SUMMATIVE ASSESSMENT – FIRST TERM

MATHEMATICS

Max. Marks: 100

Std - VIII

Time: 2.30 Hrs

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

1. The value of 3/10 is _____.

   a) 0.03 b) 0.3 c) 0.003 d) 0.0003

2. The additive identity of rational number is _____.

   a) 2 b) 3 c) 0 d) 4

3. What is the diameter of a circle if the radius is 2 cm?

   a) 6 b) 8 c) 10 d) 4

4. The reciprocal of $\frac{-2}{9}$ is _____.

   a) $\frac{5}{6}$ b) $\frac{9}{2}$ c) $\frac{-9}{2}$ d) $\frac{2}{9}$

5. The sum of the angles of a triangle is _____.

   a) 180° b) 270° c) 360° d) 450°

6. The value of $5a \times 6b$ is equal to _____.

   a) $30ab$ b) $30ab^2$ c) $6ab$ d) $8ab$

7. $\frac{x^3}{x^3}$ = _____.

   a) 0 b) 1 c) –1 d) 2

8. The diameter of a circle is 3cm. What is the circumference?

   a) 9.42 cm b) 7 c) 6.2 d) 5.3

9. The negative of $\frac{9}{5}$ is _____.

   a) $\frac{5}{9}$ b) $\frac{-9}{5}$ c) $\frac{-5}{9}$ d) $\frac{9}{5}$

10. The value of $\frac{1}{0}$ is _____.

    a) 1 b) 0 c) does not exist d) 0.1

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

11. The reciprocal of a rational number is also a _____.

12. The algebraic expression $3x + 4y - 5$ has _____ terms.

13. $\frac{-3}{4} \div \frac{2}{5} =$ _____.
14. The perimeter of a square is given by the formula _____.
15. The additive inverse of $\frac{5}{6}$ is _____.

III. Match the following: **5 x 1 = 5**

	A		B
16.	$a^2 - b^2$	-	πr^2
17.	Rational number	-	Volume of a cube
18.	a3	-	$\frac{7}{8}$
19.	Like terms	-	$(a+b)\,(a-b)$
20.	Area of circle	-	Same variables with same powers

IV. Do as directed: (Any 15) **15 x 2 = 30**

21. Represent the following numbers on the number line $\frac{-3}{5}, \frac{12}{5}$
22. Find ten rational numbers between: $\frac{1}{7}$ and $\frac{2}{3}$
23. Write the rational number $\frac{7}{8}$ in decimal form up to 3 decimal places.
24. Subtract $\frac{-5}{6}$ from $\frac{2}{3}$
25. Find the area of a circle whose radius is 4.2 cm
26. Find the coefficient of:

    a) x^2 in $3x^2 yz$ b) a^3 in $-a^3 bcd$
27. Add the expressions $(-3p^2q + qr - 3pq)$ and $(-8pq + 9p^2q)$
28. Find the product: $(6p + 2q)(7p + 9q)$
29. Simplify: $\frac{14p^8q - 8p^3q^2}{2p^2q}$
30. Find the value of 12^2 using the identity.
31. Find the greatest common factor of $18xy^2 z$, $6x^2 y^2 z^2$
32. Define similarity.
33. Two coins are tossed simultaneously. What are the possible outcomes?
34. Add $\frac{3}{5}$ and $\frac{-2}{7}$
35. Divide and find the value: $\left(\frac{-64}{25}\right) \div \left(\frac{-4}{5}\right)$

36. Multiply: $-7a^2b$ by $4ab$

37. Simplify: $\frac{4x - 4y}{4}$

V. Answer the following: (any 10) **10 x 5 = 50**

38. Arrange the following rational numbers in ascending and descending order.

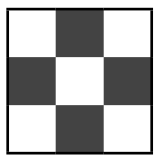
    $0.62;\ 0.\overline{6};\ \frac{1}{3};\ \frac{2}{5}$

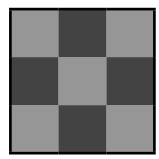
39. Simplify: $\left(\frac{5}{6} - \frac{3}{5} + \frac{7}{6}\right) \times \left(2\frac{2}{3} - \frac{3}{4} + 2\frac{1}{5}\right)$

40. How many pieces of $3\frac{3}{5}$ m of rope can be cut from a 10m of long rope?

41. In a circular park with a radius of 35 m, there are 7 lamps, each having a circular base with a radius of 1 m. The entire park is covered with grass except the areas occupied by the bases of the lamps. Calculate the total area covered with grass.

42. How many colours are needed to colour the given figure using the minimum number of colours so that no two adjacent regions have the same colour?





43. In a right-angled triangle, if one angle is 47°, find the other angle.

44. The measures of two angles of a triangle are 37° and 64°. Find the measurement of the third angle.

45. If two dice are rolled simultaneously, list all the possible outcomes.

46. A sector containing an angle of 90° is cut from a circle of radius 42cm. Calculate the length, perimeter and area of the sector.

47. Find the area, angle and perimeter of the following sectors.

	Radius	Arc length
a)	5cm	8cm
b)	3.5cm	6cm
c)	8cm	3cm
d)	6.3cm	10cm

48. What must be added to $x^3 + 3x^2y + 3xy^2 + y^3$ to get $x^3 + y^3$?

49. Find the product of $ax^2 + bx + c$ and $px + q$.

50. Divide by $(5a^3 + a - 3)$ by $(a - 1)$

51. Show that $(a + b)^2 = a^2 + 2ab + b^2$ by geometric verification.
52. Factorise: $16a^3b^2c + 4a^2b^2c^2$
53. Calculate the angles of a triangle if they are in the ratio 1 : 2 : 3
54. Construct a quadrilateral with the following measurements:

    AB = 4.3cm BC = 6cm, AC = 5.4cm $\angle$A = 120°, and AD = 3.2cm.