

**INDIAN SCHOOL SOHAR**  
**FORMATIVE ASSESSMENT I (2015 – 16)**  
**MATHEMATICS**

**SET 1**

**Class: IX**  
**Date: 14.05.2015**

**Marks: 20**  
**Time: 40 minutes**

**General Instructions:**

- a. The question paper has 9 questions in all. All questions are compulsory.  
b. Marks are indicated against each question.

- 
- |   |   |
|---|---|
| 1. If $x=0.064$ , find the value of $\left(\frac{1}{x}\right)^{\frac{1}{3}}$  | 1 |
| 2. What is the remainder when $2x^3 - 2x^2 + x - 1$ is divided by $(x - 1)$ ?   | 1 |
| 3. Simplify: $(\sqrt{3} + 2)(\sqrt{3} - 2)$   | 1 |
| 4. If $x = \frac{-1}{2}$ is a zero of the polynomial, $p(x) = ax^3 - x^2 + x + 4$ , find the value of 'a'                             | 2 |
| 5. Simplify: $\frac{\sqrt[3]{27} - \sqrt[3]{125}}{1 - \sqrt{2}}$  | 2 |
| 6. Represent $\sqrt{4.6}$ on the number line.   | 3 |
| 7. If remainder is same when polynomial $p(x) = x^3 + 8x^2 + 17x + ax$ is divided by $(x + 2)$ and $(x - 1)$ , find the value of 'a'. | 3 |

Page 1

**INDIAN SCHOOL SOHAR**  
**FORMATIVE ASSESSMENT I (2015 – 16)**  
**MATHEMATICS**

**SET 2**

**Class: IX**  
**Date: 14.05.2015**

**Marks: 20**  
**Time: 40 Minutes**

**General Instructions:**

- a. The question paper has 9 questions in all. All questions are compulsory.  
b. Marks are indicated against each question.

- 
- |  |   |
|--|---|
| 1 Simplify : $(3 + \sqrt{5})(3 - \sqrt{5})$  | 1 |
| 2 What is the remainder when $4x^3 - 3x^2 + 2x + 4$ is divided by $(x + 2)$                                  | 1 |
| 3 If $x = 0.125$ , find the value of $\left(\frac{1}{x}\right)^{\frac{1}{3}}$                                | 1 |
| 3 If $x = \frac{-1}{3}$ is a zero of the polynomial $p(x) = 27x^3 - mx^2 - x + 3$ , then find the value of m | 2 |
| 5 Simplify: $\frac{\sqrt[3]{8} - \sqrt[3]{125}}{1 - \sqrt{3}}$   | 2 |
| 6 If $a = 1 - \sqrt{2}$ , find $\left(a - \frac{1}{a}\right)^3$  | 3 |
| 7 Represent $\sqrt{4.2}$ on the number line.   | 3 |

Page 1

8. If  $a = 2 + \sqrt{3}$ , find  $\left(a + \frac{1}{a}\right)^3$  3

9. Simplify:  $\frac{1}{2+\sqrt{5}} + \frac{1}{\sqrt{5}+\sqrt{6}} + \frac{1}{\sqrt{6}+\sqrt{7}} + \frac{1}{\sqrt{7}+\sqrt{8}} + \frac{1}{\sqrt{8}+\sqrt{9}}$  4

\*\*\*\*\*

Page 2

8 The polynomial  $ax^3 + 3x^2 - 3$  and  $2x^3 - 5x + a$  when divided by  $x - 4$  leave the same remainder in each case. Find the value of a. 3

9 Find the value of  $\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \frac{1}{\sqrt{3}+\sqrt{4}} + \dots\dots\dots\frac{1}{\sqrt{8}+\sqrt{9}}$  4

\*\*\*\*\*