ECAT Pre General Science Physics Chapter 2 Vectors and Equilibrium

Sr	Questions	Answers Choice
1	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
2	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°
3	The vector in space has:	A. One component B. Two components C. Three components D. None of these
4	All trigonometric functions (sine, cosine, tangent etc) are positive in:	A. 1st quadrant B. 2nd quadrant C. 3rd quadrant D. 4th quadrant
5	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
6	By convention, torques producing clockwise rotation are taken as:	A. Positive B. Nagative C. Zero D. None of these
7	When a vector is multiplied by a negative number, its direction:	A. Remains the same B. Changes C. Changes by 180° D. None of these

8	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
9	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
10	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
11	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. $45°$ B. $315°$ C. $135°$ D. $225°$
12	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
13	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. $150°$

14	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
15	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
16	An vector of 10 N makes an angle of 45° with x-axis. Angle between its rectangular components with be:	A. 45° B. 90° C. 135° D. Zero
17	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
18	Cosine of an angle is positive in:	A. 2nd quadrant B. 3rd quadrant C. 4th quadrant D. All of these
19	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
20	If a vector lies in second quadrant, than B_x and B_y are:	A. -,+ B. +,- C. +,+ D. -,-