Tenkasi District Common Examinations
Common First Mid Term Test - 2022
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Standard 8

Time: 1.30 Hrs.

MATHS

Marks: 50

Part - I

I. Choose the correct answer: 5×1=5

1) Which of the following pairs is equivalent?

a) $\dfrac{-20}{12}, \dfrac{5}{3}$ b) $\dfrac{16}{-30}, \dfrac{-8}{15}$ c) $\dfrac{-18}{36}, \dfrac{-20}{44}$ d) $\dfrac{7}{-5}, \dfrac{-5}{7}$

2) $\dfrac{3}{4} \times \left(\dfrac{5}{8} \div \dfrac{1}{2} \right) =$ _____.

a) $\dfrac{5}{8}$ b) $\dfrac{2}{3}$ c) $\dfrac{15}{32}$ d) $\dfrac{15}{16}$

3) $(-2)^{-3} \times (-2)^{-2} =$ _____.

a) $\dfrac{-1}{32}$ b) $\dfrac{1}{32}$ c) 32   d) –32

4) A cube has _____ faces.
    a) 4   b) 6   c) 8   d) 12

5) The longest chord of a circle is _____.
    a) arc   b) diameter   c) radius   d) centre

II. Fill in the blanks: 5×1=5

6) The multiplicative inverse of –1 is _____.
7) The ones digit in the square of 77 is _____.
8) The cube root of 540×50 is _____.
9) A part of circumference of a circle is called as _____.
10) The cross section of a solid cylinder is _____.

III. State True or False: 5×1=5

11) 0 is the smallest rational number.
12) 79570 is not a perfect cube.
13) The standard form of 2×10^{-4} is 0.0002.
14) The square root of 225 is 15.
15) Using the power rule $(3^7)^{-2} = 3^5$.

IV. Match the following: 5×1=5

16) a) Area of a circle   - $\dfrac{1}{4}\pi r^2$

     b) Circumference of a circle   - $(\pi+2)r$
   c) Area of the sector of a circle   - πr^2
     d) Circumference of a semi circle   - $2\pi r$

     e) Area of a quadrant of a circle   - $\dfrac{\theta^\circ}{360^\circ} \times \pi r^2$

Part - II

V. Answer ANY 5 questions: 5×2=10

17) Find a rational number between $\dfrac{1}{3}$ and $\dfrac{5}{9}$.

18) Subtract $\dfrac{9}{17}$ from $\dfrac{-12}{17}$.

19) Evaluate: $\dfrac{9}{132} \times \dfrac{-11}{3}$

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2

20) Find the value of $\sqrt{256}$.

21) Evaluate: $(2^{-5} \times 2^7) \div 2^{-2}$

22) A spinner of radius 7.5 cm is divided into 6 equal sectors. Find the area of each of the sectors.

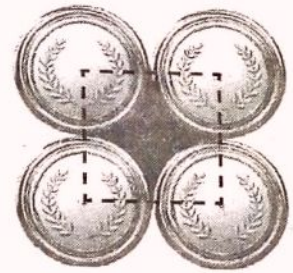23) Which 3-D shape do the following net represent? Draw it.
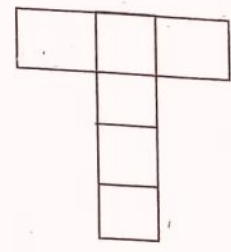
Part - III

VI. Answer ANY 3 questions:

$3 \times 5 = 15$

24) Simplify: $\left(\dfrac{4}{3} - \left(\dfrac{-3}{2}\right)\right) + \left(\dfrac{-5}{3} \div \dfrac{30}{12}\right) + \left(\dfrac{-12}{9} \times \dfrac{-27}{16}\right)$

25) Verify the distributive property, $a \times (b+c) = (a \times b) + (a \times c)$ for the rational numbers $a = \dfrac{-1}{2}$, $b = \dfrac{2}{3}$, $c = \dfrac{-5}{6}$.

26) Evaluate: (i) $\sqrt[3]{\dfrac{9261}{8000}}$ (ii) $\sqrt[3]{\dfrac{1728}{729}}$

27) Four identical medals, each of diameter 7 cm are placed as shown in the figure.

Find the area of the shaded region between the medals $\left(\pi = \dfrac{22}{7}\right)$.

28) Find the area of the combined figure given formed by joining a semicircle of diameter 6 cm with a triangle of base 6 cm and height 9 cm. ($\pi = 3.14$)

6 cm

9 cm
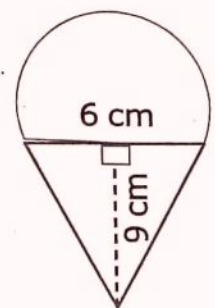
Part - IV

VII. Answer ANY 1 of the following:

$1 \times 5 = 5$

29) a) Construct a Quadrilateral DEAR with, DE = 6 cm, EA = 5 cm, AR = 5.5 cm, RD = 5.2 cm. Also find its area.

(OR)

b) Construct a Trapezium CUTE with, $\overline{CU} \parallel \overline{ET}$, CU = 7 cm, $\angle UCE = 80°$, CE = 6 cm and TE = 5 cm. Also find its area.