

FIRST MID TERM TEST - 2023

VII - 'B'

8 - STD

MATHEMATICS

Marks : 50

TIME: 1.30 Hrs

PART - A

I. Choose the Correct answer.

7 x 1 = 7

1. The area of the square is $36x^4y^2$ then, its side is
- a. $6x^4y^2$ b. $8x^2y^2$ ~~c. $6x^2y$~~ d. $-6x^2y$
2. is added to 24^2 to get 25^2
- a. 4^2 b. 5^2 c. 6^2 ~~d. 7^2~~
3. $\frac{-5}{4}$ 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
4. The product of $7P^3$ and $(2P^2)^2$ is
- a. $14P^{12}$ ~~b. $28P^7$~~ c. $9P^7$ ~~d. $11P^{12}$~~
5. 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. $(a + b)^2$
6. The square of 43 ends with the digit
- ~~a. 9~~ b. 6 c. 4 d. 3
7. The number of digits in the square root of 123454321 is
- a. 4 b. 5 ~~c. 6~~ d. 7

PART - B

Answer the following questions. (Any five)

5 x 2 = 10

8. Find the cube root of 27000. $\sqrt[3]{27000}$ $3 \overline{)27}$
9. Divide : $27y^3 + 3y$ LCM = $30 \times 30 \times 30$ $3 \overline{)9}$
10. Find the product of $(2x+3)(2x-4)$ $3 \overline{)3}$
11. Simplify : $\frac{3m^2}{m} + \frac{2m^4}{m^3}$ = 30, 1
12. Find the sum of $\frac{7}{5} + \frac{3}{5}$ $\frac{7}{5} + \frac{3}{5}$ $27y^3 \div 3y$
13. Evaluate : $(2^{-5} \times 2^7) \div 2^{-2}$ $27y^3 \div 3y$
14. Evaluate : $\frac{3^2}{3^{-2}}$ $\frac{10^2}{5}$ $27y^3 \div 3y$

PART - C

Answer the following questions. (Any five)

5 x 5 = 25

15. Find the square root of 324 by prime factorisation. Example: 1.22
16. Find a rational number between $\frac{1}{3}$ and $\frac{5}{9}$
17. Find the square root of $24 \times 36 \times 80 \times 25$. $24 \times 36 \times 80 \times 25$
18. Simplify: $\frac{2^8 \times 2187}{3^5 \times 32}$
19. The sum of two rational numbers is $\frac{4}{5}$. If one number is $\frac{2}{15}$, then find the other.
20. A circle of radius 120m is divided into 8 equal sectors. Find the area of each of the sectors.
21. A spinner of radius 7.5cm is divided into 6 equal sectors. Find the area of each of the sectors.

PART - D

Answer any one of the following questions:

1 x 8 = 8

22. a) Construct a quadrilateral DEAR. DE = 6cm, EA = 5cm, AR = 5.5cm, RD = 5.2 cm, DA = 10cm. Also find its Area.

(OR)

- b) Construct the following trapeziums with the given measures and also find their area. AIMS with $\overline{AI} \parallel \overline{SM}$, AI = 6 cm, IM = 5 cm, AM = 9 cm and MS = 6.5cm.