FTJ

QUARTERLY EXAMINATION – 2023

8 - STD

MATHS

Time : 2.30 Hrs

Marks : 100

Part - A

I Choose the best answer. 10 X 1 = 10

1. Which of the following rational number is the greatest?
   a) $\frac{-17}{24}$ b) $\frac{-13}{16}$ c) $\frac{7}{-8}$ d) $\frac{-31}{32}$
2. Closure property is not true for division of rational numbers be cause of the number
   a) 1 b) -1 c) 0 d) ½
3. The square of 43 ends with the digit ..... .
   a) 9 b) 6 c) 4 d) 3
4. $\sqrt{48}$ is approximately equal to ..... . a) 5 b) 6 c) 7 d) 8
5. If $\frac{10^x}{10^{-3}} = 10^9$, then x is ..... . a) 4 b) 5 c) 6 c) 7
6. If the area of a rectangle is $48m^2n^3$ and whose length is $8\ mn^2$ then, its breadth is
   a) 6mn b) $8m^2n$ c) $7m^2n^2$ d) $6m^2n^2$
7. Two similar triangles will always have ..... angles.
   a) acute b) obtuse c) right d) Matching
8. How many out comes can you get when you toss three coins once?
   a) 6 b) 8 c) 3 d) 2
9. If the area of a 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) $(a + b)^2$
10. The sum of the digits of the denomination in the simplest form of $\frac{112}{528}$ is ..... .
    a) 4 b) 5 c) 6 d) 7

II Fill in the blanks. 5 X 1 = 5

11. The decimal form of the rational number $\frac{15}{-4}$ is ..... .
12. The value of $\left(\frac{-3}{6}\right) X \left(\frac{18}{-9}\right)$ is ..... .
13. The number perfect square numbers between 300 and 500 is ..... .
14. A part of circumference of a circle is called as ..... .
15. x - axis and y - axis intersect at ..... .

III True or false. 4 X 1 = 4

16. The average of two rational numbers line between them.
17. The additive inverse of $\frac{-11}{-17}$ is $\frac{11}{17}$.
18. $7ab^3 \div 14ab = ab^2$.
19. The in centre is equidistant from all the vertices of a triangle.

IV Match the following. 5 X 1 = 5

20.	Area of a circle	-	a) $\frac{1}{4}\pi r^2$
21.	Circumference of a circle	-	b) $(\pi + 2)\, r$
22.	Area of the sector of circle	-	c) πr^2
23.	Circumference of a semicircle	-	d) $2\pi r$
24.	Area of a quadrant of circle	-	e) $\frac{\theta^o}{360^o} X \pi r^2$

Part - B

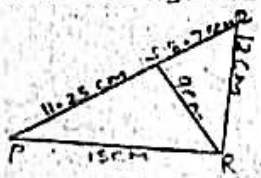
V Answer any ten of the following. 10 X 2 = 20

25. Add : $\frac{-6}{11}, \frac{8}{11}, \frac{-12}{11}$.
26. Evaluate : $\frac{9}{132} X \frac{-11}{3}$.
27. Is 108 a perfect square number?
28. Find the square of 203?
29. Find x if $5\frac{x}{5} x\, 3\frac{3}{4} = 21$.
30. i) A spinner of radius 7.5cm is divided into 6 equal sectors. Find the area each of the sectors. ii) $3x^2y$, $-3xy^3$, x^2y^2.
31. Simplify : $\frac{14p^5q^3}{2p^2q} - \frac{12p^3q^4}{3q^2}$.
32. Phythagoram theorem.
33. Sum of $\frac{7}{5} + \frac{5}{7}$.
34. Find the value of $\sqrt{256}$.
35. Find the value of 4^{-3}.
36. i) Length of the arc, l= ii) Area of the sector, A =
37. Expand $-2p\,(5p^2 - 3p + 7)$.

Part - C

VI Answer any eight of the following. 8 X 5 = 40

38. Find a rational number between $\frac{1}{3}$ and $\frac{5}{9}$.
39. The product of two rational number is $-2/3$. If one number is $3/7$, then find the other.
40. Find the square root of 324 by prime factorisation.
41. Solve for x . i) $\frac{2^{2x-1}}{2^{x+2}} = 4$, ii) $\frac{5^5 X 5^{-4} X 5^x}{5^{12}} = 5^{-5}$.
42. The radius of a sector is 21cm and its central angle is 120°.
    Find i) the length of the arc. ii) area of the sector. iii) Perimeter of sector $\left(\pi = \frac{22}{7}\right)$.
43. Nishanth has a key - chain which is the form of an equilateral triangle and a semicircle attached to a square of side 5cm as shown in the fig. 2.24. Find its area (π=3.14, $\sqrt{3}$=1.732)
44. Divide : $(5y^3 - 2y^2 + 8y)$ by 5y.
45. Prove that ΔPQR ~ ΔPRS.
46. Find the cube root of 27000.
47. Shanthi has 5 chudithar sets and 4 frocks. In how many possible ways, can she wear either a chudithar on a frock?



VII Answer the following questions. 2 X 8 = 16

48. a) Construct a quadrilateral DEAR with DE = 6cm, EA = 5cm, AR = 5.5cm, RD = 5.2 cm and DA = 10cm. Also find its area. ***(OR)***
    b) PLAY, PL = 7cm, LA = 6cm, AY = 6cm, PA = 8cm and LY = 7cm.
49. a) Consider the following points M(4,3), N(-4,5), P(-3,-6), Q(5,-2),R(6,O),S(0,-5)
    (OR) b) Find the quadrants without plotting the points on a graph sheet
    (3,-4), (5,7), (2,0), (-3,-5), (4, -3), (-7,2) (-8,0), (0,10), (-9, 50).