INDIAN SCHOOL SOHAR **SET II**

PERIODIC TEST I (2024-25)
MATHEMATICS

CLASS: IX **MAX. MARKS: 20**

DATE: 23/05/24 **TIME: 40 MINUTES**

General Instructions:

1. This Question paper contains - four sections A, B, C and D. Each section is compulsory. However, there are internal choices in some questions.
2. Section A has 4 MCQ's and 1 Assertion-Reason based questions of 1 mark each.
3. Section B has 2 Very Short Answer (VSA)-type questions of 2 mark each.
4. Section C has 2 Short Answer (SA)-type questions of 3 mark each.
5. Section D has 1 Long Answer (LA)-type questions of 5 marks.

	SECTION – A (Multiple Choice Questions) Each question carries 1 mark
1.	Evaluate: $(\sqrt{3} + \sqrt{2})^2 + (\sqrt{2} - \sqrt{3})^2$ (a) $2\sqrt{10} - 20$ (b) $-20 - 2\sqrt{10}$ (c) -10 (d) 10
2.	If 4 is the zero of the polynomial p(x) = x^2 + 11x + k, then value of k is (a) 60 (b) –60 (c) 28 (d) 5
3.	Which of the following is an irrational number? (a) $\sqrt{25}$ (b) $\sqrt{23}$ (c) $\sqrt{1}$ (d)3.45555
4.	If $4^{44} + 4^{44} + 4^{44} + 4^{44} = 4^x$, then the value of x is (a) 4 (b) 44 (c) 45 (d) 1
5.	Assertion – Reason based question In the following question, a statement of assertion (A) is followed by a statement of reason (R). Choose the correct answer out of the following choices. (a) Both A and R are true and R is correct explanation of A (b) Both A and R are true and R is not correct explanation of A (c) A is true but R is false (d) A is false but R is true Assertion (A): Zero of polynomial p(x)=x^2-3x+2 is 1 Reason (R): 7 is a non-zero constant polynomial.
	SECTION – B [This section comprises of very short answer type questions (VSA) of 2 marks each]
6.	Locate $\sqrt{10}$ on number line. **OR** Express 1 .818181……in $\frac{p}{q}$ form.
7.	Check whether $(2x + 1)$ is a factor of the polynomial f(x) = $4x^3 + 4x^2 - x - 1$.
	SECTION – C [This section comprises of short answer type questions (SA) of 3 marks each]

8.	Find the value of a and b if $$\frac{\sqrt{2}-\sqrt{5}}{\sqrt{2}+\sqrt{5}} = a + b\sqrt{10}$$ **OR** Rationalize the denominator: $$\frac{1}{\sqrt{5}-\sqrt{2}-\sqrt{7}}$$
9.	If x = 2 and x = 0 are zeroes of the polynomial $2x^3 - 5x^2 + ax + b$, then find the value of a and b.
	SECTION – D [This section comprises of long answer type questions (LA) of 5 marks]
10.	Factorize $x^3 + 4x^2 + x - 6$. **OR** If x + 1 and x −1 are factors of $ax^3 + x^2 - 2x + b$, find the value of a and b.