ECAT Mathematics Chapter 23 Conic Section

Sr	Questions	Answers Choice
1	The modulus of a vector i-i+ k is:	A. √3 B. 1 C. √2 D. ∞
2	If u = xi + yj, then|u|	A. x² + y² B. (x² +y²)² C. x²-y² D. √(x²+y²)
3	If a≠ , b≠ 0 and|a=b|=|a-b|,then vectors a and b are:	A. Parallel to each other B. Perpendicular to each other C. Inclined at 60^o D. neither parallel nor perpendicular
4	The angle between the vectors u =2i - i + k and v = -i +i is:	A. 3π/2 B. 2π/3 C. 5π/6 D. π/3
5	a _____quantity is one that possesses both magnitude and direction.	A. Scalar B. Vector C. Segment D. None of these
6	The vector i = [1,0] is called unit vector along:	A. x-axis B. y - axis C. z- axis D. Botha a and y-axis
7	If a = [1,4,3] and B= [2,-1,5] athen the mid point M of AB is:	A. [1,1,1.5] B. [2,2,1.5] C. [1.5,1.5,4] D. None of these
8	If u =2i +pi + 5k and v = 3i + i +pk are perpendicular , then p=	A. 1 B. 2 C. -1 D. -3
9	The modulus of 12-5i is:	A. 7 B. 13 C. √7 D. 119
10	Vector additon is:	A. Commutative B. Associative C. Commutative and Associative D. None of these
11	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
12	If the sum of two unit vectors is a unit vector the the magnitude of their difference is	A. √2 B. √3 C. 1 D. None of these
13	If the angle between two vectors u and v is 0 orπ, then the vectors u and v are:	A. Orthogonal B. Collinear C. Perpendicular D. None of these
14	The angle between the vectors u = [-3 , 5] and v = [6 , -2] is:	A. π/2 B. -3π/2 C. π D. None of these
15	If G is the centroid of the triangle, then GA +GB+GC=	A. 0 B. 1 C. -1 D. 3

16	If m and n be two scalars, then (m+n) g =	A. 0 B. m+n<img width="9" height="20" src="file:///C:/Users/Softsol/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" v:shapes="_x0000_i1025"> <!--[endif]--><o:p></o:p> C. m_a+n_a D. ma - m_a <!--[endif]--><o:p></o:p>
17	The positive real number which is the measure of the length of a vector is called the	A. Unit vector B. Modulus C. Inverse D. None of these
18	If u = 2ai + j - k and v = i +aj + 4k are perpendicular then a =	A. 4 B. 1/2 C. 3 D. 4/3
19	The magnitude of vector a=i-3j+5k is:	A. 3 B. √35 C. √17 D. √35
20	If a = 2i +2j, b= 3i -j and c=4i +5j, the 3b -a-2c =	A. -i -15j B. i-15j C. i-3j D. None of these