NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	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
2	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
3	The associative angle of 280^o is	A. 100^o B. 10^o C. 80^o D. -80^o
4	If $Sin^{-1} x + cos^{-1} y = \pi$, then x and y are	A. Associative angles B. Complementary angles C. Reflex angles D. Supplementary angles
5	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
6	AreCot $\sqrt{3}$ =?	A. π/2 B. π C. 2π D. π/6
7	The area of circle of unit radius=	A. 0 B. 1 C. 4 D. π
8	x is a member of the set {-1,0,3,5} y is a member of the set {-2,1,2,4} which is possible?	A. x- y =-6 B. x -y < -6 C. x -y > 6 D. None
9	ω^n = ?, when n = 3k	A. 0 B. ω C. 1 D. 1 / ω
10	If -1 < x < 0, which of the following statement must be true?	A. x < x² < x² B. x < x³ < x² C. x² < x³ < x D. x²< x < x³
11	If x < y, 2x = A and 2y = B then	A. A =B B. A < B C. A< X D. B < y
12	The gradient of the line joining (1,4) and (-2,5) is	A. 3/8 B. -2 2/3 C. -1/3 D. 2
13	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
14	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
15	2/(x+1)(x-1) = A/x+1 + B/x-1 corresponds to	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
16	Sin^{-1} √3/2 =?	A. 2π/3 B. π/2 C. π/3 D. v/5
17	If p and r are integers P = 0, and p ≠ -r, which of the following must be true?	A. p < r B. p > r C. p + r < 0 D. p - r < -0
18	Two matrices A and B are conformable for multiplication (AB) if and only if	A. Addition B. Multiplication C. Division D. Subtraction
19	If Sin θ =Cosθ then θ=	A. 30° B. 45° C. 60° D. 90°
20	Which of the following is solution of Tan^2 x = 1/3	A. 7π/6 B. 5π/6 C. π/6 D. All