

PT4/ANNUAL EXAMINATION, 2022-23

MATHEMATICS

Time - 3 hrs.

Class – VII (Set-A)

M.M. – 80

Name of the student _____ Section _____ Date - 11.02.2023 (Saturday)

GENERAL INSTRUCTIONS:

- This question paper is divided into four sections A, B, C and D.
- SECTION A consists of 2 Questions. Q1 contains 10 MCQs of 1 mark each and Q2 contains 4 fill ups of 1 mark each. Attempt all the questions.
- SECTION B consists of 8 Questions (Q3-Q10) of 2 marks each. Attempt all the questions.
- SECTION C consists of 6 Questions (Q11-Q16) of 4 marks each. Attempt any 5 questions.
- SECTION D consists of 8 Questions (Q17-Q24) of 5 marks each. Attempt any 6 questions.
- Draw neat diagrams wherever needed.
- Show the required calculations in fair.

SECTION -A (Attempt all questions)

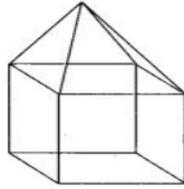
Q1. Choose the correct answer:

(10×1=10)

- i) 0.07 is equal to
(a) 70% (b) 7% (c) 0.7% (d) 0.07%
- ii) How many rational numbers are there between two rational numbers?
(a) 1 (b) 0 (c) infinite (d) 100
- iii) The number of perpendicular lines that can be drawn to a line from a point not on the line.
(a) 1 (b) 0 (c) infinite (d) 2
- iv) Circumference of a circle is 88 cm. Its radius is
(a) 8 cm (b) 11 cm (c) 14 cm (d) 44 cm
- v) The coefficient of x in $9 - x + y$ is:
(a) 0 (b) 9 (c) -1 (d) 1
- vi) x is a non-zero rational number. Product of the square of x with the cube of x is equal to the
(a) second power of x (b) third power of x (c) fifth power of x (d) sixth power of x
- vii) Which of the following is equal to 1?
(a) $2^0 + 3^0 + 4^0$ (b) $2^0 \times 3^0 \times 4^0$ (c) $(3^0 - 2^0) \times 4^0$ (d) $(3^0 - 2^0) \times (3^0 + 2^0)$
- viii) Letter 'H' of the English alphabet have reflectional symmetry (that is symmetry related to mirror reflection) about
(a) Both horizontal and vertical mirror (b) only vertical mirror
(c) Neither horizontal nor vertical mirror (d) only horizontal mirror
- ix) Which of the following letters of English alphabets have 2 lines of symmetry?
(a) B (b) Z (c) X (d) M
- x) What cross-section do you get when you give a horizontal cut to a dice?
(a) Square (b) Pentagon (c) Triangle (d) Circle

Q2. Fill in the blanks.**(4×1=4)**

- i) 40% of Rs 450 = _____.
- ii) The standard form of $\frac{24}{-36}$ is _____.
- iii) 1 hectare = _____ m².
- iv) The number of vertices in the given solid shape are _____.

**SECTION - B (Attempt all questions)****Solve the following:****(8×2=16)**

- Q3. Find the ratio of 30 cm to 15 m
- Q4. Find the sum of $\frac{2}{3}$ and $\frac{1}{2}$
- Q5. Given $\triangle ABC$ with $m\angle A = 85^\circ$, $m\angle B = 115^\circ$ and $AB = 5$ cm. Identify whether the triangle can be constructed or not. If not state the reason why you cannot construct it.
- Q6. Find the breadth of a rectangular sheet of paper, if its perimeter is 100cm and its length is 35cm.
- Q7. Subtract : $(- 6xy)$ from $10xy$
- Q8. Express 9876500 in standard form.
- Q9. Name two quadrilaterals which have both line symmetry and rotational symmetry of order more than 1.
- Q10. If two cubes of dimensions 2cm by 2cm by 2cm are placed side by side, what would the dimensions of the resulting cuboid be?

SECTION - C**Attempt ANY FIVE questions.****(5×4=20)**

- Q11. Find percentage of decrease if price of shirt decreased from Rs 280 to Rs 210.
- Q12. Simplify:
(i) $\frac{1}{5} \times \left(\frac{-3}{4}\right)$ (ii) $\left(\frac{-6}{5}\right) \div \frac{3}{2}$
- Q13. Construct a $\triangle ABC$ given that $AB = 5$ cm, $BC = 6$ cm and $AC = 7$ cm.
- Q14. Find the value of the expression $5n^2 + 5n - 2$ when $n = (- 2)$
- Q15. Express 648 as a product of powers of their prime factors.
- Q16. Draw net of a dice and a cylinder.

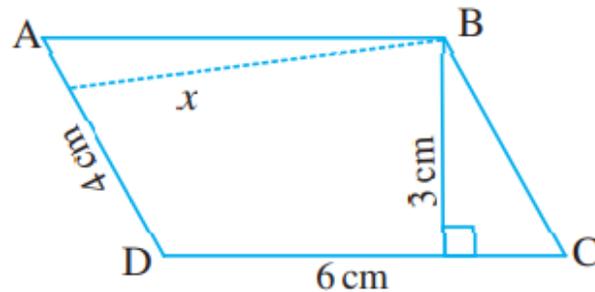
SECTION - D**Attempt ANY SIX questions.****(6×5=30)**

- Q17. Anita takes a loan of Rs. 5,000 at 15% per annum as rate of interest. Find the amount she has to pay at the end of two years.

Q18. List 4 rational numbers between $\frac{1}{2}$ and $\frac{2}{5}$

Q19. Construct a ΔPQR given that $PQ = 3$ cm, $QR = 5.5$ cm and $\angle PQR = 60^\circ$.

Q20. The two sides of the parallelogram ABCD are 6 cm and 4 cm. The height corresponding to the base CD is 3 cm. Find the (i) area of the parallelogram. (ii) the height corresponding to the base AD.



Q21. Two cross roads, each of width 5 m, run at right angles through the center of a rectangular park of length 70 m and breadth 45 m and parallel to its sides. Find the area of the roads. Also find the cost of constructing the roads at the rate of Rs 105 per m^2 .

Q22. What should be taken away from $(24ab - 10b - 18a + 30)$ to obtain $(30ab + 12b + 14a + 30)$?

Q23. Simplify $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$

Q24. Complete the table

Shape	Order of Rotation	Angle of Rotation
Square		
Rectangle		
Equilateral Triangle		
Regular Hexagon		
Rhombus		

