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 square root of 0.0144 is _____.
   a) 1.2 b) 0.12 c) 0.0012 d) 0.012
2. The value of $\sqrt{33 + \sqrt{1 + \sqrt{64}}}$ =
   a) 8 b) 9 c) 7 d) 6
3. If $\left(\frac{m}{n}\right)^{1-5y} = \left(\frac{n}{m}\right)^{\frac{1}{4}}$, then y =
   a) 4^{-1} b) 2^{-1} c) 3^{-1} d) 1^{-1}
4. Which of these equals $\left(\frac{16}{20}\right)^{-3}$?
   a) $\left(\frac{16}{20}\right)^{-3}$ b) $\left(\frac{5}{4}\right)^{3}$ c) $\left(\frac{4}{5}\right)^{3}$ d) $\left(\frac{-4}{5}\right)^{3}$
5. Two–thirds of a number increased by 5 is 25. The number is
   a) 15 b) 30 c) 40 d) 45
6. Three number are in the ratio 1 : 2 : 3. The sum of the numbers is 60. The smallest of the number is
   a) 15 b) 24 c) 10 d) 8
7. The line $y = -5x + 6$ passes through the point.
   a) (1, 1) b) (0, –5) c) (0, 0) d) (2, 4)
8. The point (a, b) lies on the line $4x - 3y = 8$. If $a = 2$ then b = _____.
   a) 1 b) –6 c) $\frac{1}{2}$ d) 0
9. The points on the line $y = x$ have the ordered pairs as
   a) $(a, -a)$ b) $(-a, a)$ c) (a, a) d) $(0, a)$
10. The square root of the smallest 3 digit number is
    a) 13 b) 10 c) 9 d) 1

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

11. The longest chord of a circle is _____.
12. A part of the circumference of a circle is called a _____.
13. In a _____ equation, the highest power of the variable is 3.

14. The graph of $x + y = 8$ intersects the y-axis at _____.
15. The lines $x = 3$ and $y = -1$ intersect in _____ quadrant.

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

16.	$\left(\frac{5}{5}+(-1)\right)+\frac{-3}{4}=\frac{5}{6}+\left(-1+\frac{-3}{4}\right)$	=	does not exist
17.	$\frac{1}{0}$	=	associative property of addition.
18.	$\frac{22}{7}$	=	$10\ (x^2 + y^2)$
19.	$10x^2 + 10y^2$	=	I quadrant
20.	(3, 2)	=	rational number

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

21. Fill the box with correct symbol: $3\frac{4}{5} \square 3\frac{6}{7}$
22. Find the product: $\frac{-2}{7} \times \frac{-3}{8} \times \frac{-5}{6}$
23. Find the value of: $\frac{-2}{7} \div 2\frac{1}{4}$
24. Evaluate: $\left(\frac{-4}{5}\right)^3$
25. Find the positive square root of the products and quotients. 500×20
26. Find the cube root: 1092727
27. Find the sum using formula: $1^2 + 2^2 + 3^2 \ldots\ldots 100^2$
28. The circumference of a circle is 18.84cm. Find the diameter.
29. Find the coefficient of:
    a) x^2 in $3x^2 yz$ b) a^3 in $-a^3bcd$
30. Find the product: $5x^2 y \times 6x$
31. Simplify: $= \frac{12x^9 y^3}{6x^8 y^2}$
32. Find the product using the identities: 12^2.
33. Find the greatest common factor of the following:
    a) $2xy^5$, $6x^3 y^3$ b) $10ab$, $20bc$, $30ca$
34. Factorise by regrouping: $x^2 + xy + 9x + 9y$
35. Factorise using identities: $4a^2 - 12a + 9$
36. Solve: $7x - 12 = 16$
37. Solve: $5x - 11 = 3x + 9$

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

38. Simplify: $\left(\frac{-7}{11}\times 2\frac{5}{7}\right)\times\left(2\frac{3}{5}-3\frac{4}{7}\right)$

39. A diver dives down $22\frac{1}{2}$ feet and then he swims up to $11\frac{4}{5}$ feet. He then does a final dive of $13\frac{4}{5}$ feet. How deep did diver dive?

40. Simplify: $\frac{625\times 3^{-4}\times 10^{-4}}{6^{-4}\times 5^{-2}}$

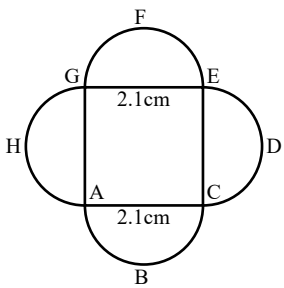
41. (a) Express the following numbers in scientific notation:
    (i) 4890000000 (ii) 39.3
    (b) Compare the diameter of the sun, which is 1.4×10^{9} m, with the diameter of Venus, which is 1.2104×10^{7}m.

42. Find the square roots by division method: 94864.

43. Is 74088 a perfect cube ? If so what is its cube root?

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

45. Find the area and perimeter of the following figure, which has a semicircle drawn on all sides of a square.



46. Give geometric verification of $(a + b)^2$.

47. Find two consecutive odd numbers such that their sum is 148.

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

48. Sketch the graphs of the following function.
    $y = x - 4$ (or) $y = 3x$