

## ECAT Mathematics Chapter 24 Vectors Online Test

Sr	Questions	Answers Choice
1	The ortho center of triangle whose vertices are (0,0)(3,0)(0,4) is	A. (0,0) B. (1,1) C. (2,2) D. (3,3)
2	Question Image	A. 0 B. 1 C. -1 D. None
3	If C is the mid point of AB and P is any point outside AB, then	
4	Question Image	A. A, B, C are coincident B. A, B, C are collinear C. Both A and B D. None of these
5	Question Image	
6	Question Image	
7	Question Image	
8	$3\mathbf{j} \cdot \mathbf{k} \times \mathbf{i}$	A. 0 B. 1 C. 3 D. 9
9	The angle between the vectors $3\mathbf{i} + \mathbf{j} - \mathbf{k}$ and $2\mathbf{i} - \mathbf{j} + \mathbf{k}$ is	
10	Question Image	A. A B. 0 C. Unit vector D. None
11	If the vector $2\mathbf{i} + 4\mathbf{j} - 7\mathbf{k}$ and $2\mathbf{i} + 6\mathbf{j} + x\mathbf{k}$ are perpendicular then $x = ?$	A. 0 B. 2 C. 4 D. 7
12	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
13	Question Image	A. 0 B. $90^\circ$ C. $180^\circ$ D. $360^\circ$
14	Question Image	
15	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
16	Question Image	A. $ \mathbf{m} ^2 +  \mathbf{n} ^2 = 0$ B. $ \mathbf{m} ^2 -  \mathbf{n} ^2 = 1$ C. $ \mathbf{m} ^2 +  \mathbf{n} ^2 = 1$ D. $ \mathbf{m} ^2 +  \mathbf{n} ^2 = 0$
17	Which of the vectors have opposite direction?	
18	Question Image	
19	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these

20	A vector of magnitude zero is called	A. Position vector <b>B. Null vector</b> C. Free vector D. None of these
21	Unit vector in the positive direction of x-axis is	
22	Question Image	A. Free vector B. Null vector <b>C. Unit vector</b> D. None of these
23	If the angle between two vectors with magnitude 2 and 15 is $30^\circ$ then their scalar product is	B. 15 C. 30
24	Question Image	A. 12 <b>B. 6</b> C. 8 D. none of these
25	Question Image	
26	Question Image	
27	Question Image	
28	Question Image	
29	Question Image	
30	Question Image	D. none of these