COMMON QUARTERLY EXAMINATION - 2024

Standard VIII   Reg.No. ☐☐☐☐☐☐

MATHEMATICS

Time : 2.30 hrs   Part - I   Marks : 100

I. Choose the correct answer: 14 x 1 = 14

1. Which of the following rational numbers the greatest?

   a) $\dfrac{-17}{24}$ b) $\dfrac{-13}{16}$ c) $\dfrac{7}{-8}$ d) $\dfrac{-31}{32}$

2. The standard form of the sum $\dfrac{3}{4} + \dfrac{5}{6} + \left(\dfrac{-7}{12}\right)$

   a) 1   b) $\dfrac{-1}{2}$ c) $\dfrac{1}{12}$ d) $\dfrac{1}{22}$

3. Which of these rational numbers which are additive inverse?

   a) 7   b) $\dfrac{-5}{7}$ c) 0   d) all of these

4. Closure property is not true for division of rational numbers because of the number

   a) 1   b) -1 c) 0   d) $\dfrac{1}{2}$

5. $\sqrt{45}$ is approximately equal to _____.

   a) 5   b) 6   c) 7   d) 8

6. By what number should $(-4)^{-1}$ be multiple so that the product becomes 10^{-1}?

   a) $\dfrac{2}{3}$ b) $\dfrac{-2}{5}$ c) $\dfrac{5}{2}$ d) $\dfrac{-5}{2}$

7. The cross section of a solid cylinder

   a) square   b) circle   c) rectangle   d) sphere

8. 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) $-6x^2y$

9. If the area of the rectangle is $48m^2n^3$ whose length is $8mn^2$, then its breadth is

   a) $6mn$ b) $8m^2n$ c) $7m^2n^2$ d) $6m^2n^2$

10. When 60 is subtracted from 60% of a number to give 60, the number is

    a) 60   b) 100   c) 150   d) 200

11. By selling a flower pot for ₹528, a woman gains 20%. At what price should she sell it to gain 25%?

    a) ₹500   b) ₹550   c) ₹553   d) ₹573

12. The cost of a machine ₹18,000 and it depreciates at $16\frac{2}{3}$ % annually, its value

    after two years will be _____.

    a) ₹12,000   b) ₹12,500   c) ₹15,000   d) ₹16,500

13. Two similar triangles will always have _____ angles.

    a) acute   b) obtuse   c) right   d) match

14. If ΔABC~ ΔPQR in which ∠A = 53° and ∠Q = 77°, then ∠R is .

    a) 50°   b) 60°   c) 70°   d) 80°
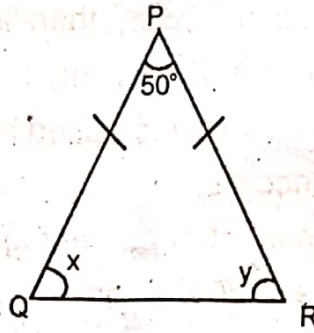
Part - II

II. Answer any 10 questions.   10 x 2 = 20

15. Compare the pairs of rational number : $\frac{3}{-4}, \frac{-1}{2}$

16. Find the square root of $\frac{144}{225}$

17. Find the smallest number by which 200 should be multiplied to make it a perfect

    cube.

18. Find the value of 4^{-3}.

19. A circular shaped gymnasium ring of radius 35 cm is divided into 5 equal arcs

    shaded with different colours. Find the length of each of the arc.

20. Find the area of the sector whose length of arc 48 m and radius 10 m.

21. Verify Euler's formula for the faces 6, vertices 8 and edges 12 for polyhedrons.

22. Find the product of $3x^2y$, $-3xy^3$, x^2y^2

23. Divide : $45x^3y^2z^4 \div (-15xyz)$

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

25. If x% of 600 is 450, then find the value of x.

26. If the selling price of 10 rulers is the same as the cost price of 15 rulers, then find

    the profit in percentage.

