Mathematics General Science Test Medium Mode

Sr	Questions	Answers Choice
1	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
2	Two cards are drawn at random from a well shuffled pack of cards. The probability that at least one of them is a face card is	A. 3 / 17 B. 5 / 17 C. 7 / 17 D. 9 / 17
3	Given X,Y are any two sets such that number of elements in set X = 28, number of elements in set Y = 28, and number of elements in set X∪Y = 54, then number of elements in set X∩Y =	A. 4 B. 3 C. 2 D. 1
4	If the cutting plane is parallel to the axis of the cone and intersects both of its nappes, then the curve of intersection is:	A. an ellipse B. a circle C. a parabols D. a hyperbola
5	The conic is a parabola if	A. e < 1 B. e > 1 C. e = 1 D. None of these
6	The minimum value of the quadratic function f(x) = 5 x 2-11,is	A. -11 B. 6 C. -7 D. 7
7	Range of sec$\theta$is	A. Z - {x | -1 < x < 1} B. W - {x | -1 < x < 1} C. R - {x | -1 < x < 1} D. R
8	∀x,y∈ R and x < 0, y < 0, which one is true	A. xy < o B. xy = o C. xy > o D. None of these
9	Question Image	
10	For Cosine Rule of any triangle ABC, $b^2$is equal to	A. a² - c² + 2ab cos A B. a³ + c³ - 3ab cos A C. a² + c² - 2ac cos B D. a² - c² 4bc cos A

11	Question Image	
12	Question Image	A. 0 B. 1 C. 8 D. ∞
13	sin5θ+sin3θ = _____;	A. 2sin 4θ cosθ B. 2cos 4θ sinθ C. 2cos 4θ cosθ D. -2sin 4θ sinθ
14	The corner point of the boundary lines, x- 2x x+2y=10 is:	A. (8,1) B. (1,8) C. (6,10) D. (3,5)
15	If a +b +c =0 then which of the following is true	A. a =b =c =0 B. a,b =b,c =c,a C. a xb=b xc =c xa D. None
16	Five engineering, four mathematics, two chemistry books are placed on a table at random.The probability that the books of each kind are all together is	
17	1+3x+6x2 +10x3 +....=	A. (1+x)-3 B. (1-x)-2 C. (1-x)-3 D. (1+x)-2
18	Multiplicative inverse of "1" is	A. 0 B. ±1 C. 1 D. {0,1}
19	The roots of ax2+bx+c=0 are	A. Rational ⇔ b2 -4 ac ≥ 0 B. Irrational ⇔ b2-4 ac > 0 C. Real ⇔ b2-4 ac ≠ 0 D. Rational⇔ b2-4 ac = 0
20	(A ∩ B)c =	A. A∩ B B. (A ∪ B)c C. Ac∪Bc D. Φ