GAT Subject Mathematics MCQ's Test

Sr	Questions	Answers Choice
1	∫cot (ax + b) dx =	A. 1/a log |sin (ax + b)| +c B. 1/a log |cos ax + b) C. 1/b |sin (ax + b)| D. 1/a log |sin (bx + a)|
2	Two matrices A and B are conformable for multiplication (AB) if and only if	A. Addition B. Multiplication C. Division D. Subtraction
3	Area of ΔABC=	A. ab sin α B. 1/2 ab sin α C. 1/2 ac Sin γ D. 1/2 ac Sin β
4	A function F(x) is called even if	A. F(x) = F(-x) B. F(x) = F(-x) C. F(x) = -F(x) D. 2F(x) = 0
5	The multiplicative inverse of x such that x = 0 is	A. -x B. does not exist C. 1/x D. 0
6	An m x n matrix is said to be rectangular if	A. Forms a group w.r.t. addition B. Non commutative group w.r.t. multiplication C. Forms a group w.r.t. multiplication D. Doesn't form a group
7	If f (x) = x/x^2- 4 then which is not included in the domain of f(x)	A. 0 B. -2 C. 1 D. 4
8	The two consecutive positive integers whose product is 56 are	A. 7, 8 B. 14, 4 C. 28, 2 D. 56, 1
9	F(x) = xx decreases in the interval	A. (0,e) B. (0.1) C. (-∞.0) D. None
10	Two natural numbers whose sum is 25 and difference is 5, are	A. 25, 20 B. 20, 10 C. 20, 5 D. 15, 10
11	The line through the center and perpendicular to the transverse axis is called the	A. Major axis B. Minor axis C. Focal axis D. Conjugate axis
12	If 1 + Cos x = 0 then x =	A. π +2n π B. π + nπ C. π - nπ D. π/2
13	If y = sin(ax + b) then fourth derivative of y with respect to x=	A. a⁴ cos (ax + b) B. a⁴ sin (ax + b) C. -a⁴ sin(ax +b) D. a4 tan (ax + b)
14	For any set X, X∪X is	A. 15 B. 15i C. -15i D. -15
15	What is the domain of y = Cot^{-1} x?	A. Set of irrational numbers only B. Set of all real numbers C. Set of integers only

		D. Set of complex numbers only
16	If the angle between two vectors with magnitude 8 and 2 is 60° then their scalar product is	A. 12 B. 8 C. 16 D. 1
17	There are 30 Red, 20 Green and some Blue bells in a bag if the probability of finding a Red ball is 1/3,how many are red balls in the bag	A. 120 B. 20 C. 40 D. 90
18	In the triangle Δ ABC, where C is the right angle Tan A + Tan B=	A. A +B B. C² /AB C. A²/BC D. B²/AC
19	Given eight points in a plane no three of which are collinear how many lines do the points determine?	A. 16 B. 64 C. 28 D. 36
20	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None