ECAT (Pre-Eng) Mathematics MCQ's Test For Chapter 23

Sr	Questions	Answers Choice
1	If a,b = 0 then	A. a |b B. a||b C. a = b D. None
2	If a=5j + 2j,b=2i -3j, then|a+2b|=	A. √21 B. √97 C. √39 D. None of these
3	O (0,0)is called:	A. Position vector B. Free vector C. Unite vector D. Null vector
4	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
5	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
6	If u =2i +pi + 5k and v = 3i + i +pk are perpendicular , then p=	A. 1 B. 2 C. -1 D. -3
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 = 2ai +i - k and v = i +ai + 4k are perpendicular then a =	A. 4 B. 1/2 C. 3 D. 4/3
9	If aand bare two vectors then a+b =	A. b + a B. b - a C. ab D. a^ b
10	The modulus of a vector i-i+ k is:	A. √3 B. 1 C. √2 D. ∞
11	If c = 2i+j+k and d= -1 + 4j +2k, then [c-d]=	A. √7 B. √41 C. √19 D. √(2&7)
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	Vector additon is:	A. Commutative B. Associative C. Commutative and Associative D. None of these
14	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
15	If G is the centroid of the triangle, then GA +GB+GC=	A. 0 B. 1 C. -1 D. 3

16	If u = xi + yj, then|u|	A. x² + y² B. (x² +y²) ² C. x²-y² D. √(x²+y²)
17	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
18	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
19	a _____quantity is one that possesses both magnitude and direction.	A. Scalar B. Vector C. Segment D. None of these
20	If u =[3,-4],then modulus of uis:	A. 5 B. 5i C. -5 D. √5