27. Find the difference in C.I and S.I for P = ₹5000, r = 4% p.a, n = 2 years

28. Find the unknowns in the given figure.

29. Can a right triangle have sides that measures 5 cm, 12 cm and 13 cm?

Part - III

III. Answer any 10 questions.   **10 x 5 = 50**

30. $a = \dfrac{1}{2}$, $b = \dfrac{2}{3}$, then find $(a + b) \div (a - b)$

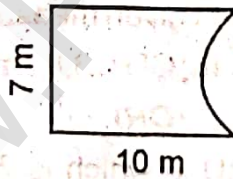31. Find the square root of 11025 by long division method.

32. Find the cube root of 24 x 36 x 80 x 25

33. Solve for x : $\dfrac{5^5 \times 5^{-4} \times 5^x}{5^{12}} = 5^{-5}$

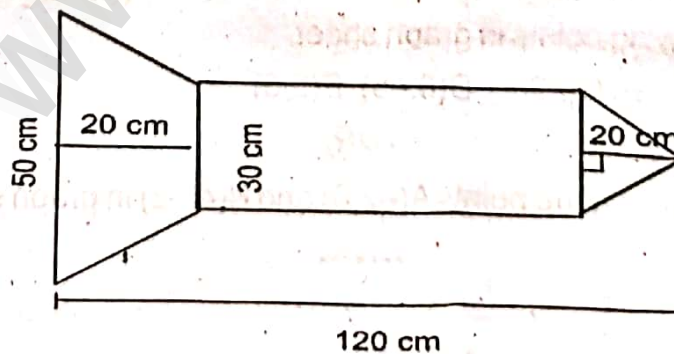34. Find the central angle of each of the sectors whose area is 462 cm² and radius 21 cm. $\left(\pi = \dfrac{22}{7}\right)$

35. Find the perimeter and area of the given figure.

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

37. Multiply $(2x + 5y)$ and $(3x - 4y)$

38. If $l = 4pq^2$, $b = -3p^2q$, $h = 2p^3q^3$, then find the value of $l \times b \times h$

39. Divide : $5xy^2 - 18x^2y^3 + 6xy$ by $6xy$.

40. The income of a person is increased by 10% and then decreased by 10%. Find the change in his income.

41. Find the single discount in percentage which is equivalent to two successive discounts of 25% and 20% given on an article.

42. The value of a motorcycle 2 years ago was ₹70,000. It depreciates at the rate of 4% p.a. Find its present value.

43. In the given figure, $\triangle PQR \sim \triangle XYZ$. Find a and b.
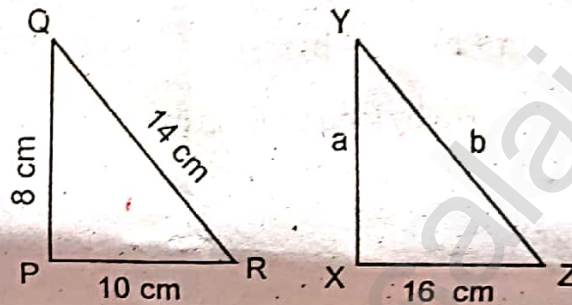
44. Find the quadrants without plotting the points on a graph sheet.
    $(3,-4)$ $(5,7)$ $(2,0)$ $(-3,-5)$ $(0,10)$

Part - IV

IV. Answer the following questions.   2 x 8 = 16

45. a) Construct the quadrilateral with given measurements, also find its area.
    ABCD, AB = 5 cm, BC = 4.5 cm, CD = 3.8 cm, DA = 4.4 cm and AC = 6.2 cm.

   (OR)

   b) Construct a trapezium CARD in which is $\overrightarrow{CA}$ parallel to $\overrightarrow{DR}$, CA = 9 cm, $\angle CAR = 70°$, AR = 6 cm and CD = 7 cm. Also find its area.

46. a) Plot the following points in graph sheet.
    A(5,2), B(-7,-3), C(-2,4), D(0,-5), E(2,0)

   (OR)

   b) Draw a line joining the points A(-2,6) and B(4,-3) in graph sheet.

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