MATHEMATICS MOCK TEST

Class: IX | Set: 14

Time: 1 Hour 30 Minutes | Written Marks: 35 | Viva: 5 | Total: 40 Marks

NAME: _____ **ROLL NO:** _____

SECTION A

(1 Mark Each)

1. Simplify the expression: $\sqrt[3]{125} \times \sqrt[3]{8}$.
2. Find $p(0)$ for the polynomial $p(x) = x^2 - 5x + 6$.
3. If the abscissa of a point is 2 and it lies on the x-axis, what are its coordinates?
4. Check if $(1, 1)$ is a solution of the linear equation $x + y = 2$.
5. Express 0.5 as a rational number in the form p/q.

SECTION B

(2 Marks Each)

6. Rationalize the denominator of $\frac{6}{\sqrt{2}}$.
7. Factorize the expression: $x^2 - 16$.
8. Find the value of k if $x = k$ and $y = -1$ satisfies the equation $2x + 3y = 7$.
9. What is the distance of the point $(3, 4)$ from the y-axis?
10. Evaluate $(95)^2$ using a suitable identity of the form $(a - b)^2$.

SECTION C

(3 Marks Each)

11. If $x = \sqrt{2} + 1$, find the value of $\left(x - \frac{1}{x}\right)^2$.
12. Factorize $2x^2 + 7x + 3$ by splitting the middle term.
13. Plot the points $A(0, 0), B(4, 0), C(4, 4)$, and $D(0, 4)$ on a graph. Join them in order and name the figure formed.
14. Find three different solutions for the linear equation $x - 2y = 4$.

SECTION D

(4 Marks Each)

15. Factorize the cubic polynomial $x^3 - 2x^2 - x + 2$ completely.

16. For a journey, a taxi charges ₹8 for the first kilometer and ₹5 for every subsequent kilometer. If the total distance is x km and the total fare is ₹y, write the linear equation and draw its graph.

VIVA VOCE

(5 Marks)

- **Polynomials:** What is a linear polynomial? Give an example.
- **Quadrants:** What are the signs of a point in the third quadrant?
- **Equations:** What is the standard form of a linear equation in two variables?
- **Identities:** Recite the identity for $a^3 + b^3$.
- **Real Numbers:** Can you find an irrational number between 1 and 2?