Class : 7

Register Number

SECOND TERM - SUMMATIVE ASSESSMENT(SA) - 2023-24

Time Allowed : 2.00 Hours] **MATHEMATICS** [Max. Marks :60

PART - I

I. Choose the correct Answer. 5x1=5

1. To convert grams into kilograms, we have to divide to it by
   a) 10000 b) 1000 c) 100 d) 10
2. The ratio of the area of a circle to the area of its semicircle is
   a) 2:1 b) 1:2 c) 4:1 d) 1:4
3. Observe the equation $(10+y)^4 = 50625$ and find the value of y
   a) 1 b) 5 c) 4 d) 0
4. If two plane figures are congruent then they have
   a) Same size b) Same shape
   c) Same angle d) Same shape and same size
5. The elements along the sixth row of the Pascal's Triangle is
   a) 1, 5, 10, 5, 1 b) 1, 5, 5, 1
   c) 1, 5, 5, 10, 5, 5, 1 d) 1, 5, 10, 10, 5, 1

II. Fill in the Blanks. 5x1=5

6. The simplest form of 0.35 is ---------
7. Formula used to find the circumference of a circle is -------
8. The expanded form of p^3q^2 is ----------
9. The exterior angles of a triangle add up to --------
10.

X	1	2	3	4	5
Y	4	8	12	16	-

III. Say true or false: 5x1=5

11. Decimal form of $\frac{3}{5}$ is 0.6.
12. The formula to find the width of the circular path is (r-R) units.
13. $2^3 \times 3^2 = 6^5$.
14. Two circles are congruent if they have the same radius.
15. General form of the sequence 1, 4, 9, 16, ... is $y = n^2$.

IV. Match the following: 5x1=5

16. $\frac{1}{10}$ - π
17. Area of the rectangular path - a^{m+n}
18. $\frac{c}{d}$ - 7
19. Degree of $6x^7 - 7x^3 + 4$ is - 0.1
20. $a^m \times a^n$ - LB - lb

PART - II

V. Answer any 10 questions. Q.No.35 is Compulsory. 10x2=20

21. Expand the decimal number 5678.358.
22. Arrange the following in ascending order. 2.35, 2.53, 5.32, 3.52, 3.25.
23. Represent the decimal numbers 1.7 and 2.1 on the number line.

24. Between which two whole numbers, the following decimal numbers lie?
(i) 3.3 (ii) 0.9

25. Write the following amount using decimals.
(i) 809 rupees 99 paise (ii) 147 rupees 70 paise

26. What is the circumference of the circular disc of radius 14 cm? (use $\pi = 22/7$)

27. Find the area of a hula loop whose diameter is 28 cm (use $\pi = 22/7$)

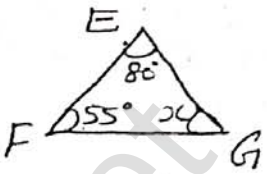
28. Express using exponential form of the number 512.

29. Find the unit digit of expanded form. (i) 25^{23} (ii) 19^{12}

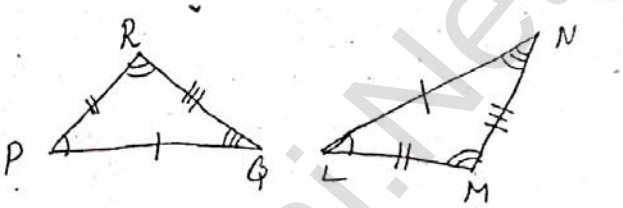
30. Identify the degree of the expression. $2a^3bc + 3a^3b + 3a^3c - 2a^2b^2c^2$.

31. Find the like terms: $12\ x^3y^2z$, $-y^3x^2z$, $4z^3y^2x$, $6x^3z^2y$, $-5y^3x^2z$.

32. Find the value of x in the given triangle.



33. If the given two triangles are congruent, then identify all the corresponding sides.



34. Find the relationship between x and y from the given table.

X	-2	-1	0	1	2
Y	4	5	6	7	8

35. Find the value of $a^o + b^o + c^o$

PART - III

VI. Answer any 5 of the following questions. Q.No.43 is compulsory. **5x3=15**

36. Express the following decimal numbers in place value grid and write the place value of the underlined digit. (i) 53.61 (ii) 9.657 (iii) 4972.068

37. A Rose garden is in the form of circle of radius 63 m. The gardener wants to fence it at the rate of ₹150 per metre. Find the cost of fencing?

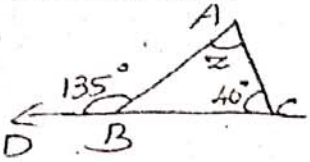
38. A rectangular garden has dimensions 11m x 8 m. A path of 2m wide has to be constructed along its sides. Find the area of the path.

39. If a = 3 and b = 2 then find the value of (i) $a^b + b^a$ (ii) $(a+b)^b$

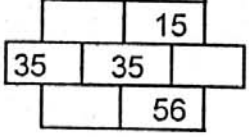
40. Add and find the degree of the following expression: $(k^2 - 25k + 46)$ and $(23 - 2k^2 + 21k)$

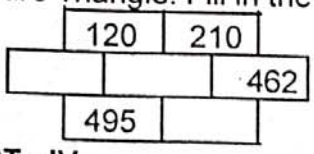
41. If the three angles at a triangle are in the ratio 3:5:4, then find them?

42. In the ΔABC shown in the figure, find the angle z.



43. The following shapes are taken from Pascal's Triangle. Fill in the missing numbers.





PART - IV

VII. Answer the following. **1x5=5**

44. a) Draw a triangle XYZ given that XY = 6 cm, YZ = 5.5 cm and ZX = 5 cm.

(OR)

b) Draw a triangle PQR given that $\angle P = 115^o$, $\angle Q = 40^o$ and PQ=6cm.