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

Sr	Questions	Answers Choice
1	O (0,0)is called:	A. Position vector B. Free vector C. Unite vector D. Null vector
2	If|a| =|b|=|a + b|=1, then|a+ b| = 5, then|a-b| =	A. 4 B. 6 C. 5 D. 3
3	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
4	If a=5j + 2j,b=2i -3j, then|a+2b|=	A. √21 B. √97 C. √39 D. None of these
5	a _____quantity is one that possesses both magnitude and direction.	A. Scalar B. Vector C. Segment D. None of these
6	If a,b = 0 then	A. a |b B. a||b C. a = b D. None
7	If u = xi + yj, then|u|	A. x² + y² B. (x² +y²) ² C. x²-y² D. √(x²+y²)
8	If u =[3,-4],then modulus of uis:	A. 5 B. 5i C. -5 D. √5
9	If G is the centroid of the triangle, then GA +GB+GC=	A. 0 B. 1 C. -1 D. 3
10	The vector k = [0,0,1] is called unit vector along:	A. x -axis B. y - axis C. z- axis D. None of these
11	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
12	Vector additon is:	A. Commutative B. Associative C. Commutative and Associative D. None of these
13	The magnitude of vector a=i-3j+5k is:	A. 3 B. √35 C. √17 D. √35
14	The modulus of a vector i-i+ k is:	A. √3 B. 1 C. √2 D. ∞
15	I f a =5i + 2j, then|a| =	A. √13 B. √7 C. 1/√13

		D. √29
16	The modulus of 12-5i is:	A. 7 B. 13 C. √7 D. 119
17	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
18	If u = 2a$\underline{i}$ + $\underline{j}$ - $\underline{k}$ and $\underline{v}$ = $\underline{i}$ +a$\underline{i}$ + 4$\underline{k}$ are perpendicular then a =	A. 4 B. 1/2 C. 3 D. 4/3
19	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
20	The angle between the vectors $\underline{u}$ = [-3 , 5] and $\underline{v}$ = [6 , -2] is:	A. π/2 B. -3π/2 C. π D. None of these