



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL

ANNUAL EXAMINATION (2025-26)

MATHEMATICS

Class: VII

Date: 21.03.26

Admission no:

Set-2

Time: 3 hrs.

Max Marks: 80

Roll no:

General Instructions:

- This question paper consists of FIVE sections
- All answers must be correctly numbered as in the question paper and written in the answer sheet.
- Write neatly and draw diagrams wherever necessary.

Section A

Choose the correct answer

1 x 20 = 20

1. The value of $(-1)^{50}$ is _____.
(a) 50 (b) -1 (c) 1 (d) None of these
2. Which of the following is the coefficient of 'z' in the expression: $7z^2 + z + 4$
(a) 7 (b) 1 (c) 4 (d) 0
3. 100% of 450 = _____
(a) 100 (b) 450 (c) 45 (d) 400
4. Which is the longest side of a right-angled triangle?
(a) Base (b) Height (c) Hypotenuse (d) all sides equal
5. The constant term in the expression $5 + x + x^2$ is _____.
(a) x^2 (b) x (c) 5 (d) +
6. The solution of the equation $p \div 25 = 20$ is _____.
(a) 500 (b) 45 (c) 5 (d) 100
7. The ratio of ₹ 8 to 200 paise is _____.
(a) 4:1 (b) 1: 4 (c) 8 : 200 (d) 200 : 8
8. The area of a rectangle is 36 cm^2 . If breadth is 6 cm, its length is _____.
(a) 6 cm (b) 12 cm (c) 216 cm (d) 30 cm
9. Angles which are both supplementary as well as vertically opposite are _____.
(a) $95^\circ, 85^\circ$ (b) $45^\circ, 45^\circ$ (c) $100^\circ, 80^\circ$ (d) $90^\circ, 90^\circ$

10. If one angle of a complementary pair is 25° , the other angle is _____
(a) 75° (b) 65° (c) 90° (d) 55°
11. The perimeter of a triangle with sides 5 cm, 7 cm and 8 cm is _____
(a) 20 cm (b) 15 cm (c) 25 cm (d) 18 cm
12. $0.45 =$ _____
(a) $\frac{45}{100}$ (b) $\frac{65}{100}$ (c) $\frac{100}{100}$ (d) $\frac{5}{100}$
13. An algebraic expression having three unlike terms is called
(a) monomial (b) binomial (c) polynomial (d) trinomial
14. The difference between highest and lowest value of data is called _____
(a) Range (b) mean (c) median (d) mode
15. If radius of a circle is 9 cm, its diameter is _____
(a) 18 cm (b) 9 cm (c) 4.5 cm (d) 27 cm
16. Write the statement "5 added to a number gives 12" as an equation
(a) $x - 5 = 12$ (b) $x + 5 = 12$ (c) $5x = 12$ (d) $x \div 5 = 12$
17. The sum of any two sides of a triangle is always _____ the third side.
(a) equal to (b) greater than (c) less than (d) half of
18. The value of 6^0 is _____
(a) 0 (b) 6 (c) 1 (d) None of these
19. Assertion: Perimeter of a square = $4 \times$ side
Reason: All sides of a square are equal.
(a) Both assertion and reason are correct and reason is a correct explanation for the assertion.
(b) Both assertion and reason are correct, but the reason is not a correct explanation for the assertion.
(c) The assertion is correct, but the reason is false.
(d) Both assertion and reason are false.
20. Assertion: Ratio of 5 g to 5 kg is $1/1000$
Reason: $5 \text{ kg} = 5000 \text{ g}$
(a) Both assertion and reason are correct and reason is a correct explanation for the assertion.
(b) Both assertion and reason are correct, but reason is not a correct explanation for the assertion.
(c) Assertion is correct, but reason is false.
(d) Both assertion and reason are false.

Section B

Do as directed

2 x 5 = 10

21. Simplify: (a) 4×10^3 (b) $3^2 \times 3^4$

or

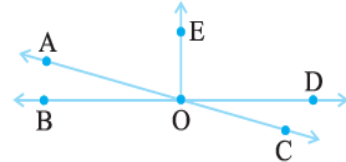
Write the expanded form of (a) 508309 (b) 4025178

22. Find the supplement of 38° .

or

In the adjoining figure, name the following pairs of angles.

