

QUARTERLY EXAMINATION - 2024

MATHS

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MARKS : 100

PART - A

I Choose and write the correct answer.

10 X 1 = 10

- The number which is subtracted from $\frac{-6}{11}$ to get $\frac{8}{9}$ is
 a) $\frac{34}{99}$ b) $\frac{-142}{99}$ c) $\frac{142}{99}$ d) $\frac{-34}{99}$
- Which of these rational numbers which have additive inverse?
 a) 7 b) $\frac{-5}{7}$ c) 0 d) all of these
- Closure property is not true for division of rational numbers because of the number.
 a) 1 b) -1 c) 0 d) $\frac{1}{2}$
- $\sqrt{128} - \sqrt{98} + \sqrt{18} = \dots\dots\dots$
 a) $\sqrt{2}$ b) $\sqrt{8}$ c) $\sqrt{48}$ d) $\sqrt{32}$
- By what number should $(-4)^{-1}$ be multiplied so that the product became 10^{-1} ?
 a) $\frac{2}{3}$ b) $\frac{-2}{5}$ c) $\frac{5}{2}$ d) $\frac{-5}{2}$
- The product of $7p^3$ and $(2p^2)^2$ is
 a) $14p^{12}$ b) $28p^7$ c) $9p^7$ d) $11p^{12}$
- When 60 is subtracted from 60% of a number to give 60 the number is
 a) 60 b) 100 c) 150 d) 200
- By selling a flower pot for Rs. 528, a woman gains 20%. At what price should she sell it to gain 25%?
 a) Rs. 500 b) Rs. 550 c) Rs. 553 d) Rs. 573
- Two similar triangles will always have angles.
 a) obtuse angles b) right angles c) acute angles d) matching angles

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SIVANANDHA K M.A., B.Ed.
 GHS SANDHANAPALLI
 DENKANIKOTTA TK
 KRISHNAGIRI DISTRICT
 PH: 9003371506

10. How many outcomes can you get when you toss three coins once?

- a) 6 b) 8 c) 3 d) 2

II Fill in the blanks.

5 X 1 = 5

11. The decimal form of the rational number $\frac{15}{-4}$ is

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. In any triangle sides are opposite to equal angles.

III Say true? False?

5 X 1 = 5

16. The average of two rational numbers lies between them.

17. The square root of 225 is 15.

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

19. (-9,0) lies on the x axis.

20. The present value of a machine is Rs. 16800. It depreciates at 25% p.a. its worth after 2 years is Rs. 9450.

IV Match.

5 X 1 = 5

21. Perimeter of a sector - $BC^2 = AB^2 + AC^2$

22. $(a^m)^n$ - $l + 2r$ units

23. Cuboid - A-P

24. Compound interest - 6 faces

25. Pythagoras theorem - a^{mn}

PART - B

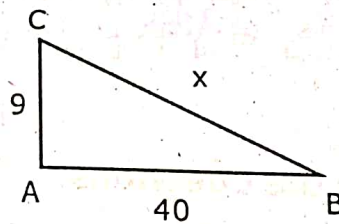
V Answer the following. (Any 12)

12 X 2 = 24

26. Subtract : $\frac{9}{17}$ from $\frac{-12}{17}$. $= \frac{3}{17}$

27. Evaluate : $\frac{-7}{27} \times \frac{24}{-35}$.

28. Simplify : $\sqrt{12} \times \sqrt{3}$
29. Find the cube root of 27000.
30. Simplify and write the answer in exponential form $(3^5 \div 3^8)^5 \times 3^{-5}$.
31. A circle of radius 120m is divided into 8 equal sectors. Find the length of the arc of each of the sectors. $3) \frac{4}{11}$
32. Find the product of $2x^2y^2$, $3y^2z$ and $-z^2x^3$.
33. Simplify : $\frac{3m^2}{m} + \frac{2m^4}{m^3}$.
34. Find the quadrants without plotting the points. $(5,7)$, $(3, -4)$, $(0,10)$, $(2,0)$.
35. If x% of 600 is 450, then find the value of x.
36. Find the C.I for principal Rs. 4000, $r = 5\%$, $n=2$ years, interest compounded annually.
37. Find the difference in CI and SI for P-8000, $r = 5\%$ p.a. $n = 3$ years.
38. In class VIII, a math club has four members M, A, T and H Find the number of different ways, the club can elect i) a leader ii) a leader and assistant leader.
39. A 20 feet ladder leans against a wall at height of 16 feet from the ground. How far is the base of the ladder from the wall. Long is inclined to touch a wall?



40. Find the unknown side of the triangle.

PART - C

VI Answer the following. (Any 7)

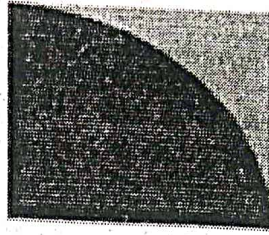
7 X 5 = 35

41. Find atleast 5 rational number between $\frac{-3}{4}$ and $\frac{-2}{5}$.
42. Combine the scientific notations :
- i) $(7 \times 10^2)(5.2 \times 10^{-7})$ ii) $(3.7 \times 10^{-5})(\times 10^{-3})$.

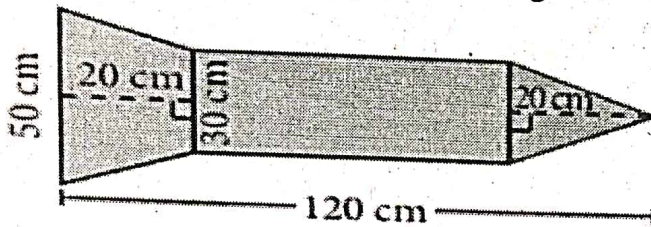
43. Simplify : $\frac{9^2 \times 7^3 \times 2^5}{84^3}$.

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44. Dhamu fixes a square tile of 30cm on the floor. The tile has a sector design on it as shown in the figure. Find the area of the sector. ($\pi = 3.14$)



45. A rocket drawing has the measures as given in the figure. Find its area.



46. Multiply $(2x + 5y)$ and $(3x - 4y)$.
47. A number is increased by 25% and then decreased by 20%. Find the percentage change in that number.
48. Find $(a + b) \div (a - b)$ if $a = \frac{1}{2}$, $b = \frac{2}{3}$.
49. The product of two rational numbers is $\frac{-2}{3}$. If one number is $\frac{3}{7}$, then find the other.
50. A value of a motor cycle 2 years ago was Rs. 70000. It depreciates at the rate of 4% p.a. Find its present value.

PART - D

VII Answer all the questions.

$$2 \times 8 = 16$$

51. Construct a quadrilateral PLAY with $PL = 7\text{cm}$, $LA = 6\text{cm}$, $AY = 6\text{cm}$, $PA = 8\text{cm}$ and $LY = 7\text{cm}$. Also find its area. **(OR)**
Construct a trapezium BOAT in which $BO \parallel TA$, $BO = 7\text{cm}$, $OA = 6\text{cm}$, $BA = 10\text{cm}$ and $TA = 6\text{cm}$. Also find its area.
52. Draw the graph of $Y = 5X$. **(OR)**
Find the point of intersection of the line joining points $(-3, 7)$ $(2, -4)$ and $(4, 6)$ $(-5, -7)$. Also find the point of intersection of these lines and also their intersection with the axis.