

# PT4/ANNUAL EXAMINATION, 2023-24

## MATHEMATICS

Time – 3 hrs.

Class – VII

M.M. – 80

Name of the student \_\_\_\_\_ Section \_\_\_\_\_ Date - 13.02.2024 (Tuesday)

### GENERAL INSTRUCTIONS -

- This question paper is divided into four sections A, B, C and D.
- Section A consists of MCQs, Fill ups and Match the following questions. Attempt all the questions.
- Section B consists of 5 questions of 2 marks each. Attempt all the questions.
- Section C consists of 7 questions of 4 marks each. Attempt any 5 questions.
- Section D consists of 8 questions of 5 marks each. Attempt any 6 questions.

### SECTION – A

**Q1. Choose the correct answer.**

**(10x1=10)**

- a) Standard form of  $\frac{32}{-48}$  is
- i)  $\frac{2}{-3}$                       ii)  $\frac{-2}{3}$                       iii)  $\frac{3}{-2}$                       iv)  $\frac{-3}{2}$
- b) Convert  $\frac{9}{25}$  into percent.
- i) 25 %                      ii) 35%                      iii) 36%                      iv) 45%
- c) 0.08 is equal to \_\_\_\_\_
- i) 0.08%                      ii) 0.8%                      iii) 8%                      iv) 80%
- d) Perimeter of an equilateral triangle with each side 18cm is \_\_\_\_\_
- i) 36 cm                      ii) 54 cm                      iii) 64 cm                      iv) 72 cm
- e) Area of a circle with radius 7 cm is
- i) 154 sq.cm                      ii) 145 sq.cm                      iii) 164 sq.cm                      iv) 146 sq.cm
- f) Algebraic expression of the statement “ Sum of 5x and y subtracted from their product” is
- i)  $xy - 5x + y$                       ii)  $5xy - x + y$                       iii)  $5xy - (5x+y)$                       iv)  $5x + y - 5xy$
- g) The coefficient of ‘p’ in  $5p - 6q + 12$  is
- i) 12                      ii) 5                      iii) 6                      iv) -6
- h) Which of the following letters of English Alphabet has more than two lines of symmetry?
- i) X                      ii) M                      iii) H                      iv) O
- i) The value of  $5^0 + 6^0$  is
- i) 0                      ii) 1                      iii) 2                      iv) 3
- j) The alphabet which does not have any line of symmetry is
- i) A                      ii) Q                      iii) H                      iv) M

**Q2. Fill in the blanks.**

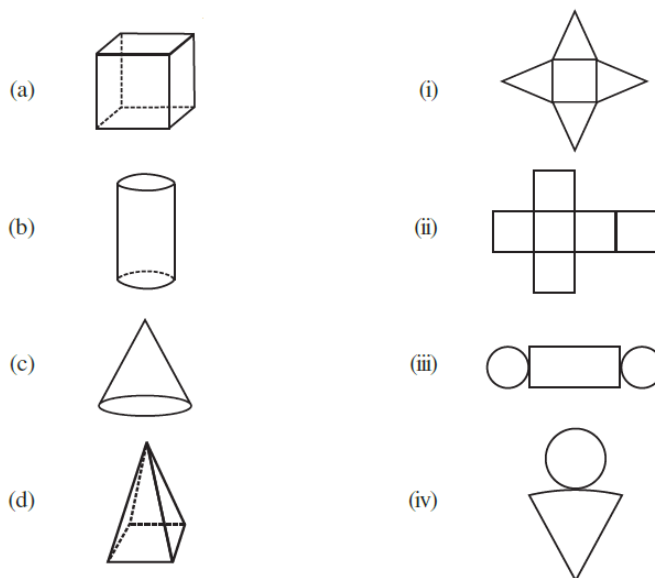
**(6x1=6)**

- i) Amount = Principal + \_\_\_\_\_

- ii) When denominator of a rational number is positive integer and 1 is the only common factor between the numerator and denominator, such rational number is said to be in \_\_\_\_\_.
- iii) There are \_\_\_\_\_ rational numbers between two rational numbers.
- iv) Area of a parallelogram = \_\_\_\_\_  $\times$  \_\_\_\_\_
- v) The corner of a solid shape is called its \_\_\_\_\_
- vi) 10000 in exponential form is \_\_\_\_\_

**Q3. Match the following nets with their solid shapes.**

**(4 $\times$ 1=4)**



### **SECTION –B**

**(Attempt all the questions).**

**(5 $\times$ 2=10)**

- Q4. Find out 75% of 200.
- Q5. Find the quotient of  $(-16) \div \frac{2}{3}$
- Q6. If  $x = 2$  then what will be value of  $x^2 + 5x - 2$  ?
- Q7. What cross section do you get when you give a vertical cut to  
i) a brick?                      ii) an orange?
- Q8. Write name of two shapes with no line of symmetry.

### **SECTION –C**

**(Attempt any 5 questions.)**

**(5 $\times$ 4=20)**

- Q9. A sum of Rs 1,500 is lent for 3 years at the rate of 6 % per annum. Find the interest.
- Q10. Find the sum of  $\frac{-5}{6} + 2\frac{3}{5}$
- Q11. If the circumference of a circular sheet is 176 m then find its radius. Also find its area.
- Q12. Identify the terms and factors in the following expression. Show these by tree diagram.  
 $7m^2n + 5mn^2$ .
- Q13. Express the following as a product of prime factors only in exponential form.

$$64 \times 125$$

- Q14. What letters of the English alphabet have reflectional symmetry (symmetry related to mirror reflection)
- a) a vertical mirror (any two)
  - b) a horizontal mirror (any two)
  - c) both horizontal and vertical mirror ( any two)
- Q15. In the given expression  $8x^2 - 5x + 2$  identify
- i) coefficient of  $x^2$
  - ii) coefficient of  $x$
  - iii) constant
  - iv) number of terms

### SECTION - D

**(Attempt any 6 questions).**

**(6x5=30)**

- Q16. Find out 5 rational numbers between  $\frac{7}{5}$  and  $\frac{5}{3}$ .
- Q17. Simplify the following expression and find the value if  $x = 3$
- $$8x + 5(x - 2)$$
- Q18. A circular flower bed is surrounded by a path 4m wide. The diameter of the flower bed is 66m. What is the area of this path?
- Q19. If  $p = 10$ , find the value of  $p^3 - 3(p - 10)$ .
- Q20. Simplify :  $\frac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$
- Q21. Mahima buys a book for Rs 275 and sells it at a loss of 15%. How much does she sell it for?
- Q22. Complete the following table.

Shape	Order of rotation	Angle of rotation
Square		
Rectangle		
Equilateral Triangle		
Regular hexagon		
Circle		

- Q23. Name the shadow that you might get when you throw light on following objects:
- a) A ball
  - b) A dice
  - c) A birthday cap
  - d) A book
  - e) A cylindrical glass

