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	Sin^{-1} (-x) =	A. Cos⁻¹ 1/x B. -Sin⁻¹ X C. 1/sin-1x D. Sin⁻¹ 1/x
3	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
4	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
5	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
6	If sin θ= 3/5 Cos θ=	A. 1/2 B. 3/5 C. 4/5 D. 1
7	Cot 360° =_____.	A. Undefined B. 0.707 C. -0.5 D. 0
8	Given X, Y are any two sets such that number of elements in 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. -7 + 2i B. 7 + 2i C. 7-2i D. √53
9	Find the geometric mean between 4 and 16	A. 7, 8 B. 14, 4 C. 28, 2 D. 56, 1
10	Which of the following is not defined?	A. Arcsin 1/9 B. ArcCos (-4/3) C. Arctan 11/12 D. Arccot (-4)
11	The sum of the ages of Nazish and his son is 56 years. Eight years ago. Nazish was 3 time as old as his son. How old is the son now?	A. m = n B. m ≠ n C. mn = 1 D. mn = 0
12	If 2 Sin x Cos 2 x = Sin x then?	A. X = nπ+ π/6 B. X = nπ +π/3 C. X = nπ +1 D. X = nπ + π/2
13	The Domain of f(x) = log x is	A. [0,∞] B. (0, ∞) C. [0,∞[D. [∞ ,∞]
14	If the sum of the roots of $(a + 1)x^2 + (2a + 3)x + (3a + 4) = 0$ is -1, then product of the roots is	A. Commutative law w.r.t multiplication B. Associative law w.r.t addition C. Distributive law w.r.t addition D. Multiplication of a scalar with the matrix
15	If C^n_r. P^n_r = 24:1 then r = ?	A. 1 B. 2

		C. 3 D. 4
16	If sinθ = 1 then θ =	A. 2nπ +π/2 B. 2nπ C. 2π +n D. Nπ +π/2
17	The number of ways in which we can courier 5 packets to 10 cities is	A. 2 x 5^o B. 5¹⁰ C. 10⁵ D. 2¹⁰
18	There are 30 Red balls and 25 Green balls in a bag of a ball is drawn from the bag randomly what is the probability that a Blue ball comes out?	A. 1 B. 0.5 C. 0 D. None
19	∫1/ax +b dx =	A. 1/a log |ax + b| +c B. Log |ax + b| +c C. 1/b log |ax +b| +c D. 1/x log |ax + b| +c
20	If A and B are matrices of same order than (A + B)(A + B)=	A. addition B. multiplication C. subtraction D. None