

NAT II Physical Science Mathematics

Sr	Questions	Answers Choice
1	Question Image	
2	Question Image	
3	If c is a constant number and if f is the function defined by the equation $f(x) = c$ for all values of x , then f is differentiable at every x and f is defined the equation $f'(x) =$ _____	A. f B. 1 C. C D. 0
4	If α and β be irrational roots of a quadratic equation, then	
5	Question Image	D. None
6	The point $(-5, 3)$ is the center of a circle and $P(7, -2)$ lies on the circle. The radius of the circle is	A. 2 B. 13 C. 7 D. 8
7	The value of the polynomial $3x^3 + 4x^2 - 5x + 4$ at $x = -1$ is	A. 12 B. 1 C. 10 D. -10
8	Question Image	
9	Question Image	
10	6 is	A. A prime integer B. An irrational number C. A rational number D. An odd integer
11	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 per hectometer. Working hours cannot exceed 240. If he gets a profit of Rs. 20 per hectometer for corn and Rs. 20 per hectometer for wheat. The profit function for the farmer is	A. $P(x,y) = 20x + 15y$ B. $P(x,y) = 2x + 3y$ C. $P(x,y) = x + y$ D. $P(x,y) = 3x + 2y$
12	If the diagonal of a square has coordinates $(1, 2)$ and $(5, 6)$ the length of a side is	A. 3 B. 4 C. 1 D. 5
13	Which of the following integrals can be evaluated	
14	Period of $\sin 2x =$	
15	A die is thrown. What is the probability that there is a prime number on the top?	A. $1/2$ B. $1/3$ C. $1/6$ D. $2/3$
16	Which of the vectors have opposite direction?	D. Both A and B
17	The sum of the series $1+5+9+13+17+21+25+29$ is	A. 140 B. 130 C. 120 D. 110
18	Question Image	
19	Question Image	
20	The length of rectangle is twice as much as its breadth. If the perimeter is 120 cm, the length of the rectangle is	A. 10 cm B. 20 cm C. 30 cm D. 40 cm