

ECAT Pre General Science Mathematics Chapter 24 Vectors

Sr	Questions	Answers Choice
1	Question Image	
2	Which of the following is a scalar	A. weight B. force C. speed D. momentum
3	Question Image	C. 0 D. 1
4	If a, b, c are unit vectors then $ a + b ^2 + a - b ^2$	A. 4 B. $8ab$ C. $9\cos$ D. $4(a, b)$
5	The null vector is regarded to be perpendicular to	A. Every vector B. In some cases C. Both a b D. None
6	Question Image	
7	The unit vector along y-axis is	D. none of these
8	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
9	If $a + b + c = 0$ then which of the following is true	A. $a = b = c = 0$ B. $a, b = b, c = c, a$ C. $a \times b = b \times c = c \times a$ D. None
10	Question Image	
11	$3j \cdot k \times i$	A. 0 B. 1 C. 3 D. 9
12	Question Image	
13	Question Image	D. none of these
14	The angle between the vectors $3i + j - k$ and $2i - j + k$ is	
15	The physical quantity which possesses both magnitude and direction is called a	A. scalar B. vector C. constant D. none of these
16	Three points whose position vector a, b, c are collinear	A. $axb + bxc + cxa = 0$ B. $a, b + b, c + c, a = 0$ C. $a, a \times c = 0$ D. $a + b + c = 0$
17	If $\text{Proj}_u v = \text{Proj}_v u$, then	A. u and v are parallel B. $ u = v $ C. u and v are perpendicular D. One of u or v
18	Question Image	
19	Which of the following is not a unit vector	A. $[1, 1, 1]$ B. $[0, 1, 0]$ C. $[0, 0, 1]$ D. $[1, 0, 0]$
20	Question Image	