NAT I Engineering Mathematics

Sr	Questions	Answers Choice
1	The equation of the line with gradient 1 passing through the point (h,k) is	A. Y = x+ k-h B. Y = k/hx +1 C. Y = x + h -l D. Ky = hx =1
2	Cse π/3	A. 2 B. 1 C. 0 D. 2/√3
3	The multiplicative inverse of x such that x = 0 is	A. -x B. does not exist C. 1/x D. 0
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	If the vector 2i+4j-2k and 2i +6j+xk are perpendicular then x-7	A. 4 B. 8 C. 14 D. 7
6	Which is a proper rational fraction	A. 3x - 7/x² +4 B. 2x² - 5/x² + 4 C. 3x⁴/2x² - 15 D. All are proper rational fraction
7	Which of the following is the subset of all sets ?	A. A ≠ C B. B = C C. A = B D. A ≠ B
8	If the order of A is n x m. Then order of kA is	A. Forms a group B. Does not form a group C. Contains no additive identity D. Contains no additive inverse
9	The number of ways in which we can courier 5 packets to 10 cities is	A. 2 x 5^o B. 5¹⁰ C. 10⁵ D. 2¹⁰
10	How many elements are in the sample space of two rolling dies	A. 6 B. 12 C. 18 D. 36
11	If P(E) is the probability that can event will occur then P(E)=	A. 1 B. 0.5 C. 2 D. 0
12	3/2 is	A. An irrational number B. Whole number C. A positive integer D. A rational number
13	If θ= 60° then	A. sin θ = 1/2 B. tan θ = cot 30° C. θ = π/4 D. Sec θ =4
14	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)
15	The line through the center and perpendicular to the transverse axis is called the	A. Major axis B. Minor axis C. Focal axis

		D. Conjugate axis
16	∫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)|
17	The number of real roots in cube roots of 8 is ?	A. n x m B. m x n C. km x n D. m x kn
18	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
19	If the 9^{th} tern of A.P is 8 and the 4^{th} term is 20. then the first term is	A. 1 B. 2 C. -2 D. -1
20	Sin-1 (√2/2)=?	A. π/2 B. π/3 C. 3π/4 D. 2π