NAT I General Science Mathematics

Sr	Questions	Answers Choice
1	Cos^{-1} (-x) =_____.	A. π +cos⁻¹ x B. π -sin⁻¹ x C. π +sin⁻¹ x D. π -cos⁻¹ x
2	In the figure angle A is =	A. 15 B. 60 C. 90 D. 20
3	If 0 is not an integral multiple of π/2 then Cot^4 θ+ Cot^2 θ=?	A. Cosec⁴ θ - Cosec²θ B. Tan θ - Tan² θ C. Cosec² θ + Cosec θ D. Sinθ Cosθ
4	If a cone is cut by a plane perpendicular to the axis of the cone then the section is a	A. Parabola B. Circle C. Hyperbola D. Ellipse
5	Let A, B, and C be any sets such that A∪B=A∪C and A∩B=A∩C then	A. A ≠ C B. B = C C. A = B D. A ≠ B
6	Two dice are rolled The number of possible out come in which at least one die shows 2 is?	A. 5 B. 12 C. 11 D. 7
7	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
8	An angle 0 is such that tan θ = 1 and cos θ is negative then	A. Sin θ is positive B. Cos θ = √2/4 C. cosθ = -1 D. sec θ is negative
9	Cot 360° =_____.	A. Undefined B. 0.707 C. -0.5 D. 0
10	$1/x^2$ -1 = ? (in case of making partial fraction)	A. Ax +B/x² -1 B. A/x + B/ x- 1 C. A/ x+1 + B/x-1 D. None
11	Which of the following is the equation of a line with slope 0 and passing through the point (4,3)	A. X =4 B. X = -4 C. Y = 3 D. Y = -6
12	The nth term in G.P 3,-6,12,..... is	A. 25, 20 B. 20, 10 C. 20, 5 D. 15, 10
13	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
14	The gradient of the line joining (1,4) and (-2,5) is	A. 3/8 B. -2 2/3 C. -1/3 D. 2
		A. Mid point

15	If $k_1 : k_2 = 1:1$ then the point P dividing the line is	B. Extreme left point C. Extreme Right point D. Plies out side k₁ and k₂
16	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
17	Domain of Y = csc x is	A. R - nπ, n ε I B. R C. R -nπ/2,nεI D. All negative Integers
18	If $Z_1 = \sqrt{-36}$, $Z_2=\sqrt{-25}$, $Z_3= \sqrt{-16}$, then what is the sum of Z_1, Z_2 and Z_3 ?	A. √3 I B. √7 C. -2-1 D. √5
19	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
20	The number of ways in which 5 distinct toys can be distributed among 3 children is	A. 3⁵ B. 5³ C. C⁵₃ D. P⁵₃