ECAT Pre General Science Mathematics Chapter 24 Vectors Online Test

Sr	Questions	Answers Choice
1	Question Image	
2	The unit vector along x-axis is	D. none of these
3	Question Image	
4	Question Image	A. a₁+ a₂ B. a²₁+ a²₂
5	Question Image	A. 0 B. 1 C. -1 D. None
6	Question Image	
7	Question Image	D. none of these
8	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
9	Question Image	
10	The position vector of the point P(a, b, c) is	
11	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
12	The null vector is regarded to be perpendicular to	A. Every vector B. In some cases C. Both a b D. None
13	Question Image	D. none of these
14	Which of the following is a vector.	A. work B. time C. density D. electric field
15	Question Image	
16	Question Image	A. 25 B. 16 C. 5 D. 0
17	Question Image	D. none of these
18	Question Image	D. none of these
19	Question Image	
20	If the angle between two vectors with magnitude 2 and 15 is 30°then their scalar product is	B. 15 C. 30
21	Question Image	
22	Question Image	
23	Question Image	D. none of these
24	Question Image	
25	Question Image	A. Free vector B. Null vector C. Unit vector

		D. None of these
26	3j . k x i	A. 0 B. 1 C. 3 D. 9
27	The position vector of a point (x, y) in xy plane is	D. none of these
28	Question Image	
29	If C is the mid point of AB and P is any point outside AB, then	
30	Question Image	A. perpendicular vectors B. parallel vectors C. concurrent vectors D. none of these
31	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
32	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
33	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)
34	If |αi + (α+1)j +2k| =3 then value of α is	A. 1,2 B. -1,-2 C. 1,-2 D. -1,2
35	The physical quantity which possesses both magnitude and direction is called a	A. scalar B. vector C. constant D. none of these
36	If a,b,c are unit vectors then |a + b|2 +|a - b|2	A. 4 B. 8ab C. 9cos D. 4(a,b)
37	Question Image	D. none of these
38	Question Image	
39	Question Image	D. none of these
40	Question Image	
41	Question Image	A. perpendicular vectors B. concurrent vectors C. parallel vectors D. none of these
42	Which of the following us a scalar	A. displacement B. velocity C. acceleration D. density
43	Which of the following is a scalar.	A. force B. frequency C. weight D. acceleration
44	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
45	Question Image	D. none of these
46	Question Image	D. none of these
47	Which of the following is a vector.	A. energy B. force C. work D. power
48	u,v,wand u x (v x w) are	A. Equal B. Parallel

48	u,v,wand u x (v.w) are	C. Additive immense of each other D. Meaningless
49	Question Image	
50	Which of the following does not represent absolute value of a vector	A. magnitude B. length C. norm D. number
51	Question Image	A. 0 B. 1
52	Question Image	D. none of these
53	Question Image	
54	Which of the following represents a vector	D. (x, y)
55	Question Image	C. 0 D. 1
56	The angle between the vectors 3i + j - k and 2i - j + k is	
57	For two vector a and b, a+b = _____	A. a b B. b+a C. b-a D. None
58	Question Image	D. none of these
59	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
60	Question Image	
61	Question Image	A. parallel vectors B. perpendicular vectors C. concurrent vectors D. collinear vectors
62	Question Image	
63	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
64	Question Image	A. 12 B. 6 C. 8 D. none of these
65	Question Image	
66	Question Image	A. 0 B. 1
67	[i,j,k]	A. 0 B. 2 C. 1 D. -2
68	Question Image	
69	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
70	Question Image	
71	The zero vector is	A. [0, 0, 0] B. [1, 1, 1] C. [0, 1, 0] D. [0, 0, 1]
72	Question Image	D. none of these
73	Which of the vectors have opposite direction?	
74	The position vector of any point in space is	

75	If the vector 2i + 4j - 7k and 2i + 6j + xk are perpendicular then x = ?	A. 0 B. 2 C. 4 D. 7
76	Question Image	D. none of these
77	Question Image	D. none of these
78	Question Image	
79	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|
80	Question Image	
81	If uv= Projuv then	A. Uandvare parallel B. vis a unit vector C. Uis a unit vector D. Both b and c
82	If Projvu = Projuv, then	A. Uand vare parallel B. |u|=|v| C. Uandvre perpendicular D. One ofuorv
83	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
84	Which of the following is a vector	A. length B. momentum C. volume D. speed
85	Question Image	A. 1 B. 0
86	A vector of magnitude zero is called	A. Position vector B. Null vector C. Free vector D. None of these
87	Unit vector in the positive direction of x-axis is	
88	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
89	Question Image	A. direction ratios B. direction cosines C. direction angles D. none of these
90	Question Image	C. 0 D. 1
91	Question Image	A. [0, 0, 0] B. [1, 0, 0] C. [0, 1, 0] D. [0, 0, 1]
92	Question Image	
93	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
94	Question Image	
95	A vector with magnitude one is called	A. constant vector B. unit vector C. zero vector D. null vector
96	The magnitude of a vector can never be	A. Zero B. Negative C. Positive D. None of these
97	Which of the following is a scalar	A. weight B. force

	Which of the following is a scalar	C. speed D. momentum
98	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°
99	Question Image	
100	Projection of vector u along v is	A. |v| cosθ B. |u| cosθ C. |v| sinθ D. |u| sinθ
101	Question Image	
102	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
103	Which of the following is a scalar.	A. electric field B. magnetic field C. weight D. mass
104	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]
105	The unit vector along y-axis is	D. none of these
106	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
107	Question Image	A. l²+ m²+ n²= 0 B. l²- m²+ n²= 1 C. l²+ m²+ n²= 1 D. l²+ m²- n²= 0
108	Question Image	C. 1 D. 0
109	Question Image	
110	The direction cosines of y-axis are	A. 1, 0, 0 B. 0, 1, 0 C. 0, 0, 1 D. 1, 1, 1
111	Question Image	
112	If a2 = b2 then	A. a = b B. a+b= 1 C. |a+b| =0 D. None
113	Which of the following is a vector.	A. distance B. temperature C. energy D. acceleration
114	Question Image	A. A,. B, C are coincident B. A, B, C are collinear C. Both A and B D. None of these
115	Question Image	
116	The unit vector along z-axis is	D. none of these
		A. A

117	Question Image	B. 0 C. Unit vector D. None
118	Question Image	A. 0 B. 90° C. 180° D. 360°
119	Question Image	
120	Question Image	
121	The zero vector is regarded to be parallel to	A. Every vector B. Is some cases C. Both a,b D. None