

## Sample Paper 2

### 1. Multiple Choice Questions

I. Which of the following property is associative property of addition?

- a.  $a + b = b + a$
- b.  $a + (b + c) = (a + b) + c$
- c.  $a \times (b + c) = ab + ac$
- d.  $a + 0 = 0 + a$

II. If  $-4x = 8$  then  $x =$

- a. 2
- b. 12
- c. -2
- d. 4

III. If a parallelogram has one angle  $90^\circ$  then which quadrilateral is this?

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

IV. How many natural numbers between  $10^2$  and  $11^2$ ?

- a. 20
- b. 10
- c. 21
- d. 18

V. The unit digit of square of 123 is:

- a. 3
- b. 6
- c. 9
- d. 7

VI. The volume of a cube of side 5cm is:

- a.  $120 \text{ cm}^3$
- b.  $125 \text{ cm}^3$
- c.  $100 \text{ cm}^3$
- d.  $150 \text{ cm}^3$

VII. How many tax slabs under GST?

- a. 1
- b. 8
- c. 3
- d. 5

VIII. Which of the following is a binomial?

- a.  $5x - 2$
- b.  $3xy$
- c.  $6x^2$
- d.  $3x^2 - 4y + 2$

IX. The area of rhombus with base 6cm and altitude 4cm:

- a.  $12 \text{ cm}^2$
- b.  $24 \text{ cm}^2$
- c.  $18 \text{ cm}^2$
- d.  $20 \text{ cm}^2$

X. The volume of cube of side 6cm:

- a.  $144 \text{ cm}^3$
- b.  $196 \text{ cm}^3$
- c.  $224 \text{ cm}^3$
- d.  $216 \text{ cm}^3$

XI.  $a^m \div a^n =$

- a.  $a^{mn}$
- b.  $a^{m-n}$
- c.  $a^{m+n}$
- d.  $a^{\frac{m}{n}}$

XII.  $2.03 \times 10^{-4} =$

- a. 20300
- b. .0203
- c. .000203
- d. .00203

XIII. The common factor of  $3y$  and  $33xy$ :

- a.  $3y$
- b.  $3x$
- c.  $3xy$
- d.  $xy$

XIV.  $2x^2(x + 1)(x + 3) \div 4x(x + 3) =$

a.  $2x(x + 1)$       b.  $2x^2(x + 1)$

c.  $\frac{x^2(x+1)}{2}$       d.  $\frac{x(x+1)}{2}$

**XV.** Which of the following point lie on  $x$ -axis ?

a.  $(y, 0)$       b.  $(0, x)$

c.  $(y, y)$       d.  $(x, y)$

**XVI.** Additive inverse of  $\frac{-5}{-9}$

a.  $\frac{5}{9}$       b. 0

c. 1      d.  $\frac{-5}{9}$

## 2. Fill in the blanks

**I.** If the opposite angles of a parallelogram are  $3y^\circ$  and  $60^\circ$  then value of  $y$ ....

**II.** The upper limit of 40-60 is.....

**III.** Sum of first 10 odd numbers is.....

**IV.** The unit digit of cube of 213 is....

**V.** The marked price of a book is Rs. 900 and it is sold at Rs. 873 then discount is .....

**VI.** If  $5^{3x} = \frac{1}{5^3}$  then  $x = \dots\dots$

**VII.** The ordinate of (7,6) is.....

## 3. Choose True/False

**I.** The solution of  $-4x=8$  is 12.

**II.** The diagonals of a square are equal.

**III.** In a bag there are 10 blue balls and the probability of getting a red ball is 0.

**IV.**  $(a + b)^2 = a^2 - 2ab - b^2$

**V.** Area of four walls =  $2(l + b)h$

**VI.** If  $x_1, y_1, x_2, y_2$  are in inverse proportion then  $\frac{x_1}{y_1} = \frac{x_2}{y_2}$ .

**VII.**  $6x^2y - 9xy^2 = 3xy(2x - 3y)$

**4.** Solve  $\frac{9}{10} - \frac{15}{27} \times \frac{18}{5}$

**5.** Find square root of 2916.

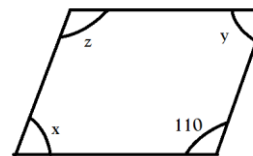
**6.** By which smallest number 675 must be multiplied so that it becomes perfect cube?

**7.** Solve  $\frac{8^{-1} \times 5^2}{2^{-3}}$

**8.** Solve  $\frac{3x}{4} - \frac{3}{2} = \frac{-2}{3} - \frac{5x}{6}$       **OR**

Find a number which is as more than from 84 as it is less from 108.

**9.** Find  $x, y$  and  $z$  in the given parallelogram.



**10.** Simplify  $(x + 5y)^2 - (x + y)(x - y)$

**11.** A train moves in a uniform speed at 75km/h. How much time it would take to cover 150km? **OR**

15 persons can build a wall in 8 days. How many persons can build the same wall in 6 days?

**12.** Factorise  $8x^5 - 72x^3$

Match the following

- I.  $a^2 - b^2$       a.  $(a - b)(a - b)$   
 II.  $(a + b)^2$       b.  $(a - b)(a + b)$   
 III.  $(a - b)^2$       c.  $(a - b)(a + b)(a^2 + b^2)$   
 IV.  $a^4 - b^4$       d.  $(a + b)(a + b)$

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

Weight (in kg)	1	2	3	4	5
Price	15	30	45	60	75

**14.** Draw a pie chart of the following:

Work	Rent	Edu	Food	Cloth	Others
Cost	2700	1800	2400	1500	2400

**OR**

The marks obtained by 40 students of 8th class are as follows:

18, 12, 8, 6, 8, 5, 16, 23, 12, 2, 16, 2, 23, 10, 9, 20, 12, 5, 3, 5, 6, 7, 15, 21, 13, 13, 20, 7, 1, 21, 24, 16, 23, 18, 13, 18, 3, 7, 16, 17

Make a frequency distribution by taking class intervals 10-15, 15-20.

**15.** The population of a town is 15000 which increases 4% every year. Find the population after 2 years.

**OR** Find the cost price of each if there is 5% sales tax on its price.

I. Towel of Rs. 120

II. Shoes of Rs. 450

**16.** Sandeep has a square plot of side 25m. He wants to build his house of 20 m × 15m in between the plot and rest part will be covered with grass. Find the rate of grass at Rs. 60 per m<sup>2</sup>.

**OR**

A closed cylinder tank of radius 7, and height 3m is made of iron. Find the rate of iron sheet at Rs. 20 per m<sup>2</sup>.