

KENDRIYA VIDYALAYA SANGATHAN LUCKNOW REGION
SESSION ENDING EXAMINATION [2023-2024]
SUB- MATHEMATICS
CLASS VII

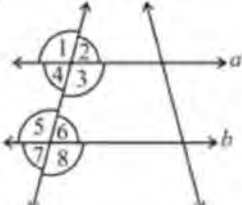
TIME: 2 ½ hrs.

MM: 60

General Instructions:

1. This question paper has four sections A, B, C and D.
2. Section A has 15 Multiple Choice questions carrying 1 mark each.
3. Section B has 5 questions carrying 2 marks each.
4. Section C has 5 questions carrying 3 marks each.
5. Section D has 5 questions carrying 4 marks each.
6. Internal choices are provided in 2 questions of section B, 2 questions of section C and 2 questions of section D.
7. All questions are compulsory.

SECTION –A

1. _____ make one whole.
 (a) One half (b) two halves (c) Three halves (d) Five halves 1
2. $\frac{2}{3}$ of 18 is
 (a) 12 (b) 18 (c) 14 (d) 16 1
3. State the property that is used in the following statement?
 If $a \parallel b$, then $\angle 4 = \angle 6$.

 (a) Corresponding angles (b) Alternate interior angles
 (c) Vertically opposite angles (d) None of these 1
4. The Rational number $\frac{21}{28}$ in standard form is,
 (a) $\frac{21}{28}$ (b) $\frac{3}{8}$ (c) $\frac{3}{4}$ (d) $\frac{2}{3}$ 1
5. The rational number $\frac{-2}{3}$ with denominator 15 is:
 (a) $\frac{10}{15}$ (b) $\frac{2}{15}$ (c) $\frac{3}{15}$ (d) $\frac{-10}{15}$ 1
6. The area of a parallelogram is 100 sq. meter. If base of the parallelogram is 20 meter then its height is...
 (a) 10 m (b) 5 m (c) 20 m (d) 8 m 1
7. The region occupied by a closed figure is called its :
 (a) Volume (b) Perimeter (c) Area (d) None of these 1
8. The value of the expression $a^2 + b^2$ for $a=1$ and $b=1$
 (a) 1 (b) 0 (c) -1 (d) 2 1
9. 0.1×51.7 is
 (a) 5.17 (b) 0.517 (c) 517 (d) none of these 1
10. The value of 5^3 is
 (a) 15 (b) 125 (c) 5 (d) 3 1
11. The exponential form of 216 is,

- (a) 6^3 (b) 3^6 (c) 5^3 (d) 2^3 1
12. Number of line of symmetry in a regular hexagon is
 (a) 4 (b) 6 (c) 5 (d) 3 1
13. In the picture given below, the sum of dots facing up on both dice is 6. What would be the sum of dots facing down? 1



- (a) 7 (b) 8 (c) 9 (d) 10
14. The number of faces in the given solid are ... 1



- (a) 10 (b) 8 (c) 9 (d) 11
15. The other name for the line of symmetry of a circle is
 (a) diameter (b) radius (c) chord (d) sector 1

SECTION -B

16. Solve: $\frac{1}{4} + \frac{5}{6}$ 2

OR

- Find the product of 0.025 and 3.5.
17. Find the angle which is equal to its complement. 2

OR

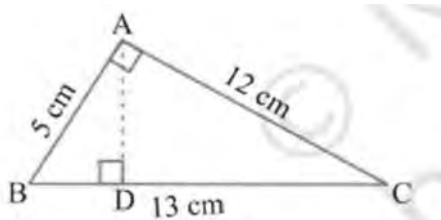
- Find the angle which is equal to its supplement
18. Rahul pays Rs500 in advance on his account at a sports club. Each time, he visits the club, Rs 10 is deducted from the account. How much balance (in Rs.) is left in Rahul's account after x visits 2

19. Express the following in exponential form:
 (a) $5 \times 5 \times 7 \times 7 \times 7$ (b) $a \times a \times a \times c \times c \times c \times c \times d$ 2

20. What cross-section do you get when you give a
 (i) Vertical cut to a round apple 2
 (ii) Horizontal cut to a die

SECTION -C

21. ABC is right angled at A. AD is perpendicular to BC. If AB = 5 cm, BC = 13 cm and AC = 12 cm, Find the area of $\triangle ABC$. 3



22. (i) Find the product of $\frac{-7}{5}$ with its reciprocal. 3
 (ii) Find : $\frac{-2}{5} - (\frac{-3}{5})$

OR

Represent the following on a number line

- (a) $\frac{5}{6}$ (b) $\frac{-4}{3}$
23. Simplify $\frac{12^3}{6^2} \times \frac{9^3}{8^3} \times \frac{4}{9}$ 3
24. Look at English alphabets given in the box and answer the questions given below 3

B, C, Q, M, K, P, O

- (i) Which of the alphabets listed above have a vertical line of symmetry?
- (ii) Which of the alphabets have a horizontal line of symmetry?
- (iii) Which alphabets have no line of symmetry?

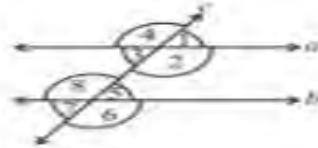
OR

Give three examples of shapes with no line of symmetry (Draw figures).

25. The dimensions of a cuboid are 5 cm, 3 cm and 2 cm. Draw an oblique sketch of this cuboid. 3

SECTION -D

26. In the adjoining figure, identify 4



- (i) The pairs of alternate interior angles.
- (ii) The pairs of interior angles on the same side of the transversal.
- (iii) The line c is called a _____.

27. From a rope 15 m long, $4\frac{2}{3}$ m is cut off and then $\frac{3}{5}$ th m from the remaining part is cut off again. Find the length of the left part of the rope. 4

28. A gardener wants to fence a circular garden of diameter 21 m. Find the length of rope he needs to purchase, if he makes 2 rounds of fence. Also find the cost of rope, if it costs 4

Rs. 4.00 per meter. (Use $\pi = \frac{22}{7}$)

OR

A circular flower bed is surrounded by a path 4m wide. The diameter of the flower bed is 66 m. What is the area of this path? (Use $\pi = 3.14$)

29. Find the value of the following expressions for $a = 3$, $b = 2$. 4

(i) $a^2 + b^2$ (ii) $a^2 - b^2 + 2ab$

OR

Simplify the expression and find its value when $a = 5$ and $b = -3$.

$$2(a^2 + ab + b) + 3 - ab + 2b$$

30. Draw an isometric sketch of a cuboid whose dimensions are 4cm, 3cm and 2 cm 4