the direction product quantity D. None of these
15	A vector which has magnitude 'one' is called:	A. Resultant vector B. A unit vector

	A vector which has magnitude one is called:	C. Position vector D. None of these
16	The vector in space has:	A. One component B. Two components C. Three components D. None of these
17	The vector is space has:	A. One Component B. Two Compnents C. Three Components D. Non of these
18	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
19	Which of the following is scalar quantity?	A. Electric potential B. Velocity C. Momentum D. Force
20	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
21	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
22	Two forces each of the magnitude F act perpendicular to each other. The angle made by the resultant force with the horizontal will be:	A. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
23	All trigonometric functions (sine, cosine, tangent etc) are positive in:	A. 1st quadrant B. 2nd quadrant C. 3rd quadrant D. 4th quadrant
24	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
25	For measuring the angle between two vectors graphically, we join:	A. Tails of both the vectors B. Tail of one vector with the head of other C. Heads of both the vectors D. None of these
26	All trigonometric functions (since, cosine tangent etc.) are positive in:	A. 1st Quadrant B. 2nd Quadrant C. 3rd Quadrant

		C. 3rd Quadrant D. 4th Quadrant
27	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
28	If x-component of a vector is -3 N and y-component is 3 N, then angle of resultant vector will x-axis is:	A. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 315<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 135<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 225<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
29	An vector of 10 N makes an angle of 45° with x-axis. Angle between its rectangular components with be:	A. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 135<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. Zero
		A. 0<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 30<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-

30	The rectangular components of a vector are equal in magnitude when the vector makes and angle _____with their x-component:	origin: initial; background-clip: initial;">° C. 45<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
31	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
32	If a vector lies in second quadrant, than $B_x$and $B_y$are:	A. -,+ B. +,- C. +,+ D. -,-
33	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
34	The magnitude of resultant of three vectors is 3. Its x-component is one, y-component is two, then its z-component is:	A. 0 B. 1 C. 2 D. 3
35	Two forces of 10 N and 8 N are applied simultaneously to a body. the maximum value of their resultant is:	A. 2 N B. - 2 N C. 18 N D. 36 N
36	When the magnitude of two component vectors are equal to that of their resultant, then the angle between the components is:	A. 60<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° B. 90<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° C. 120<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. 150<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position: initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">°
37	When a vector is multiplied by a negative number, its direction:	A. Remains the same B. Changes C. Changes by 180<span style="font-size: 10.5pt; line-height: 107%; font-family: Arial, sans-serif; background-image: initial; background-position:

37	When a vector is multiplied by a negative number, its direction:	initial; background-size: initial; background-repeat: initial; background-attachment: initial; background-origin: initial; background-clip: initial;">° D. None of these
38	Torque is also called:	A. Momentum B. Linear inertia C. Moment of a force D. Mass
39	By convention, torques producing clockwise rotation are taken as:	A. Positive B. Nagative C. Zero D. None of these
40	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
41	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
42	The magnitude of the resultant of two forces may be increased by:	A. Increasing the angle between them B. Decreasing the angle between them C. Drawing a triangle to represent them D. None of these