NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	The number of ways in which 5 distinct toys can be distributed among 3 children is	A. 3⁵ B. 5³ C. C⁵₃ D. P⁵₃
2	If f_1 (x) and f_2 (x) are any two anti derivatives of a function F (x) then the value of f_1 (x) = f_2 (x)	A. A variable B. A constant C. Undefined D. Infinity
3	If sinθ = 1 then θ =	A. 2nπ +π/2 B. 2nπ C. 2π +n D. Nπ +π/2
4	Cot 360° =_____.	A. Undefined B. 0.707 C. -0.5 D. 0
5	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
6	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
7	120° degrees are equal to how many radians?	A. π/3 radians B. 2π/3 radians C. π/4 radians D. π/2 radians
8	The average of first 100 integers is=	A. 50 1/2 B. 25 1/4 C. 100 D. 5050
9	Derivative of strictly increasing function is always	A. Zero B. Positive C. Negative D. Both A and B
10	Cos^{-1} x =	A. ∏ = sin⁻¹ x B. ∏ + sin⁻¹ x C. ∏/2 - sin⁻¹ x D. ∏/2 +sin⁻¹ x
11	The curves y =x^2, y= x interest at	A. (0,0) ,(1,1) B. (2,4) C. (0,),(2,4) D. (0,3),(-1,1)
12	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
13	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
14	The set of all positive even integers is	A. Φ B. {1,2,3} C. {Φ} D. {0}

15	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
16	Corola available in 5 models 8 colours and 3 sizes how many Corola must a local dealer have no hand in order to have one of each kind avialable?	A. 24 B. 120 C. 16 D. 39
17	Which of the following is not defined?	A. Arcsin 1/9 B. ArcCos (-4/3) C. Arctan 11/12 D. Arccot (-4)
18	Which of the following is the subset of all sets ?	A. A ≠ C B. B = C C. A = B D. A ≠ B
19	Cos^{-1} (-x) =_____.	A. π +cos⁻¹ x B. π -sin⁻¹ x C. π +sin⁻¹ x D. π -cos⁻¹ x
20	The complement of set A relative to universal set U is the set	A. X B. X C. φ D. Universal set