

ECAT (Pre-Eng) Mathematics Chapter 24 Vectors

Sr	Questions	Answers Choice
1	Question Image	C. 1 D. 0
2	Projection of vector u along v is	A. $ v \cos\theta$ B. $ u \cos\theta$ C. $ v \sin\theta$ D. $ u \sin\theta$
3	If $\text{Proj}_{vu} = \text{Proj}_{uv}$, then	A. u and v are parallel B. $ u = v $ C. u and v are perpendicular D. One of u or v
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	Question Image	A. $ u ^2 + v ^2 = 0$ B. $ u ^2 - v ^2 = 1$ C. $ u ^2 + v ^2 = 1$ D. $ u ^2 + v ^2 = 0$
9	If the angle between two vectors with magnitude 6 and 2 is 60° when their scalar product is	A. 12 B. 6 C. 3 D. 0
10	The zero vector is	A. $[0, 0, 0]$ B. $[1, 1, 1]$ C. $[0, 1, 0]$ D. $[0, 0, 1]$
11	If $a^2 = b^2$ then	A. $a = b$ B. $a+b=1$ C. $ a+b =0$ D. None
12	If the angle between two vectors with magnitude 2 and 15 is 30° then their scalar product is	B. 15 C. 30
13	Question Image	
14	Question Image	D. none of these
15	Question Image	
16	Which of the following does not represent absolute value of a vector	A. magnitude B. length C. norm D. number
17	$[i, j, k]$	A. 0 B. 2 C. 1 D. -2
18	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
		A. $[0, 0, 0]$

19

Question Image

B. [1, 0, 0]

C. [0, 1, 0]

D. [0, 0, 1]

20

Question Image

D. none of these