MATHEMATICS

Marks :60
Time : 2 HOURS

Note:
Do the calculations in the working column.
Give necessary formulae and steps wherever required.

## SECTION A (Question numbers 1 to 10 carry 1 mark each)

1. If -1 is multiplied with itself 50 times, the product is $\qquad$
A. -1
B. 1
C. -50
D. 50
2. If each one of the equal angles of an isosceles triangle is $55^{\circ}$, then the third angle is $\qquad$
A. $80^{\circ}$
B. $70^{\circ}$
C. $60^{\circ}$
D. $180^{\circ}$
3. The cost of 100 notebooks is Rs. 2250 . What is the cost of 1 notebook?
A.Rs 2.25
B.Rs 22.50
C. Rs. 225
D.Rs. 22.25
4. The solution of $(4-m)=24$ is $\qquad$
A. 20
B. -20
C. 6
D. 28
5. Find the mode of the following data: $42,45,46,46,40,45,42,45$
A. 2
B. 6
C. 5
D. 45
6. Form the equation: The sum of one-third of $y$ and 10 is 4
A. $\frac{y+10}{3}=4$
B. $y+10=4$
C. $\frac{y}{3}+10=4$
D. $y+10=\frac{4}{3}$
7. Two angles of a triangle are complementary. The third angle is $\qquad$
A. $60^{\circ}$
B. $90^{\circ}$
C. $45^{\circ}$
D. $35^{\circ}$
8. Find $\frac{5}{6} \div 6=$ $\qquad$
A. 5
B. $\frac{6}{5}$
C. $\frac{5}{36}$
D. $\frac{1}{5}$
9. The value of $x$ is $\qquad$
A. $70^{\circ}$
B. $110^{\circ}$
C. $40^{\circ}$
D. $80^{\circ}$

10. The product of $-2,-3$ and -4 is $\qquad$
A. 24
B. -24
C. -9
D. -1

## SECTION B (Question numbers 11 to 18 carry 2 marks each)

11. Draw an obtuse angled triangle PQR , obtuse angled at Q . Draw an altitude from point P to side QR
12. Find the values of $\mathbf{a}$ and $\mathbf{b}$.

13. Find the product using suitable property: $85 \times(-35)+(-85) \times 65$
14. Evaluate: $[(-48 \div 12] \div 4$
15. A boat $4 \frac{2}{3}$ metres in height is sailing in water. One-third of its height is under water. Find the height of the boat under water.
16. Find the median of the following data: $17,43,29,10,86,111,264$
17. Construct two equations starting with $x=-3$
18. PS is parallel to QR . Find the value of x .


## SECTION C (Question numbers 19 to 24 carry 3marks each)

19. Water descends from the dam to the ground level at the rate of $8 \mathrm{~m} / \mathrm{min}$ If the descend of water starts from 800 m above the ground level, how long will it take to reach -480 m ?
20. A square has a side of $28 \frac{2}{3} \mathrm{~cm}$ and a rectangle has a length of $10 \frac{1}{3} \mathrm{~cm}$ and breadth $8 \frac{2}{3} \mathrm{~cm}$.

Which figure has more perimeter and by how much?
21. There are 10 marbles in a box with numbers from 1 to 10 marked on each of them. What is the probability of drawing a marble with :
i) a prime number
ii) an even number
iii) a number divisible by 5
22. The difference in the measures of two supplementary angles is $30^{\circ}$ Find the measures of the angles.
23. Form equations and solve :
i) Ten subtracted from twice a number is 90
ii) One third of a number added to 3 is 33
24.Find: i) $\angle A C D$
ii) $\angle A D C$
iii) $\angle D A E$


## SECTION D (Question numbers 25 and 28 carry 4 marks each)

25.i) Solve : $\frac{2 a}{3}-10=6$
ii) Ranjit's age is five years more than three times Laxmi's age. Find Laxmi's age if Ranjit's age is 44
26. Find the values of $\mathbf{x}, \mathbf{y}, \mathbf{z}$ and $\mathbf{w}$
27. i) What should be added to 4.187 to get 9 ?

ii) Mita had $8 \frac{3}{4}$ metres long ribbon. She cut it into 7 equal parts. What is the length of each of each piece of ribbon?
28. The maximum and minimum temperature ( in ${ }^{\circ} \mathrm{C}$ ) of the four major cities of India on a particular day are given below.

| City | Delhi | Mumbai | Kolkata | Chennai |
| :---: | :---: | :---: | :---: | :---: |
| Max.Temp | 34 | 30 | 31 | 32 |
| Min. Temp | 28 | 24 | 27 | 28 |

Construct a double bar graph to represent the given data.

