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 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
3	If|a| =|b| = |a+b|=1, then|a-b| is equal to:	A. 1 B. √3 C. √2 D. 7
4	The magnitude of vector a=i-3j+5k is:	A. 3 B. √35 C. √17 D. √35
5	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
6	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
7	If u =[3,-4],then modulus of uis:	A. 5 B. 5i C. -5 D. √5
8	The modulus of a vector i-i+ k is:	A. √3 B. 1 C. √2 D. ∞
9	Vector additon is:	A. Commutative B. Associative C. Commutative and Associative D. None of these
10	The modulus of 12-5i is:	A. 7 B. 13 C. √7 D. 119
11	If a=5j + 2j,b=2i -3j, then|a+2b|=	A. √21 B. √97 C. √39 D. None of these
12	Vector i =	A. [1,0] B. [0,1,0] C. [0,0,1] D. None of these
13	I f a =5i + 2j, then|a| =	A. √13 B. √7 C. 1/√13 D. √29
14	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
15	If c = 2i+j+k and d= -1 + 4j +2k, then [c-d]=	A. √7 B. √41 C. √19 D. √(2&7)

16	If u = xi + yj, then|u|	A. x² + y² B. (x² +y²) ² C. x²-y² D. √(x²+y²)
17	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
18	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
19	If u =2i +pi + 5k and v = 3i + i +pk are perpendicular , then p=	A. 1 B. 2 C. -1 D. -3
20	If|a| =|b|=|a + b|=1, then|a+ b| = 5, then|a-b| =	A. 4 B. 6 C. 5 D. 3