INDIAN SCHOOL SOHAR **SET I**

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: $(\sqrt{5} + \sqrt{2})^2 + (\sqrt{2} - \sqrt{5})^2$ (a) $2\sqrt{10} - 20$ (b) $-20 - 2\sqrt{10}$ (c) 14 (d) -14
2.	If -4 is the zero of the polynomial p(x) = x^2 + 11x + k, then value of k is (a) 40 (b) -28 (c) 28 (d) 5
3.	The value of $\sqrt[4]{625^{-2}}$ is: (a) $\frac{1}{25}$ (b) $\frac{1}{50}$ (c)50 (d)25
4.	If $3^{45} + 3^{45} + 3^{45} = 3^x$, then the value of x is (a) 4 (b) 44 (c) 46 (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) : –7 is a constant polynomial Reason(R) : Degree of a constant polynomial is one.
	SECTION – B [This section comprises of very short answer type questions (VSA) of 2 marks each]
6.	Locate √17 on number line. **OR** Express 0 .12333……in $\frac{p}{q}$ form.
7.	Check whether $(2x + 1)$ is a factor of the polynomial f(x) = $x^3 - 2x^2 + x - 1$.

SECTION – C [This section comprises of short answer type questions (SA) of 3 marks each]	
8.	Find the value of a and b if $a + b\sqrt{15} = \frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}}$ **OR** Rationalize the denominator: $\frac{3}{\sqrt{3}-\sqrt{2}+\sqrt{5}}$
9.	If y = 0 and y = 2 are zeroes of the polynomial $2y^3 - 5y^2 + cy + r$, then find the value of c and r.
SECTION – D [This section comprises of long answer type questions (LA) of 5 marks]	
10.	Factorize $x^3 + 2x^2 - 13x + 10$. **OR** Find the values of a and b, if x+1 and x+2 are factors of $x^3 + 3x^2 - 2ax + b$.