MATHEMATICS MOCK TEST

Class: VI | Set: 14

Time: 2 Hours | Written Marks: 35 | Viva: 5 | Total: 40 Marks

NAME: _____ **ROLL NO:** _____

SECTION A

(1 Mark Each)

1. Write the place value of digit 7 in the decimal 84.672.
2. How many 4-digit numbers are there in all?
3. Write 0.125 as a fraction in its lowest terms.
4. Name the instrument used to draw a perpendicular bisector of a line segment.
5. If 1 symbol represents 5 units in a pictograph, how many symbols are needed for 30 units?

SECTION B

(2 Marks Each)

6. Write the decimal 324.36 in expanded form.
7. Find the product: 36.73×48.
8. Draw a line segment $PQ = 6.2$ cm. Draw the perpendicular bisector of PQ using a ruler and compasses.
9. Find the sum of the smallest and the largest 4-digit palindromes.
10. Prepare a frequency table using tally marks for the following data representing number of goals: $2, 3, 2, 4, 3, 2, 5, 2, 4, 2$.

SECTION C

(3 Marks Each)

11. **Logic and Estimation:** Abhay bought 576 balloons for decoration. Out of these, 239 leaked and could not be used. Estimate how many balloons Abhay used for decoration (round to the nearest hundred).
12. **Decimals:** A bus covers 62.5 km in one hour. How much distance will it cover in 18 hours?
13. **Constructions:** Using a pair of compasses, construct an angle of $135°$. (Hint: $90° + 45°$).
14. **Data Handling:** The following table shows the types of fruit sold in a day: *Apple: 25, Mango: 40, Banana: 15, Orange: 20*. Draw a pictograph taking a scale of 1 symbol = 5 fruits.

SECTION D

(4 Marks Each - Case Study)

Case Study 1: The Shopping Weight Puzzle
Sunita went to the market to buy groceries. She purchased 5 kg 75 g of fruits and 3 kg 465 g of vegetables and put them in a bag.

(i) Express the weight of fruits and the weight of vegetables in kilograms using decimals. (2 Marks)

(ii) If the bag with its contents weighs 9 kg in total, find the weight of the empty bag. (2 Marks)

Case Study 2: Geometric Frame Construction
An architect needs to construct a rectangular frame ABCD for a window design.

(i) Construct a rectangle $ABCD$ in which $AB = 4.5$ cm and diagonal $BD = 5.4$ cm using a ruler and compasses. (2 Marks)

(ii) What is the sum of any two adjacent angles in this rectangle? (2 Marks)

VIVA VOCE

(5 Marks)

- **Numbers:** If we start with 3814, after how many iterations will we arrive at Kaprekar's constant?
- **Decimals:** How many decimal places are in the product of 1.2×1.2?
- **Constructions:** How many perpendicular bisectors can a single line segment have?
- **Data:** What is the purpose of using a "Scale" in a graph?
- **Estimation:** If there are 55 seeds in 8 fruits, estimate the number of seeds in each fruit.