

Class : 8Register
Number**FIRST MID TERM TEST - 2023**
MATHEMATICS

Time Allowed : 1.30 Hours]

[Max. Marks : 50

I. Choose the correct Answer.

5x1=5

1. $\frac{-5}{4}$ is a rational number which lies between -----
 (A) 0 and $\frac{-5}{4}$ (B) -1 and 0 (C) -1 and -2 (D) -4 and -5
2. 0.000000002020 in scientific form is -----
 (A) 2.02×10^9 (B) 2.02×10^{-9} (C) 2.02×10^{-8} (D) 2.02×10^{-10}
3. The longest chord of a circle is -----
 (A) Radius (B) diameter (C) Circular arc (D) circular sector
4. If the area of the rectangular land is $(a^2 - b^2)$ sq.units whose breadth is $(a - b)$ then its length is -----
 (a) $(a - b)$ (b) $(a + b)$ (c) $a^2 - b$ (d) $(a + b)^2$
5. The number of digits in the square root of 123454321 is -----
 (a) 4 (b) .5 (c) 6 (d) 7

II. Match the following.

5x1=5

6. a^0 - $\frac{\theta}{360} \times \pi r^2$
7. Additive identity - 1
8. Euler's formula - 6
9. Area of the sector - $F + V - E = 2$
10. Faces in a cube - 0

III. Answer any 6 of the following.

6x2=12

11. Draw a number line and represent the rational number $\frac{9}{4}$ on it.

12. Add : $\frac{6}{5} + \left(\frac{-14}{15}\right)$

13. Find the product of $(2x + 3)(2x - 4)$.

14. Simplify $\frac{3m^2}{m} + \frac{2m^4}{m^3}$

15. Divide $\frac{-21}{5} \div \frac{-7}{-10}$

16. Find the square root of 6889.

17. Expand using exponents : 6054.321

18. Length of the arc is 48m and its radius 10m. Find the area of the sector.

IV. Answer any 4 of the following :

4x5=20

19. Find a rational number between $\frac{1}{3}$ and $\frac{5}{9}$

20. Find the Square root of 324 by Prime factorisation.

21. A circle of radius 120m is divided into 8 equal sectors. Find the area of each of the sectors.

22. Solve for x : $\frac{2^{2x-1}}{2^{x+1}} = 4$

23. The radius of the sector 16 cm and its central angle 45° . Find (i) Area of the sector (ii) Perimeter of Sector ($\pi = 3.14$).

24. A Car waves at a uniform speed of $(x+30)$ km / hr. Find the distance covered by the car in $(y+2)$ hours. (Hint : distance = speed x time)

V. Answer the following.

1x8=8

25. Construct a quadrilateral DEAR with DE = 6 cm, EA = 5 cm, AR = 5.5 cm, RD = 5.2 cm and DA = 10 cm. also find its area.

(OR)

Construct a trapezium CUTE with CU \parallel ET, CU = 7cm , $\angle UCE = 80^\circ$, CE = 6 cm and TE = 5cm .

Also find its area.