SUMMATIVE ASSESSMENT – FIRST TERM

MATHEMATICS

Max. Marks: 100

Std - VIII

Time: 2.30 Hrs

I. Choose the correct answer: **10 x 1 = 10**

1) Convert $\frac{-2}{5}$ into decimal value.

a) 0.04 b) –0.04 c) 0.4 d) –0.4

2) $\frac{-p}{q} + \frac{p}{q}$ is equal to _____.

a) 1 b) 2 c) 0 d) 3

3) $\frac{5^3}{4^3}$ = _____.

a) $\frac{64}{125}$ b) $\frac{15}{12}$ c) $\frac{625}{144}$ d) $\frac{125}{64}$

4) The value of $(1\text{-}3)^3$ is _____.

a) 2197 b) 219.7 c) 201.97 d) 2.197

5) $\frac{x^5}{x^2}$ is equal to _____.

a) x^2 b) x^7 c) x^9 d) x^3

6) Find the area of a circle whose radius is 4.2 cm

a) 45.45 sq. cm b) 44.55 sq. cm c) 55.44 sq. cm d) 42.55 sq. cm

7) $(xy - 2y - 7x + 14) \div (x - 2) = ?$

a) $y - 7$ b) $7y + 1$ c) $-y - 7$ d) $y + 7$

8) The cost of a laptop is ₹ 3500 more than the desktop computer. If both can be bought for ₹ 53,500 the cost of the laptop is _____.

a) ₹ 20,000 b) ₹ 18,500 c) ₹ 28,500 d) ₹ 15,800

9. The equation $x^2 + y = 4$ is a _____ function.

a) Linear b) Cubic c) Quadratic d) Constant

10. $\frac{-25a^3}{5a}$ = _____.

a)1 b) 5a c) $5a^2$ d) $5a^3$

II. Fill in the blanks: **5 x 1 = 5**

11. The ratio between the circumference and diameter of any circle is _____.
12. A part of the circumference of a circle is called as _____.
13. $\frac{265a^2b^2c^2}{16abc}$ is equal to _____.
14. In general, a linear equation has _____ solutions.
15. Two thirds of a number is increased by 5 is 25. The number is _____.

III. Match the following with correct equations. **5 x 1 = 5**

16. The perimeter of a park is 480 m. Its length is x *m* and the breadth is 100 m.	$5x = 360$
17. Two times a number is 10 less than the sum of 8 and the number.	$2x = 38 + 18$
18. Krishna had 12 more stamps than Rohit and Rohit had equal no. of Stamps as Ravi altogether they had 180 stamps.	$2(x + 100) = 480$
19. The cost of two packets of biscuits is ₹ 18 more than ₹ 38.	$x + x + (x + 12) = 180$
20. A train travels at a speed of x km per hour. It covered a distance of 360 km in 5 hours.	$2x = (8 + x) - 10$

IV. Do as Directed: **10 x 2 = 20**

21. Simplify: $1\frac{2}{3} + \left(\frac{-3}{4}\right) + \frac{3}{5}$
22. Evaluate: $\left(\frac{-2}{3}\right)^2 \times \left(\frac{5}{4}\right)^3$
23. Calculate the area of square with perimeter
    a) 28 cm b) 82 cm
24. Find the square root, of the following.
    a) $\sqrt{\frac{242}{450}}$ b) $\sqrt{61009}$
25. Evaluate $20^3 - 19^3$
26. Find the sum of $1^2 + 2^2 + 3^2 + \ldots\ldots\ldots + 50^2$
    [use the formula $\frac{n(n+1)(2n+1)}{6}$]
27. The radius of the circle is 2 cm. What is the circumference?
28. Simplify: $\frac{100x^2y^2z^2 - 64x^3y^5z^6}{4xy^2z}$
29. Factorise using HCF.
    a) $2a^2 - 4a^3 + 10a^5$ b) $2x + 2y + 2z$

30. a) Find two consecutive odd numbers such that their sum is 148.

    b) A number consists of two digits whose sum is 9. If 27 is subtracted from the original number, its digits are interchanged. Find the original number.

V. Answer the following questions briefly. (Any 8) **8 x 5 = 40**

31. Show that Show that $\left(\frac{\frac{7}{9}-5}{\frac{4}{3}}\right) \div \frac{3}{2} + \frac{4}{9} - \frac{1}{3} = -2$

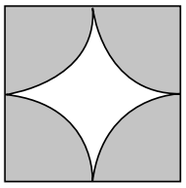
32. Simplify:

    a) $\frac{625 \times 3^{-4} \times 10^{-4}}{6^{-4} \times 5^{-2}}$ b) $\left[\left\{\left(\frac{-2}{3}\right)^3\right\}^{-2}\right]^{-1}$

33. 225 square shaped Mosaic Tiles, each of area 1 square decimeter exactly cover a square shaped verandah. How long is each side of the square shaped verandah?

34. If the radius and arc length of a sector are 12 cm and 30.8 cm respectively, find the area, central angle and perimeter of the sector.

35. Find the area of the shaded part of the following figure ($\pi = 3.14$)



10 cm

36. Find the product

    a) $2x \times 3x^2y$

    b) $5x^2y \times 6x$

    c) $(3p^2 + 2p - 6)(5p^2 - 11p + 2)$

    d) $3a(a + 2)$

    e) $(2x^2 - 5x)(9x^2 + 6x + 4)$

37. a) Find the volume of the cube whose side is $(x + 1)$ cm.

    b) Factorise using HCF: $4p^2q^2 - 12pq + 28p^3q^3$

38. A total of 90 currency notes, consisting only ₹ 5 and ₹ 10 denominations, amount to ₹ 500. Find the number of notes in each denomination.

39. A rectangular plot is 6 m longer than it's wide. The area of the plot is 16 sq. m. Find the length & width of the plot.

VI. Graph. **1 x 10 = 10**

40. Sketch the graph of the following functions.

    Y = $-3x$ (or) $y = x - 4$

VII. Geometry: **1 x 10 = 10**

41. Construct a trapezium WXYZ given WX || ZY.

    WX = 5 cm, XY = 5 cm, $\angle W = 100°$ and $\angle X = 65°$. Find the measurements. Find the area of the trapezium.