NAT I General Science Mathematics

Sr	Questions	Answers Choice
1	Which is not included in the domain of Cos^{-1} x	A. 0 B. 1 C. -1 D. 2
2	If A and B are two events then P(A∪B) =? (when A and B are disjoint)	A. P(A) - P(B) B. P(A) x P(B) C. P(A) + P(B) D. P(A) + P(B) -P(A∩B)
3	If 4 - x > 5, then	A. x > 1 B. x > -1 C. x < 1 D. x < -1
4	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
5	Sin-1 (√2/2)=?	A. π/2 B. π/3 C. 3π/4 D. 2π
6	Sin x + Cos x=1 x=	A. π B. π/2 C. π/3 D. π/4
7	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)
8	Sec^{-1} x=	A. Cos⁻¹ 1/x B. Cosec⁻¹ 1/x C. Cos-1 (-x) D. Tan⁻¹ x
9	The degree of the polynomial $2x^4 + 3x^2 + 16x + 28 = x^4 + 2x^2$ is	A. [a_{ij -}b_{ji}] B. [a_{ij -}b_{ij}] C. [a_{ij -}b_{ij}] D. [a_{ij] - [}b_{ij}]
10	Which of the following is the subset of all sets ?	A. A ≠ C B. B = C C. A = B D. A ≠ B
11	How many elements are in the sample space of two rolling dies	A. 6 B. 12 C. 18 D. 36
12	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
13	Which of the following is not defined?	A. Arcsin 1/9 B. ArcCos (-4/3) C. Arctan 11/12 D. Arccot (-4)
14	Which is not a half plane	A. ax + by < c B. ax + by > c C. Both A and B D. None
15	If P(E) is the probability that can event will occur then P(E)=	A. 1 B. 0.5 C. 2

		D. 0
16	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
17	If $k_1 : k_2 = 1:1$ then the point P dividing the line is	A. Mid point B. Extreme left point C. Extreme Right point D. Plies out side k₁ and k₂
18	The two consecutive positive integers whose product is 56 are	A. 7, 8 B. 14, 4 C. 28, 2 D. 56, 1
19	For which of the following ordered pairs (s,t) is s + t> and s- t < -3?	A. (3,2) B. (2,3) C. (1,8) D. (0,3)
20	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