GAT Subject Mathematics MCQ's Test

Sr	Questions	Answers Choice
1	The number of diagonals of a six sided figure are	A. 9 B. 6 C. 12 D. 3
2	The line joining (1,3) to (a,b) has unit gradient then	A. a-b =-2 B. a+b = 0 C. A-b =5 D. 2a + 3b =1
3	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
4	The equation of two polynomials P(x)/Q(x) where Q(x) ≠ 0 with no common factor is called	A. 12 B. 1 C. 10 D. -10
5	Period is Tan x/5 is	A. 5π B. 4π C. 2π D. π/5
6	The general solution of the differential equation dy/dx = log x is	A. Y = -x log x- x +c B. Y = x log x + x² C. Y = x log x -x +c D. Y= 2x log x + 2x +c
7	d/dx (√x) =	A. 2√x B. 1/√x C. 1/2√x D. None of these
8	If Cosα = 3/5, Cosβ = 5/13, then	A. Cos(α +β) =33/65 B. Sin(α +β) =56/65 C. sin²(α +β/2) =1/65 D. Cos(α +β) =63/65
9	If in isosceles right angled triangle one side is a then hypotenuse is	A. a√2 B. a/2 C. a D. Cannot be determined by given
10	If x lies in {0, 2π} and Cosec x = 2 then x =	A. π/ 6 and 5π/6 B. π +2nπ C. nπ D. 2π/3 and π/3
11	The center of a circle of radius 10 is on the origin which of the following points lies with in the circle	A. (10,0) B. (8,8) C. (8,4) D. (0,10)
12	What is the period of Cot x?	A. 2π B. π C. π/2 D. 4π
13	The two different parts of the hyperbola are called is	A. Vertices B. Directrices C. Nappes D. Branches
14	Which of the following is the subset of all sets ?	A. A ≠ C B. B = C C. A = B D. A ≠ B
15	The nth term of A,P:1,5,9,15.....is given by	A. 4n - 3 B. 4n + 1 C. 3n -4 D. 4n +3

16	What is the conjugate of -7 -2i ?	A. -7 + 2i B. 7 + 2i C. 7-2i D. √53
17	If a line passes through origin then the equation of the line is	A. y = m/x B. y = mx C. x = my D. None
18	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
19	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
20	If $y = (ax)^m + b^m$, then dy/dx equals	A. m (ax) ^m x^{m-1} B. ma^m x^{m-1} C. m a^m x^{m-1} D. m a^m x^{m-2}