

# Sample Paper 4

**1. Choose the correct answer:**

- I.** The multiplicative identity of  $\frac{a}{b}$
- a. 0                      b. 1
- c.  $\frac{-a}{b}$                   d.  $\frac{b}{a}$

- II.**  $\ln 6 - x = 3, x =$

- a. 3                      b. 9  
c. -3                     d. -9

- III. If one angle of a rhombus is  $90^\circ$  then quadrilateral is

- a. Parallelogram      b. Rectangle  
c. Square      d. Trapezium

- IV. Which of the following is a perfect square?

- a. 40                                      b. 4000  
c. 400                                      d. 400000

- V.** The square of 13 is

- a. 149                  b. 169  
c. 159                  d. 163

- VI.** How many cubes if 1 cm each can be made from a cube of 2cm?

- a. 2                      b. 4  
c. 6                      d. 8

- VII. GST =**

- a. goods and sales tax

- b. gross sales tax

- c. goods and services tax

- d. gross service tax

**VIII.**  $a^{12} \times a^5 \times 0 =$

- a.  $a^{17}$                       b. 0

- c.  $a^{18}$                       d. 1

- IX.** If the perimeter of a square is 16cm then find its area.

- a.  $16 \text{ cm}^2$                       b.  $8 \text{ cm}^2$   
c.  $32 \text{ cm}^2$                       d.  $24 \text{ cm}^2$

- X.** The volume of a cube with edge  $l$ :

- a.  $6l^2$                       b.  $4l^2$   
c.  $2l^2$                       d.  $l^3$

**XI.**  $\left(\frac{2}{3}\right)^{-3} =$

- a.  $\frac{27}{8}$                       b.  $\frac{-27}{8}$

- c.  $\frac{-8}{27}$                       d.  $\frac{-6}{27}$

**XII.**  $1.3 \times 10^4 =$

- a. 1300                      b. 130  
c. 130000                  d. 13000

**XIII.**  $a^2 - b^2 =$

- a.  $(a - b)^2$       b.  $a - b$   
c.  $a^2 + b^2 - 2ab$     d.  $(a - b)(a + b)$

**XIV.**  $5x^4y \div (-10x^2)$

a.  $-2x^2y$

b.  $\frac{-x^2y}{2}$

c.  $-2xy$

d.  $-x^2y$

**XV.** The ordinate of (5,8)

a. 13

b. 3

c. 5

d. 8

**XVI.** Which of the following is not true?

a.  $x \times y = y \times x$

b.  $(x + y) + z = x + (y + z)$

c.  $x \times (y + z) = (x \times y) + z$

d.  $x + y = y + x$

**2. Fill in the blanks:**

I. The sum of adjacent angles of parallelogram is ....

II. The probability of getting a head in single toss of coin is.....

III. The number of zeroes in square root of 22500 are.....

IV. The unit digit of cube of 12 is.....

V. Discount % =  $\frac{\text{Discount}}{\text{.....}} \times 100$

VI.  $5^5 \div 5^7 = \text{.....}$

VII. The abscissa of (5,4) is.....

**3. True/False**

I.  $4x + 3 = x - 5$  is a linear equation in one variable.

II. Every rhombus is a parallelogram.

III. The class size of 50-75 is 60.

IV.  $2x^2 - 3x$  is a binomial.

V. Area of square = side  $\times$  side

VI. If  $x$  and  $y$  are in direct proportion then  $x = ky$

VII.  $a^2 + b^2 = (a - b)(a + b)$

4. Find the multiplicative inverse of

$\frac{-3}{8} \times \frac{-12}{9}$

5. Find square root of 11.56

6. Find cube root of 216000

7. Find  $p$  if  $3^p \div 3^{-3} = 3^5$

8. Solve  $15(y - 4) - 2(y - 9) +$

$5(y + 6) = 0$

**OR**

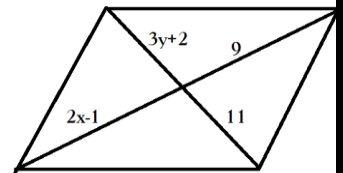
After 12 years, I shall be three times of my four years ago age. Find my present age.

9. Given figure

is a rhombus

then find  $x$

and  $y$ .



10. Simplify:  $(a + b)(a - b) + (b + c)$

$(b - c) + (c + a)(c - a)$

11. The price of 12 litres milk is Rs. 660

then what will be the price of 19 litre

milk?

**OR**

8 pipes can fill a tank in 2 hours.  
How much time will be taken by 6  
such pipes to fill the same tank?

|        |     |     |     |     |     |     |
|--------|-----|-----|-----|-----|-----|-----|
| Weight | 25- | 30- | 35- | 40- | 45- | 50- |
|        | 30  | 35  | 40  | 45  | 50  | 55  |
| number | 4   | 8   | 13  | 15  | 10  | 12  |

**12.** Factorise  $p^2 + 4p - 12$

**OR** Match the following:

- |                  |                     |
|------------------|---------------------|
| I. $x^2 - 9$     | a. $3x(x^2 + 3)$    |
| II. $(x + 3)^2$  | b. $(x - 3)(x + 3)$ |
| III. $3x^2 - 6x$ | c. $(x + 3)(x + 3)$ |
| IV. $3x^3 + 9x$  | d. $3x(x - 2)$      |

**13.** Draw a graph of the following:

|          |      |       |       |       |
|----------|------|-------|-------|-------|
| Amount   | 5000 | 10000 | 15000 | 20000 |
| Interest | 350  | 700   | 1050  | 1750  |

**14.** In the given pie chart, marks obtained in different subjects by a student are shown. If the student score 180 marks in math then



- Find total marks
- Marks obtained in each subject.

**OR** Draw a histogram of the following:

**15.** The price of a plot is Rs. 6,40,000

and it increases 5% every year. Find the price of plot after 2 years.

**OR** A shopkeeper gives 20% discount on marked price then find selling price of

i) A dress with marked price Rs. 2400

ii) A chair with marked price Rs. 1850.

**16.** The area of a trapezium is  $480 \text{ m}^2$  and the distance between its parallel sides is 15m. If one of its parallel side is 20m then find other parallel side. **OR**

The curved surface area of a hollow cylinder is  $4224 \text{ cm}^2$ . It is cut from the height to make a 33 cm wide rectangular sheet. Find the perimeter of the sheet.