

## ECAT Pre General Science Physics Online Test

Sr	Questions	Answers Choice
1	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
2	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
3	The vector in space has:	A. One component B. Two components C. Three components D. None of these
4	Which of the following is scalar quantity?	A. Electric potential B. Velocity C. Momentum D. Force
5	All trigonometric functions (sine, cosine, tangent etc) are positive in:	A. 1st quadrant B. 2nd quadrant C. 3rd quadrant D. 4th quadrant
6	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. $30^\circ$ B. $45^\circ$ C. $60^\circ$ D. $90^\circ$
7	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
8	Two forces each of 10 N act on a body, if the force are inclined at $30^\circ$ and $60^\circ$ 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
		A. Remains the same B. -

9	When a vector is multiplied by a negative number, its direction:	<p>B. Changes</p> <p>C. Changes by 180°</p> <p>D. None of these</p>
10	An vector of 10 N makes an angle of 45° with x-axis. Angle between its rectangular components with be:	<p>A. 45°</p> <p>B. 90°</p> <p>C. 135°</p> <p>D. Zero</p>
11	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>
12	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>
13	Two vectors to be combined have magnitudes of 60 N and 35 N. Pick the possible answer:	<p>A. 100 N</p> <p>B. 70 N</p> <p>C. 20 N</p> <p>D. Zero</p>
14	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>
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	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>
17	The rectangular components of a vector are equal in magnitude when the vector makes and angle with their x-component:	<p>A. 0°</p> <p>B. 30°</p> <p>C. 45°</p>



		D. Mass per length
26	Examples of physical quantities are:	A. Length B. Color C. Effect of music D. All of these
27	In the equation $E=mc^2$ value of c is?	A. 186000 miles per hour B. 186000 miles per sec C. $3 \times 10^8$ m/sec D. Both A and C E. Both B and C
28	From sand, we get a material used for construction of computer chips. That material is called:	A. Copper B. Lead C. Silicon D. Germanium
29	From sand, we get a material used for construction with the motion of bodies under the action of forces is called:	A. Optics B. Mechanics C. Thermodynamics D. Astrophysics
30	Electron is a particle whose mass is:	A. Greater than that of a proton B. Smaller than of a proton and greater than mass of neutron C. Smaller than that of proton or neutron D. Greater than that of an atom