

KENDRIYA VIDYALAYA SANGATHAN, RAIPUR REGION
SESSION ENDING EXAM (2024-25)
SUBJECT – MATHEMATICS

CLASS VII

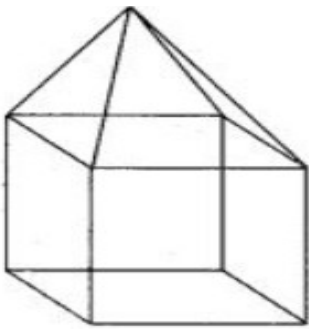
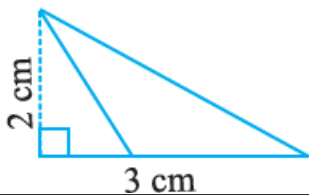
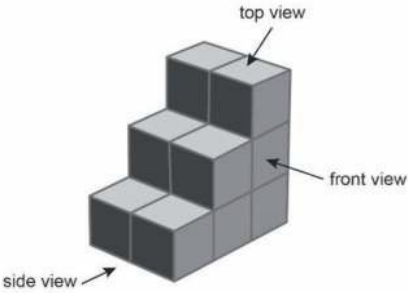
MAX. MARKS: 60

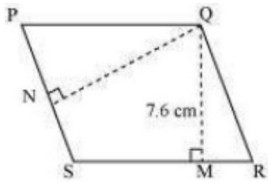
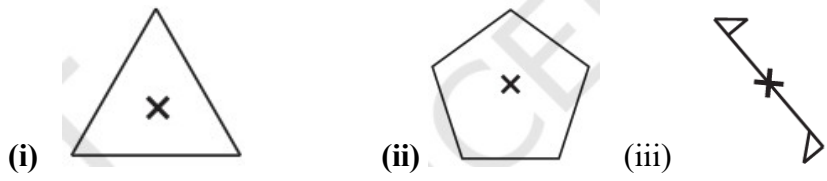
TIME: 2 ½ HRS

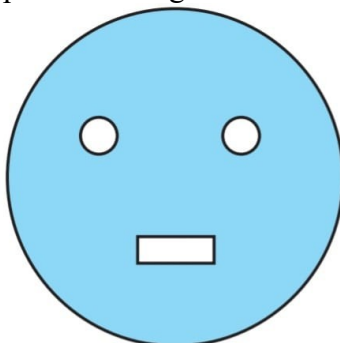
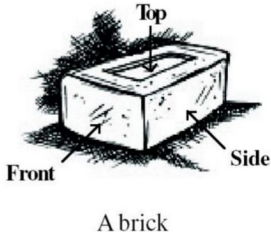
General Instructions:

- (i) All the questions are compulsory.
(ii) The question paper consists of 30 questions divided into 4 sections A, B, C and D. **Section A** comprises of 10 MCQs and 5 fill in the blanks type questions of **1 mark** each. **Section B** comprises of 5 questions of **2 marks** each. **Section C** comprises of 5 questions of **3 marks** each. **Section D** comprises of 5 questions of **4 marks** each.
(iii) Use of calculators is not permitted.

	SECTION-AQ1 – 10 are MCQs	
1.	Which of the following rational numbers is equivalent to $\frac{2}{3}$? (a) $\frac{3}{2}$ (b) $\frac{4}{6}$ (c) $\frac{4}{9}$ (d) $\frac{9}{4}$	1
2.	Which of the following rational numbers is equal to its reciprocal? (a) 1 (b) 2 (c) $\frac{1}{2}$ (d) 0	1
3.	One of the sides and the corresponding height of a parallelogram are 4 cm and 3 cm respectively. The area of the parallelogram is (a) 14 cm^2 (b) 6 cm^2 (c) 4.5 cm^2 (d) 12 cm^2	1
4.	In reference to a circle the value of π is equal to (a) $\frac{\text{area}}{\text{circumference}}$ (b) $\frac{\text{area}}{\text{diameter}}$ (c) $\frac{\text{circumference}}{\text{diameter}}$ (d) $\frac{\text{circumference}}{\text{radius}}$	1
5.	Factors of $-5x^2y^2z$ are (a) $-5 \times x \times y \times z$ (b) $-5 \times x^2 \times y \times z$ (c) $-5 \times x \times x \times y \times y \times z$ (d) $-5 \times x \times y \times z^2$	1
6.	$(1^0 + 2^0 + 3^0)$ is equal to (a) 0 (b) 1 (c) 3 (d) 6	1
7.	Which of the following is not true? (a) $3^2 > 2^3$ (b) $3^3 = 9$ (c) $4^3 = 2^6$ (d) $2^5 > 5^2$	1
8.	Name of the solid whose net diagram is given below: (a)Cylinder (b)Square (c)Circle (d)Triangle 	1
9.	What cross-sections do you get when you give a vertical cut to a circular pipe?	1

