NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	∫cot (ax + b) dx =	A. 1/a log |sin (ax + b)| +c B. 1/a log |cos ax + b) C. 1/b |sin (ax + b)| D. 1/a log |sin (bx + a)|
2	If ab > 0 and a < 0, which of the following is negative?	A. b B. -b C. -a D. (a - b)²
3	In the figure PS is perpendicular to QR, if PQ = PR 26 and P8 = 24,then QR=	A. 10 B. 20 C. 40 D. 26
4	In general matrices do not satisfy	A. Not a group B. A group w.r.t. subtraction C. A group w.r.t. division D. A group w.r.t. multiplication
5	The set (Z, +) forms a group	A. Function on B B. Range C. Domain D. A into B
6	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)
7	If Sin^{-1} x + cos^{-1} y = π, then x and y are	A. Associative angles B. Complementary angles C. Reflex angles D. Supplementary angles
8	A standard deck of 52 cards shuffled what is the probability of choosing the queen of the diamonds	A. 1/5 B. 1/13 C. 5/52 D. 1/52
9	Sin 720° = _____	A. 1 B. 0 C. 2 D. 1/2
10	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
11	If any two rows (or any two columns) of a square matrix are inter changed, the determinant of the resultant matrix is	A. True B. False C. Fallacious D. Some times true
12	The set {1, -1, i, -i}, form a group under	A. addition B. multiplication C. subtraction D. None
13	Any point where f is neither increasing nor decreasing and f(x) =0 at that point is called a	A. Minimum B. Maximum C. Stationary point D. Constant
14	√23 is	A. A rational number B. A irrational number C. An even integer D. A factor of 36
15	A relation in which the equality is true only for some values of the unknown variable is called	A. An identity B. An equation C. A polynomial D. Inverse function

16	The set { {a,b} } is	A. {X/X∈ A∧x ∈ U} B. {X/X∉ A∧x ∈ U} C. {X/X∈ A and x ∉ U} D. A-U
17	Sin^{-1} (-x) =?	A. Sin⁻¹ x B. -Sin⁻¹ x C. Cos⁻¹ x D. -Cos⁻¹ x
18	In which quadrant is the solution of the equation sin x - 1 = 0	A. II quadrants B. II and III quadrants C. III and Iv quadrants D. I quadrant
19	In the triangle Δ ABC, where C is the right angle Tan A + Tan B=	A. A +B B. C² /AB C. A²/BC D. B²/AC
20	The value of x, and y, when $(x+iy)^2=5+4i$	A. X=2, y=-1 B. X=-2, y=1 C. X=2, y=-i D. X=2, y=2