

## ECAT (Pre-Eng) Mathematics Chapter 24 Vectors

Sr	Questions	Answers Choice
1	If the angle between two vectors with magnitude 6 and 2 is $60^\circ$ when their scalar product is	A. 12 B. 6 C. 3 D. 0
2	Question Image	
3	Question Image	
4	If a force $F = 2i + j + 3k$ acts at point $(1, -2, 2)$ of a body then the moment of $F$ about a pint lying on the line of action of the force is	A. 5 B. Equal to the moment of the force about origin C. 0 D. Cannot be found
5	Question Image	
6	Question Image	D. none of these
7	Question Image	A. $[0, 0, 0]$ B. $[1, 0, 0]$ C. $[0, 1, 0]$ D. $[0, 0, 1]$
8	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
9	Question Image	
10	Question Image	A. parallel vectors B. perpendicular vectors C. concurrent vectors D. collinear vectors
11	Question Image	
12	Question Image	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
13	Which of the following is a scalar.	A. electric field B. magnetic field C. weight D. mass
14	The unit vector along x-axis is	D. none of these
15	Question Image	A. A, B, C are coincident B. A, B, C are collinear C. Both A and B D. None of these
16	The zero vector is	A. $[0, 0, 0]$ B. $[1, 1, 1]$ C. $[0, 1, 0]$ D. $[0, 0, 1]$
17	Which of the following is a vector.	A. work B. time C. density D. electric field
18	Three points whose position vector $a, b, c$ are collinear	A. $axb + bxc + cxa = 0$ B. $a \cdot b + b \cdot c + c \cdot a = 0$ C. $a \cdot  a \times c  = 0$ D. $a + b + c = 0$
19	Which of the vectors have opposite direction?	A. distance

- B. temperature
  - C. energy
  - D. acceleration
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