	(a) Rectangle (b) Circle (c) Square (d) Triangle	
10	The number of faces of the solid shape is (a) 4 (b) 6 (c) 9 (d) 8 	1
Q 11 – 15 are fill in the blanks type.		
11.	The standard form of $\frac{-8}{-36}$ is _____.	1
12.	In the given figure, the area of the triangle is _____. 	1
13.	If Rohit has $5xy$ toffees and Shantanu has $20yx$ toffees, then Shantanu has _____ more toffees.	1
14.	The letter 'A' has _____ line of symmetry.	1
15.	Number of line of symmetry in a square _____.	1
SECTION-B		
16.	Represent these numbers on the number line: (i) $\frac{3}{4}$ (ii) $\frac{-7}{4}$ (OR) Find $5 \div 3\frac{1}{8}$	2
17.	Find the circumference of a circle whose diameter is 28 cm.	2
18.	If $p = -10$, find the value of $p^2 - 2p - 100$.	2
19.	Express 648 as a product of prime factors only in exponential form.	2
20.	Rajat arranged some cubes as shown here. (i) How many cubes did he use? (ii) "An equal number of cubes are seen in the top, front and side views in this cubical arrangement." Is the statement correct? 	2

SECTION C			3
21.	Find three rational numbers between -2 and -1 .		
22.	PQRS is a parallelogram. QM is the height from Q to SR and QN is the height from Q to PS. If SR = 12 cm and QM = 7.6 cm. Find: (a) the area of the parallelogram PQRS (b) QN, if PS = 8 cm (OR) Find the cost of polishing a circular table-top of diameter 1.6 m, if the rate of polishing is Rs.15 / m² (Take $\pi = 3.14$)		3
23.	Write the algebraic expressions in the following cases using variables, constants and arithmetic operations. (i) The number z multiplied by itself. (ii) Number 5 added to three times the product of numbers m and n. (iii) Sum of numbers a and b subtracted from their product.		3
24.	Simplify $\frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5}$		3
25.	Write the order of rotational symmetry for given figure about the point marked.		3
SECTION-D			
26.	(i) Simplify the expression and state the type of algebraic expression $2(a^2 + ab) + 3 - ab$ (ii) Find the value of the expression if $a = 5$ and $b = -3$		4
27.	(i) Find the number from the following expanded form: (a) $8 \times 10^4 + 6 \times 10^3 + 0 \times 10^2 + 4 \times 10^1 + 5 \times 10^0$ (b) $9 \times 10^5 + 2 \times 10^2 + 3 \times 10^1$ (ii) Express the following in standard form: (a) 70,00,000 (b) 39087.8		4
28.	State the number of lines of symmetry for the following figures: (a) An equilateral triangle (b) A rectangle (c) A regular hexagon (d) A circle (e) Scalene triangle (f) parallelogram (g) Rhombus (h) An isosceles triangle OR (a) Name the quadrilaterals which have both line of symmetry and rotational symmetry of order more than 1		4

	(b) After rotating by 60° about a centre, a figure looks exactly the same as its original position. (i) Name the figure (ii) At what other angles will this happen for the figure ?	
29.	In a drawing class, Akriti and Kritika are planning to make a face mask using card board . From a circular card sheet of radius 14 cm, they removed two circles of radius 3.5 cm and a rectangle of length 3 cm and breadth 1cm and made a design as shown in the adjoining figure.  (i) Find the area of two small circles . (Take $\pi = 22/7$) (ii) Find the area of the remaining sheet.	4
30.	Kritika built a small hut with mud bricks. Inside the hut she was playing with two cubes of dimensions 2 cm by 2 cm by 2 cm.  A hut  A brick (i) Draw the front view, side view and top view of the hut. (ii) What cross-sections do you get when you give a horizontal cut to a brick? (iii) If the two cubes are placed side by side, what could be its length, breadth and height?	4