NAT II Physical Science Mathematics

Sr	Questions	Answers Choice
1	The number of ways in which we can courier 5 packets to 10 cities is	A. 2 x 5⁰ B. 5¹⁰ C. 10⁵ D. 2¹⁰
2	The mid point of the line joining (-1, -3) to (3, -5) is	A. (1, 1) B. (1, -1) C. (2, -8) D. (1, -4)
3	The graph of a quadratic function is	A. Circle B. Ellipse C. Parabola D. Hexagon
4	If ab > 0 and a < 0, which of the following is negative?	A. b B. -b C. -a D. (a - b)²
5	Question Image	A. 15 B. 15 i C. -15 i D. -15
6	Question Image	A. n = 3 only B. n <u>></u> 5 C. n <u>></u> 3 D. n < 5
7	An angle of one radian is equivalent to	A. 90° B. 60° C. 67° D. 57° 18[']
8	If A and B are matrices such that AB=BA=I then	A. A and B are multiplicative inverse of each other B. A and B are additive inverses of each other C. . A and B are singular matrices D. A and B are equal
9	Which is an explicit function	D. All
10	If a statement S(n) is true for n = 1 and the truth of S(n) for n + K implies the truth of S(n) for S(n) = K + 1, then S(n) true for all	A. All Real numbers B. All integers C. Positive integers D. All complex numbers
11	Question Image	
12	Question Image	
13	The complement of set A relative to universal set U is the set	D. A - U
14	Which is in the solution set of 4x - 3y < 2	A. (3, 0) B. (4, 1) C. (1, 3) D. None
15	A farmer possesses 100 hectometers of land and wants to grow corn and wheat. Cultivation of corn requires 3 hours per hectometer while cultivation of wheat requires 2 hours pert hectometer. Working hours cannot exceed 240. If he gets a profit of Rs. 20 per hectometer	A. P(x,y) = 20x + 15y B. P(x,y) = 2x + 3y C. P(x,y) = x + y

	for corn and Rs. 20 per hectometer for wheat. The profit function for the farmer is	D. P(x,y) = 3x + 2y
16	Question Image	
17	Question Image	
18	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 = -1 D. X = 2, y = 2
19	Question Image	A. 0 B. -25 C. 5 D. 45
20	Complex roots of real quadratic equation occur in	A. Conjugate pair B. ordered pair C. reciprocal pair D. quadratic function