ECAT Mathematics Chapter 24 Vectors Online Test

Sr	Questions	Answers Choice
1	Question Image	
2	Which of the following is a scalar.	A. force B. frequency C. weight D. acceleration
3	Question Image	A. perpendicular vectors B. parallel vectors C. concurrent vectors D. none of these
4	Question Image	A. 0 B. 1
5	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]
6	Question Image	
7	The zero vector is regarded to be parallel to	A. Every vector B. Is some cases C. Both a,b D. None
8	If θ be angle between u,v and u,v determine the sides of a triangle then the third side opposite to angle θ has length	A. |u+v| B. |u|+|v| C. |u-v| D. |u|-|v|
9	Question Image	
10	Question Image	C. 0 D. 1
11	Question Image	
12	Which of the following us a scalar	A. displacement B. velocity C. acceleration D. density
13	Question Image	D. none of these
14	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
15	Question Image	D. none of these
16	If uv= Projuv then	A. Uandvare parallel B. vis a unit vector C. Uis a unit vector D. Both b and c
17	Question Image	
18	If a2 = b2 then	A. a = b B. a+b= 1 C. |a+b| =0 D. None
19	Which of the following represents a vector	D. (x, y)
20	Question Image	A. 1 B. 0
21	If |a x b|2 + (a,b)2 = _____	A. |a|2 + |b|2 B. |a|2- |b|2 C. |a|2|b|2

		D. None
22	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
23	Question Image	
24	Question Image	
25	If the vector 2i + 4j - 7k and 2i + 6j + xk are perpendicular then x = ?	A. 0 B. 2 C. 4 D. 7
26	Question Image	A. A,. B, C are coincident B. A, B, C are collinear C. Both A and B D. None of these
27	Question Image	A. 12 B. 6 C. 8 D. none of these
28	Question Image	
29	Which of the following is a scalar.	A. electric field B. magnetic field C. weight D. mass
30	If |αi + (α+1)j +2k| =3 then value of α is	A. 1,2 B. -1,-2 C. 1,-2 D. -1,2
31	For two vector a and b, a+b = _____	A. a b B. b+a C. b-a D. None
32	Question Image	
33	Question Image	
34	If the angle between two vectors with magnitude 2 and 15 is 30°then their scalar product is	B. 15 C. 30
35	Question Image	
36	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
37	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°
38	If a,b,c are three non-coplanar vector then [a +b,b +c,c +a] = _____	A. [a.b.c] B. 2[a,b,c] C. [abc]-2 D. 2[abc]2
39	Question Image	A. Free vector B. Null vector C. Unit vector D. None of these
40	The physical quantity which can be specified by a number alongwith unit is called a	A. scalar B. vector C. constant D. none of these
41	Question Image	D. none of these

42	Question Image	
43	The position vector of any point in space is	
44	Question Image	C. 0 D. 1
45	Question Image	D. none of these
46	The angle between the vectors 3i + j - k and 2i - j + k is	
47	If a,b,c are unit vectors then |a + b|2 +|a - b|2	A. 4 B. 8ab C. 9cos D. 4(a,b)
48	Question Image	
49	Question Image	A. 0 B. 90° C. 180° D. 360°
50	Question Image	D. none of these
51	Which of the following does not represent absolute value of a vector	A. magnitude B. length C. norm D. number
52	[i,j,k]	A. 0 B. 2 C. 1 D. -2
53	The zero vector is	A. [0, 0, 0] B. [1, 1, 1] C. [0, 1, 0] D. [0, 0, 1]
54	Three points whose position vector a,b,c are collinear	A. axb +b x c+ c x a = 0 B. a,b +b,c +c,a =0 C. a,|a xc| =0 D. a+b+c =0
55	Question Image	D. none of these
56	Question Image	
57	Which of the vectors have opposite direction?	
58	Question Image	
59	Question Image	A. 0 B. 1 C. -1 D. None
60	The unit vector along x-axis is	D. none of these
61	Question Image	
62	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
63	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
64	Which of the following is a vector.	A. distance B. temperature C. energy D. acceleration
65	Question Image	
66	If a,b c are sides of a triangle taken in order then a x b =	A. b x c B. b x a C. cxa D. Both a & b
67	The unit vector along z-axis is	D. none of these

68	Question Image	C. 1 D. 0
69	3j . k x i	A. 0 B. 1 C. 3 D. 9
70	Unit vector in the positive direction of x-axis is	
71	Question Image	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
72	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
73	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 xb=b xc =c xa D. None
74	If C is the mid point of AB and P is any point outside AB, then	
75	Question Image	D. none of these
76	Question Image	A. 25 B. 16 C. 5 D. 0
77	The position vector of the point P(a, b, c) is	
78	Question Image	
79	The unit vector along y-axis is	D. none of these
80	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
81	Question Image	
82	Question Image	A. a₁+ a₂ B. a²₁+ a²₂
83	Question Image	
84	Question Image	
85	Question Image	
86	Projection of vector u along v is	A. |v| cosθ B. |u| cosθ C. |v| sinθ D. |u| sinθ
87	The position vector of a point (x, y) in xy plane is	D. none of these
88	Question Image	D. none of these
89	Question Image	A. l²+ m²+ n²= 0 B. l²- m²+ n²= 1 C. l²+ m²+ n²= 1 D. l²+ m²- n²= 0
90	Question Image	
91	Question Image	D. none of these
92	The area of the rhombus whose vertices are A(0,0),B(2,1),C(3,3),D(1,2) is	A. 36 square units B. 3 square units C. 6 square units D. 18 square units
93	Which of the following is a vector	A. energy B. force

	Which of the following is a vector?	C. work D. power
94	Question Image	
95	Question Image	A. parallel vectors B. perpendicular vectors C. concurrent vectors D. collinear vectors
96	Question Image	
97	Question Image	D. none of these
98	u,v,wand u x (v.w) are	A. Equal B. Parallel C. Additive immense of each other D. Meaningless
99	If Projvu = Projuv, then	A. Uand vare parallel B. |u|=|v| C. Uandvre perpendicular D. One ofuorv
100	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
101	Question Image	D. none of these
102	Question Image	D. none of these
103	Question Image	
104	Question Image	
105	Which of the following is a vector	A. length B. momentum C. volume D. speed
106	Question Image	
107	Question Image	
108	Question Image	D. none of these
109	Question Image	A. 0 B. 1
110	Question Image	A. A B. 0 C. Unit vector D. None
111	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
112	The null vector is regarded to be perpendicular to	A. Every vector B. In some cases C. Both a b D. None
113	Which of the following is a vector.	A. work B. time C. density D. electric field
114	Question Image	
115	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)
116	A vector with magnitude one is called	A. constant vector B. unit vector C. zero vector D. null vector
117	The physical quantity which possesses both magnitude and direction is called a	A. scalar B. vector C. constant

		D. none of these
118	Which of the following is a scalar	A. weight B. force C. speed D. momentum
119	A vector of magnitude zero is called	A. Position vector B. Null vector C. Free vector D. None of these
120	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
121	Question Image	D. none of these