(a) Complementary angles (b) adjacent angles



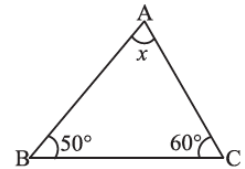
23. The marks obtained by 10 students are:

20, 35, 40, 50, 45, 30, 25, 60, 55, 40

Find the mean marks.

24. Convert 40% into decimal and fraction (in simplest form).

25. Find the value of the unknown x in the following diagram:



Section C

Solve the following

3 x 6 = 18

26. If $x = -4$, find the value of: (a) $x^2 - 2x$ (b) $5x - 3$

or

Find, if $p = -10$, find the value of $p^2 - 2p - 100$

27. Identify the greater number:

(a) 3^4 or 4^3

(b) 2^5 or 5^2

(c) 6^2 or 2^6

28. Asha donated ₹ 350 more than Riya. Total donation is ₹ 2150.

If Riya donated x rupees,

(a) Express Asha's donation.

(b) Form equation.

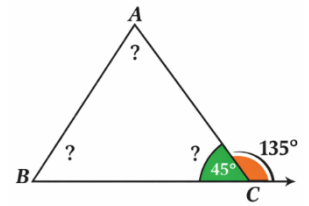
(c) Find Riya's donation.

29. The perimeter of a rectangle is 180 cm. Length = 50 cm. Find breadth and area.

or

Find the height of the parallelogram if the base is 20 cm and the area is 246 cm^2

30. In a town, 35% are men, 45% are women and remaining children are 2000. Find the number of men and women and also what percent are children?
31. In a triangle, an exterior angle at a vertex is 135° and its one of the interiors opposite angles is 45° . Find all the angles of the triangle.



Section D

Solve the following

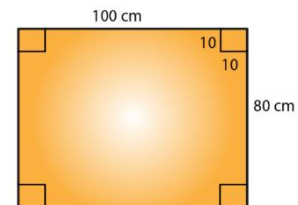
$$5 \times 4 = 20$$

32. A gardener wants to fence a circular garden of diameter 21m. Find the length of the rope he needs to purchase, if he makes 2 rounds of the fence. Also, find the cost of the rope, if it costs ₹ 4 per meter. (Take $\pi = 22/7$)



or

From a rectangular sheet of tin, of size 100 cm by 80 cm, are cut four squares of side 10 cm from each corner. Find the area of the remaining sheet.



33. (a) Simplify the expression and find its value if $x = 3$, $a = -1$, $b = -2$.
 $3x - 5 - a + 9b$
 (b) When $a = 0$, $b = -1$, find the value of the given expressions $2a^2 + b^2 + 1$

34. A 15 m long ladder reached a window 12 m high from the ground on placing it against a wall at a distance a . Find the distance of the foot of the ladder from the wall.



or

Find the perimeter of the rectangle whose length is 40 cm and a diagonal is 41 cm.



35. The number of students in 7 different classes is given below. Represent this data on the bar graph

Class	6 th	7 th	8 th	9 th	10 th	11 th	12 th
Number of Students	130	120	135	130	150	80	75

How would you choose a scale?

Section E

Do as directed

4 x 3 = 12

36. A carpenter is cutting a wooden plank. He creates an angle arrangement where three angles on a straight line are $3x$, $2x+10^\circ$ and $x+20^\circ$
- (a) Form an equation
 - (b) Solve for 'x'
 - (c) Find each angle
37. If Manvita's father's age is a half year less than 13 times of her age. Find her age if her father's age is 32.
38. A computer storage unit uses bytes to store information, often in powers of 2. A smartphone has a storage capacity of 64 GB and tablet has 256 GB.
- (a) Express the total capacity of 4 such smart phones in exponential form.
 - (b) How many times larger is the tablet storage compared to the phone's storage.
 - (c) If 1 byte is 8 bits, how many bits are in 2^{10} bytes.
- or
- Find the above storage capacity in exponential form

ALL THE BEST