8 - Std HALF YEARLY EXAMINATION - 2025
MATHS

Time : 2.30 Hrs [HSL]   Marks : 100

PART - A

I. **Choose and write the correct answer.** 10 × 1 = 10

1. The number which is subtracted from -6/11 to get 8/9 is _____.
   a) 34/99   b) -142/99   c) 142/99   d) -34/99

2. $3/4 \times (5/8 \div 1/2) =$ _____
   a) 5/8   b) 2/3   c) 15/32   d) 15/16

3. The cross section of a solid cylinder is _____
   a) Square   b) Circle   c) Rectangle   d) Triangle

4. If the area of a square is $36x^4y^2$ then, its side is _____.
   a) $6x^4y^2$.   b) $8x^2y^2$ c) $6x^2y$ d) $-6x^2y$

5. If $x^2 - y^2 = 16$ and $(x + y) = 8$ then $(x-y)$ is _____.
   a) 8   b) 3   c) 2   d) 1

6. A fruit vendor sells fruits for ₹ 200 gaining ₹ 40. His gain percentage is _____.
   a) 20%   b) 22%   c) 25%   d) 16 2/3%

7. The number of conversion periods in a year, if the interest on a principal is compounded every two months is
   a) 2   b) 4   c) 6   d) 12

8. Two similar triangles will always have _____ angles.
   a) acute   b) obtuse   c) right   d) matching

9. How many out comes can you get when you toss three coins once
   a) 6   b) 8   c) 3   d) 2

10. What is the eleventh Fibonacci number
    a) 55   b) 77   c) 89   d) 144

II **Fill in the blanks.** 5 × 1 = 5

11. The rational number _____ does not have a reciprocal.

12. The longest chord of a circle is _____.

13. X-axis and Y-axis intersect at _____.

14. Loss or gain percentage is always calculated on the _____.

15. The medians of a triangle cross each other at _____.

III **Say True ? False ?** 5 × 1 = 5

16. The additive inverse of -11/-17 is 11/17.

17. The square root of 225 is 15.

18. The standard form of 2×10^{-4} is 0.0002.

19. A cube has five faces.

20. In a right angled triangle, the hypotenuse is the greatest side.

IV **Match.** 5 × 1 = 5

21. $a^m + a^n$ -   S.P - C.P
22. Circumference of a circle   -   IV Quadrant
23. 3-D shape   - a^{m+n}
24. Profit   -   2πr
25. (6,-5)   -   Cylinder

V. **Answer the following. (Any 12).** PART - B
26. Compare. 3/4 and 5/6. 12 × 2 = 24

HSL 8 MATHS (E.M) PG. - 1

27. Find the value of $\sqrt{256}$.
28. Evaluate : $(1/2)^3$.
29. Simplify : $\sqrt{12} \times \sqrt{3}$.
30. A circle of radius 120m is divided into 8 equal sectors. Find the length of the arc of each of the sectors.
31. Divide : $27y^3$ by $3y$.
32. Expand : $(3m+5)^2$.
33. Factorise : $x^2+14x+49$.
34. Solve : $2x + 5 = 9$.
35. One number is seven times another. If their difference is 18. Find the numbers.
36. Find the quadrants without Plotting the points on a graph sheet.
   (3, -4), (5, 7), (-3, -5), (0, 10).
37. If x % of 600 is 450, then find the value of x.
38. Find the difference in C.I and S.I for P = ₹ 5000, r = 4% p.a, n = 2 years.
39. A and B together can do a piece of work in 16 days and A alone can do it in 48 days. How long will B take to complete the work?
40. Can a right triangle have sides that measure 5cm, 12cm and 13cm?
41. Using repeated subtraction method, find the HCF of 36 and 80.
42. Write the following number in scientific notation: 467800000000.

PART - C

VI Answer the following (Any 7). $\qquad$ 7×5=35

43. Arrange the rational number in ascending and descending order.
   -5/12, -11/8, -15/24, - 7/-9. 12/36.
44. Find the square root of 459684 by long division method.
45. Find the cube root of 24 x 36 x 80 x 25.
46. Find the area of the combined figure given, formed by joining a semicircle of diameter 6 cm with a triangle of base 6 cm and height 9 cm. (π = 3.14).
47. Expand : $(x + 3)(x + 5)(x + 2)$.
48. The length of a rectangular field exceeds its breadth by 9 metres. If the perimeter of the field is 154m, find the length and breadth of the field.
49. The value of a motor cycle 2 yrs ago was ₹ 70000. It depreciates at the rate of 4% p.a. Find its present value.
50. A Cement factory makes 7000 cement bags in 12 days with the help of 36 machines. How many bags can be made in 18 days using 24 machines?
51. ABC is a triangle and G is its centroid. If AD = 12cm, BC = 8 cm and BE = 9cm.find the perimeter of ΔBDG.
52. Using repeated division method, find the HCF of 455 and 26.
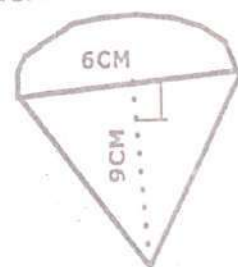
PART - D

VII Answer all the questions. $\qquad$ 2 × 8 = 16

53. Construct a trapezium BOAT in which BO ||TA, BO = 7cm, OA = 6cm, BA = 10cm, and TA = 6cm. Also find its area. (OR)
   Construct a rhombus FACE with FA = 6 cm and FC = 8cm. Also find its area.
54. Draw a straight lines by joining the points A (2, 5) B (-5, -2) M (-5, 4) N (1, -2) also find the point of intersection. (OR)
   Draw the graph of $y = 6$.

HSL 8 MATHS (E.M) PG. -2