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# MATHEMATICS MOCK TEST

Class: VI | Set: 05

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

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NAME: \_\_\_\_\_

ROLL NO: \_\_\_\_\_

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## SECTION A

(1 Mark Each)

1. Check if 3,150 is divisible by 5 using the divisibility rule.
2. Write the following as a decimal:  $\frac{3}{10} + \frac{7}{100}$ .
3. Every chord of a circle is also its diameter. (True or False?)
4. The  $y$ -coordinate of any point lying on the  $x$ -axis is \_\_\_\_\_.
5. What is the tally mark representation for the number 7?

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## SECTION B

(2 Marks Each)

6. How many times does the digit 9 occur if we write all the numbers from 1 to 100?
7. Express 5 cm as metres using decimals.
8. Draw a line segment  $\overline{PQ} = 6.2$  cm and find its midpoint  $M$  using a ruler.
9. A die was thrown 15 times and the following scores were obtained:  
1, 2, 3, 1, 4, 5, 6, 2, 3, 1, 4, 2, 5, 1, 6.  
Organize this data using Tally Marks.
10. Find the value of:  $280.69 + 25.2 + 38$ .

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## SECTION C

(3 Marks Each)

11. If we start with the number 3814, after how many iterations (using the greatest and smallest formed digits) will we arrive at the Kaprekar's constant? Show the steps.
12. Rashid spent ₹35.75 for a Maths book and ₹32.60 for a Science book. Find the total amount spent by Rashid.
13. Draw a circle of radius 4 cm. Draw any two of its chords. Construct the perpendicular bisectors of these chords. Where do they meet?
14. The following table shows the number of students who joined various clubs in a school.

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Club	Music	Dance	Yoga	Drama
No. of Students	45	30	20	15

Taking a scale of 1 symbol = 5 students, draw a pictograph to represent this data.

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## SECTION D

(4 Marks Each - Case Study)

### Case Study 1: The Palindromic Clock

A digital clock displays time in a 12-hour format. A "palindromic time" is one that reads the same forward and backward (e.g., 12 : 21).

- (i) The clock just displayed the palindromic time 10 : 01. After how much time will this clock display the **next** palindromic time? (2 Marks)
- (ii) Once the next palindromic time is displayed, after how much more time will the clock display the **following** palindromic time? (2 Marks)

### Case Study 2: Construction of Angles

A student needs to construct specific angles for a geometry project using only a ruler and compasses.

- (i) Construct an angle of  $120^\circ$  and label it  $\angle ABC$ . (2 Marks)
- (ii) Use the angle bisector method to divide this  $120^\circ$  angle into two equal parts. What is the measure of each part? (2 Marks)

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## VIVA VOCE

(5 Marks)

- **Number Play:** After how many years does the calendar repeat itself?
- **Decimals:** Which is greater, 1.3 or 1.30? Why?
- **Construction:** What is a perpendicular bisector?
- **Data Handling:** What does a 'Scale' represent in a Bar Graph?
- **Logic:** If a number is divisible by 9, is it always divisible by 3?