NAT I General Science Mathematics

Sr	Questions	Answers Choice
1	If α and β be irrational roots of a quadratic equation, then	A. α = b/a and β = ca B. α = a/b and β = -c/a C. α² + β² = 1 D. α = -b/a and β= c/a
2	The parametric equation of a curve are x = t^2, y = t^2 then	A. dy/dx =3t/2 B. dy/dx =t⁵ C. dy/dx =5t⁴ D. None
3	8 > t then	A. (s -t) ²>(t -8) ² B. (s -t) ²<(t -8) ² C. (s -t) ²=(t -8) ² D. None
4	Write the first four term of the arithmetic sequence if a_1 = 5 and other three consecutive terms are 23,26,29	A. 18 years B. 36 years C. 8 years D. 16 years
5	Which of the following is the solution of $Cot^2x = 1/\sqrt{3}$	A. π/5 B. π/3 C. π/7 D. π/9
6	The gradient of the line joining (1,4) and (-2,5) is	A. 3/8 B. -2 2/3 C. -1/3 D. 2
7	Domain of Cosecθ is	A. is R but θ= nπ B. is R but θ ≠ nπ C. is R but θ ≠ 2nπ D. is R but θ ≠ nπ/2
8	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
9	The perpendicular bisector of any chord of a circle	A. Passes through the center of the circle B. Does not pass through the center of the circle C. May or may not pass through the center of the circle D. None of these
10	Ab > 0 and a > 0 then	A. a > b B. a < b C. a = b D. None
11	Which is an explicit function	A. y = x² +2x -1 B. x² +xy +y² =2 C. xy² -y +9/xy =1 D. All are
12	The total cost of 2 apples and 3 oranges is $1.70,which of the following is true	A. The cost of one apple B. The cost of one orange C. Both have equal cost per item D. Cost of each single item can not be determined
13	Domain of Y = csc x is	A. R - nπ, n ε I B. R C. R -nπ/2,nεI D. All negative Integers
		A. nπ/2

14	If Cosθ =0, Then θ=	B. (2n + 1)π/2 C. (2n - 1)π/2 D. (n ±1)π/2
15	The mid point of the line joining (=1,-3) to(3,-5) is	A. (1, 1) B. (1,-1) C. (2, -8) D. (1, -4)
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	x^2 +2x -25 = 0 is	A. 1 B. 2 C. 3 D. 4
18	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
19	The equation of the circle with center origin and radius 2√2 is	A. x² + y² = 2√2 B. x² + y² = 8 C. x² - y² = 2√2 D. x² - y² = 8
20	Which of the following is solution of Tan^2 x = 1/3	A. 7π/6 B. 5π/6 C. π/6 D. All