CRESCENT PUBLIC SCHOOL, CHALAKUDY
PERIODIC TEST 1(2022 – 23)
SUBJECT: MATHEMATICS (041)

TIME: 1 hr   Max. Marks: 20

NAME: ....*AM*............ CLASS: X SEC : ......ı.....DATE: ..ı.ı.ıs......

General Instructions:
1. The question paper consists of 10 questions divided into 3 sections A, B, C.
2. All questions are compulsory.
3. Section A comprises of 5 multiple choice questions of 1 mark each.
4. Section B comprises of 2 questions of 2 marks each and 1 question of 3 marks.
5. Section C comprises of 2 questions of 4 marks each. It contains 1 case study based question.

	Section A	
	Section A has 5 multiple choice questions of 1 mark each.	
1	Which of the following is not an irrational number? (a) $3 + \sqrt{5}$ (b) $7 + \sqrt{3}$ (c) $\sqrt{9} - 1$ (d) $\sqrt{3} - 2$	1
2	A box contains cards numbered 6 to 50. A card is drawn at random from the box. The probability that the drawn card has a number which is a perfect square like 4,9....is (a) 1/45 (b) 2/15 (c) 4/45 (d) 1/9	1
3	The LCM of $2^3 \times 3^2$ and $2^2 \times 3^3$ is (a) 2^3 (b) 3^3 (c) $2^3 \times 3^3$ (d) $2^2 \times 3^2$	1
4	If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is (a) 10 (b) -10 (c) 5 (d) -5	1
5	A quadratic polynomial, whose zeores are -4 and -5, is (a) $x^2 - 9x + 20$ (b) $x^2 + 9x + 20$ (c) $x^2 - 9x - 20$ (d) $x^2 + 9x - 20$	1

	Section B	
	Section B has 2 questions of 2 marks each and 1 question of 3 marks.	
6	Find the zeroes of $p(x) = 2x^2 - x - 6$ and verify the relationship of zeroes with these co-efficients.	2
7	The probability of selecting a rotten apple randomly from a heap of 900 apples is 0.18. Find the number of rotten apples in the heap.	2
8	Prove that $\sqrt{2}$ is irrational.	3
	Section C	
	Section C has 2 questions of 4 marks each.	
9	Red kings, queens and jacks are removed from a deck of 52 playing cards and then well-shuffled. A card is drawn from the remaining cards. Find the probability of getting (i) King (ii) a red card (iii) a spade (iv) an ace	4
10	**Case Study Question** Due to heavy storm an electric wire got bent as shown in the figure. It followed a mathematical shape. Answer the following questions below (i) Name the shape in which the wire is bent and how many zeroes are there for the polynomial? (ii) Write the zeroes of the polynomial and its expression.	2 2