Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	If a=5j + 2j,b=2i -3j, then|a+2b|=	A. √21 B. √97 C. √39 D. None of these
2	The value of k (k > 0) for which the equation x^2+ kx + 64 = 0 and x^2- 8x + k = 0 both will have real roots is	A. 8 B. -16 C. -64 D. 16
3	The range of the tangent function is	A. all real numbers B. -1 ≤ x ≥ 1 C. natural number D. z⁺
4	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
5	A function from X to X is denoted as	B. f : X to Y D. f : Y to Y
6	The value of $\sin^2 20°$ + $\sin^2 70°$ is equal to	A. 1 B. 2 C. -1 D. 1/2
7	A circle which touches one side of a triangle externally and the other two sides produced is called _____	A. In-circle B. Circum cirle C. Escribed circle D. None of these
8	A square is inscribed in the circle x^2+ y^2- 2x + 4y + 3 =0. Its sides are parallel to the co-ordinate axes. Then one vertex of the square is	
9	A fixed point which lies on the axis of the cone is called its:	A. axis B. apex C. plane D. diameter
10	If ax^2+ bx + x = 0 is satisfied by every value of x, then	A. b = 0, c = 0 B. c = 0 C. b = 0 D. a = b = c = 0
11	If A = [a_{ij}] is (m x n) matrix, then transpose of A is of the order	A. m x m B. m x n C. n x n D. n x m
12	Four cards are drawn at random from a pack of 52 playing cards. The probability of getting all the four cars of the same suit is	A. 44/4165 B. 22/4165 C. 11/4165 D. None of these
13	Question Image	D. none of these
14	Question Image	
15	The 7th term of the A.P 7,11,15,is	A. 24 B. 31 C. 26 D. 23
16	The number of terms in the expansion of $(a + x)^{12}$is	A. 13 B. 12 C. 11 D. 10
17	Question Image	A. a^x B. a^xln a
		A. Uand vare parallel

18	If Projvu = Projuv, then	B. |u|=|v| C. Uandvre perpendicular D. One ofuorv
19	Question Image	
20	If A is a skew-symmetric matrix of order n and P, any square matrix of order n.prove that P' AP is	A. Skew-symmetric B. Symmetric C. Null D. Diagonal