

ECAT (Pre-Eng) Mathematics Chapter 24 Vectors

Sr	Questions	Answers Choice
1	If 2 and 2 are x and y components of vector then its angle with x-axis is	A. 30° B. 45° C. 60° D. 90°
2	Which of the following is a vector.	A. work B. time C. density D. electric field
3	The number z so that the triangle with vertices A(1,-1,0),B(-2,2,1)and C(0,2,z) is a right triangle with right angle at vertex C	A. 1,2 B. -1,-2 C. 2,-1 D. -2,1
4	[i,j,k]	A. 0 B. 2 C. 1 D. -2
5	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
6	The null vector is regarded to be perpendicular to	A. Every vector B. In some cases C. Both a b D. None
7	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
8	If $uv = \text{Proj}_v u$ then	A. u and v are parallel B. v is a unit vector C. u is a unit vector D. Both b and c
9	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
10	Question Image <input style="width: 500px; height: 20px;" type="text"/>	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
11	Question Image <input style="width: 500px; height: 20px;" type="text"/>	D. none of these
12	Which of the following is a scalar	A. weight B. force C. speed D. momentum
13	The angle between the vectors $3i + j - k$ and $2i - j + k$ is	
14	Which of the following is a vector.	A. energy B. force C. work D. power
15	Question Image <input style="width: 500px; height: 20px;" type="text"/>	
16	If a force $F = 2i + j + 3k$ acts at point (1,-2,2) of a body then the moment of F about a point 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

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Question Image

- A. Free vector
- B. Null vector
- C. Unit vector
- D. None of these

18

Question Image

19

Question Image

- D. none of these

20

Question Image

- A. $[0, 0, 0]$
- B. $[1, 0, 0]$
- C. $[0, 1, 0]$
- D. $[0, 0, 1]$