THE VILLAGE INTERNATIONAL SCHOOL
"We Nurture Dreams"

Date: 02/08/23 GRADE: IX	MONTHLY TEST -01(2023-24) MATHEMATICS	Max marks: 20 Time: 50 Minutes

General Instructions:

1. There are 10 questions in the question paper. All questions are compulsory.
2. The question paper has 4 sections A, B, C and D.
3. Section A has 5 MCQs carrying 1 mark each.
4. Section B has 2 VERT SHORT ANSWER TYPE QUESTIONS carrying 2 marks each.
5. Section C has 2 SHORT ANSWER TYPE QUESTIONS carrying 3 marks each.
6. Section D has 1 LONG ANSWER TYPE QUESTIONS carrying 5 marks.

Qn. No	SECTION A MULTIPLE CHOICE QUESTIONS	Marks Allocated
1	In between any two rational numbers there are: a) Only one rational number b) No rational numbers c) Two rational numbers d) Infinite rational numbers	1
2	Which of the following is an irrational number? a) $\sqrt{25}$ b) $\sqrt{225}$ c) 1.10101010…. d) 2.151551555…	1
3	The value of $\sqrt{1^3 + 2^3 + 3^3}$ is a) 5 b) 6 c) 14 d) 36	1
4	$(x + y)^3$ is equal to a) $x^3 + y^3 + 3x^2y + 3xy^2$ b) $x^3 + y^3 + 3xy$ c) $x^3 + y^3$ d) $x^3 - 3x^2y + 3xy^2 - y^3$	1

5	Which of the following is a zero of the polynomial $p(x) = 5x - 10$? a) $x = 0$ b) $x = 1$ c) $x = 2$ d) $x = 5$	1
	SECTION B **VERY SHORT ANSWER TYPE QUESTIONS**	
6	Show that 1.272727….. can be expressed in the form $\frac{p}{q}$ where p and q are integers and q≠0.	2
7	Find the value of the polynomial $p(x) = x^3 + x^2 + x + 1$ at $x = 0\ and\ -1$	2
8	Expand $(3x - y + 2z)^2$	2
	SECTION C **SHORT ANSWER TYPE QUESTIONS**	
9	If a and b are rational numbers and $\frac{2+\sqrt{3}}{2-\sqrt{3}} = a + b\sqrt{3}$, find the values of a and b.	3
10	Examine whether $x + 2$ is a factor of $x^3 + 3x^2 + 5x + 6$ and of $2x + 4$.	3
11	The following rectangular has length *l* and breadth *b*.  Find possible expressions for the length and breadth of this rectangular park if it has an area $25a^2 - 35a + 12$	3
	THE END	