TIME – 3 Hrs   **MM-80**

General Instructions-
1. All questions are compulsory.
2. The question paper consists of 40 questions divided into four sections – A,B,C,D.
3. Section A contains 20 questions of 1 mark each which are multiple choice questions, fill in the blanks and short questions, Section B contains 6 questions of 2 marks each, Section C contains 8 questions of 3 marks each, Section D contains 6 questions of 4 marks each.

SECTION-A

Each question carry 1 mark-
I(a): Multiple Choice Questions:

1. The number of altitudes in a triangle is_____.
(a) 1   (b) 2   (c) 3   (d) 4

2. The simplest from of $(\frac{-8}{6})$ is_____:
(a) $\frac{-4}{3}$ (b) $\frac{-1}{2}$ (c) $\frac{8}{6}$ (d) $\frac{2}{3}$

3. Area of parallelogram is_____.
(a) Base x Height   (b) 4 x side   (c) 2(Length + Breadth)   (d)none

4. The smallest rational number is _____.
(a) 0   (b) 1   (c) 10   (d) not determinable.

5. The distance around a circular region is called its _____.
(a) Circum ference   (b) Area   (c) Volume   (d)None

6. If the radius of a circle is doubled, then the area becomes _____.
(a) 2 times   (b) 4 times   (c) 6 times   (d) 8 times

7. The value of $(\frac{1}{2})^0$ is_____.
(a) 1   (b) 2   (c) 0   (d) (-1)

8. Subtract x from zero is _____.
(a) x   (b) (-x)   (c) 0   (d) 1

9. An algebraic expression with more than three terms is called a _____.
(a) Monomial   (b) Binomial   (c)Trinomial   (d) Polynomial

36. Construct the right angled ΔPQR, where m $\angle Q = 90^0$, QR=8cm and PR=10cm. Write the steps of construction.

Or

Construction ΔDEF such that DE=5cm, DF=3cm and m $\angle EDF = 90^0$. Write the steps of construction.
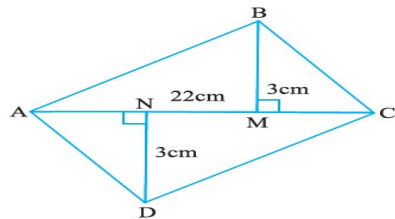
37. Find the value of
(a) $\frac{9}{2}$ x $\frac{-7}{4}$ (b) $\frac{-6}{13}$ - $\frac{-7}{15}$

38. The minute hand of a circular clock is 15cm long. How far does the tip of the minute hand move in 1 hour?
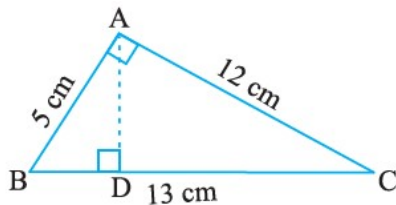
39. Simplify

$$\frac{(2^5)^2 \text{x} 7^3}{8^3 \text{x} 7}$$
.

40. Find the area of the quadrilateral ABCD Here, AC=22cm, BM =3cm, DN=3cm and BM ⊥ AC, DN⊥ AC

Or

ΔABC is right angle at A. AD is the perpendicular to BC. If AB=5cm, BC= 13cm and AC= 12cm. Find the area of ΔABC , Also find the length of AD

10. Every integer is a _____
(a) Natural Number   (b) Whole Number   (c) Rational Number   (d) None

I(b): Fill in the blanks:-

11. The additive inverse of (-2) is _____

12. 1hectare =_____ m^2.

13. Circumference of a circle is _____.

14. The term having the same literal factors are called _____.

15. The equation for : "the number 12 added to x to get 44" is_____.

I(c): Solve the following:-

16. Define Rational number.

17. If m=2, find the value of m-2

18. Express 5,00,00,000 in standard form.

19. Express 6x6x6x6 in exponential form.

20. Write the angle sum property of a triangle.

SECTION-B

Each question carries 2 marks-

21. Find two rational numbers between (-2) and (-1)

22. Find the area of circle of radius 30cm.

23. Get the algebraic expressions one fourth of the products of the numbers p and q.

Or

Sum of the numbers a and b subtracted from their product.

24. If (m=2) find the value of 3m-5.

25. Express in standard from: 5,00,00,000

26. Simplify and express in exponential form 2^0 x 3^0 x 4^0

SECTION-C

Each question carries 3 marks-

27. The radius of a circular pipe is 10cm. What length of a tape is required to wrap once around the pipe?

28. What should be added to x^2+xy+y^2 to obtain $2x^2+3xy$?

Or

From the sum of *3x-y+11* and *–y-11* subtract *3x-y-11*

29. Draw the number line and represent $(\frac{-5}{8})$ on it.

30. Arrange in ascending order
$\frac{1}{3}, \frac{-2}{9}, \frac{-4}{3}$

31. Find the area of square park whose perimeter is 320m.

32. If the circumference of a circular sheet is 154m, find its radius. Also find the area of the sheet.

Or

How many time a wheel of radius 28cm must rotate to 352m?

33. Simplify the expression and find its value when a=5 and b= (-3).
$2(a^2+ab) + 3- ab$

34. Express as a product of primefactors in exponential from 108x92

SECTION-D

Each question carries 4 marks-

35. A garden is 90m long and 75m broad. A path 5m wide is to be built outside and around it. Find the area of the path.