

INDIAN SCHOOL SOHAR PERIODIC TEST 1 (2022-23) MATHEMATICS (041)

CLASS: X DATE: 18/05/22 MAX. MARKS: 20 TIME: 45 MINUTES

## General Instructions:

- 1. The question paper contains 11 questions. All questions are compulsory.
- 2. Section A comprises of 5 questions of 1 mark each. Section B comprises of 3 questions of 2 marks each. Section C comprises of 3 questions of 3 marks each.

SECTION A							
1	If the HCF of 85 and 153 is expressible in the form 85x – 153, then the value of x is						
	a) 2 b) 17	c) -2	d) 1	1			
2	HCF and LCM of two numbers find the other number. a) 27 b) 18	is 9 and 459 respectively c) 59	ctively. If one of the numbers is 27, d) 153	1			
3	The graph of a polynomial P(x points. The number of zeroes a) 5 b) 2	) cuts the x-axis at a of P(x) is c) 1	3 points and touches it at 2 other d) 4	1			
4	If two positive integers p and numbers, then HCF (p, q) is : a) 1 b) xy <sup>2</sup>	q are written as p= c) x <sup>2</sup> y <sup>2</sup>	x <sup>2</sup> y <sup>2</sup> and q = xy <sup>2</sup> , x, y are prime d) xy	1			
5	If $\alpha$ and $\beta$ are the zeroes of th a) $\frac{7}{2}$ b) $\frac{2}{3}$	ie polynomial p(x) = c) $\frac{-2}{5}$	= $5x^2 - 7x + 2$ , then $\frac{1}{\alpha} + \frac{1}{\beta}$ is d) $\frac{7}{5}$	1			

## SECTION B

6	Show that 4 <sup>n</sup> , when n is a natural number cannot end with the digit 0 for any natural number ' n.	2
7	If x -2 is a factor of the polynomial $p(x) = x^3 + ax^2 + b$ and $a + b = 4$ , then find the values of a and b	2
8	If $\alpha$ and $\beta$ are the zeroes of the quadratic polynomial $p(x) = x^2 - 5x + 6$ , find a quadratic polynomial whose zeroes are $\frac{\alpha}{\beta}$ and $\frac{\beta}{\alpha}$ . OR Find the zeroes of the polynomial $4\sqrt{3}x^2 + 5x - 2\sqrt{3}$ .	2

**SECTION C** 

9	Prove that 5 + $\sqrt{3}$ is an irrational number.		
10	Find the zeroes of the quadratic polynomial $6x^2 - 3 - 7x$ and verify the relationship		
	between the zeroes and the coefficients.		
11	Find the smallest number which when divided by 161, 207 and 184 leaves remainder 21	3	
	in each case.		
	OR		
	Two tankers contain 850 liters and 680 liters of petrol. Find the maximum capacity of a		
	container which can measure the petrol of each tanker in the exact number of times.		