SET – 1

**FORMATIVE ASSESSMENT- 1**
**MATHEMATICS**

Date: 06-05-2014                                                    Time: 45mnts
Class: IX                                                               Marks: 20

General Instructions:
- All questions are compulsory.
- Section A comprises 3 questions of 1 mark each.
- Section B comprises 2 questions of 2 marks each.
- Section C comprises 3 questions of 3 marks each.
- Section D comprises 1 question of 4 marks.

## SECTION A

1. Find the value of $y^{a-b} \times y^{b-c} \times y^{c-a}$.

2. Find the zero of the polynomial $p(x) = 2x + 5$

3. Find the reminder when $x^3 + 3x^2 + 3x + 1$ is divided by $(2x + 5)$.

## SECTION B

4. Express $2.02\overline{5}$ in the form of $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

5. Simplify $\sqrt[4]{81} - 8\sqrt[3]{216} + 15\sqrt[5]{32} + \sqrt{225}$.

## SECTION C

6. If $a + b\sqrt{3} = \frac{\sqrt{3}-1}{\sqrt{3}+1}$, find the values of a and b.

7. Locate $\sqrt{17}$ on the number line.

8. If $x = 3 + 2\sqrt{2}$, find the value of $\left(\sqrt{x} - \frac{1}{\sqrt{x}}\right)$.

## SECTION D

9. If $f(x) = x^4 - 2x^3 + 3x^2 - ax + b$ is divided by $(x - 1)$ and $(x + 1)$, it leaves the remainders 5 and 19 respectively. Find a and b.

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