NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	Cot 360° =_____.	A. Undefined B. 0.707 C. -0.5 D. 0
2	Two natural numbers whose sum is 25 and difference is 5, are	A. 25, 20 B. 20, 10 C. 20, 5 D. 15, 10
3	The direction cosines of y-axis are	A. 1,0,0 B. 0,1,0 C. 0,0,1 D. 1,1,1
4	ω^n = ?, when n = 3k	A. 0 B. ω C. 1 D. 1 / ω
5	Unit vector in the positive direction of x-axis is	A. $\hat{i}$ B. $\hat{j}$ C. $\hat{k}$ D. All
6	Which of the following is the subset of all sets ?	A. A ≠ C B. B = C C. A = B D. A ≠ B
7	How many different arrangements of the letters in the word QABABA are Possible?	A. 720 B. 40 C. 60 D. 30
8	d/dx a^x is	A. xa^{x-1} B. a^x C. x in a D. a^x in a
9	The set (Z, +) forms a group	A. Function on B B. Range C. Domain D. A into B
10	The set of complex numbers forms a group under the binary operation of	A. 0 B. ±1 C. 1 D. {0,1}
11	√23 is	A. A rational number B. A irrational number C. An even integer D. A factor of 36
12	Sec^{-1} x=	A. Cos⁻¹ 1/x B. Cosec⁻¹ 1/x C. Cos-1 (-x) D. Tan⁻¹ x
13	Sin^{-1} (-x) =	A. Cos⁻¹ 1/x B. -Sin⁻¹ X C. 1/sin-1x D. Sin⁻¹ 1/x
14	Sin x + Cos x=1 x=	A. π B. π/2 C. π/3 D. π/4
15	Cos^{-1} (-x) =_____.	A. π +cos⁻¹ x B. π -sin⁻¹ x C. π +sin⁻¹ x D. π -cos⁻¹ x

16	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
17	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
18	6 is	A. A prime integer B. An irrational number C. A rational number D. A odd integer
19	Which is an explicit function	A. y = x² +2x -1 B. x² +xy +y² =2 C. xy² -y +9/xy =1 D. All are
20	Cse π/3	A. 2 B. 1 C. 0 D. 2/√3