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Tsi-8M

Tenkasi District Common Examinations
Common Quarterly Examination - September 2022

Standard 8

Time: 2.30 Hrs. **MATHEMATICS** Marks: 100

PART - A

I. Choose the correct answer: **5×1=5**

1) Which of the following rational numbers is the greatest?
   a) $\frac{-17}{24}$ b) $\frac{-13}{16}$ c) $\frac{7}{-8}$ d) $\frac{-31}{32}$
2) If 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) $-6x^2y$
3) 15% of 25% of 10000 = _____.
   a) 375 b) 400 c) 425 d) 475
4) The hypotenuse of a right angled triangle of sides 12 cm and 16 cm is _____.
   a) 28 cm b) 20 cm c) 24 cm d) 21 cm
5) How many outcomes can you get when you toss three coins once?
   a) 6 b) 8 c) 3 d) 2

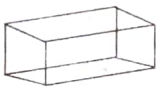
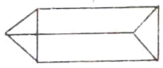
II. Fill in the blanks: **5×1=5**

6) The rational number _____ does not have a reciprocal.
7) $(-2)^{-7}$ = _____.
8) A line segment which joins any two points on a circle is a _____.
9) $6xy \times$ _____ $= -12x^3y$
10) A mobile phone is sold for ₹8,400 at a gain of 20%. The cost price of the mobile phone is _____.

III. Say True or False: **5×1=5**

11) A square number will not have odd number of zeros at the end.
12) If $8^x = \frac{1}{64}$, the value of x is −2.
13) $8x^3y \div 4x^2 = 2xy$
14) The time taken for ₹1,000 to become ₹1,331 at 20% p.a. compounded annually is 3 years.
15) In a right angled triangle, the hypotenuse is the greatest side.

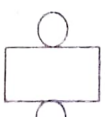
IV. Match the following: **5×1=5**

16)  - IV quadrant
17)  - $-12y^3$
18) $(4y^2) \times (-3y)$ - III quadrant
19) (10, −2) - Triangular prism
20) (−3, −7) - Cuboid

PART - B

V. Answer any 12 questions: **12×2=24**

21) Reduce to the standard form $\frac{48}{-84}$.
22) Compare $\frac{1}{3}$ and $\frac{4}{3}$.
23) Divide $\frac{7}{-8}$ by $\frac{-3}{4}$.
24) Simplify: $\sqrt{12} \times \sqrt{3}$
25) 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 arcs.
26) From the measures given below, find the area of the sector:
    Length of the arc = 48m, Radius r = 10m
27) Which 3-D shape do the following net represent? Draw it.



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28) Expand: $5x(2y-3)$

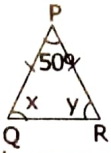
29) Divide: $(5y^3-25y^2+8y)$ by $5y$

30) Simplify: $\frac{3m^2}{m}+\frac{2m^4}{m^3}$

31) 48 is 32% of which number?

32) The price of a rain coat was slashed from ₹1,060 to ₹901 by a shopkeeper in the rainy season to boost the sales. Find the rate of discount given by him.

33) Find the value of x and y.



34) Write the statement of Pythagoras theorem.

35) Shanthi has 5 chudithar sets and 4 frocks. In how many possible ways, can she wear either a chudithar or a frock?

PART - C

VI. Answer any 8 questions: **8×5=40**

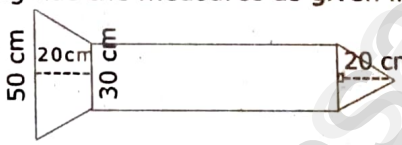
36) Simplify: $\left[\frac{4}{3}\div\left(\frac{8}{-7}\right)\right]-\left[\frac{3}{4}\times\frac{4}{3}\right]+\left[\frac{4}{3}\times\left(\frac{-1}{4}\right)\right]$

37) Find the square root of 324 by prime factorisation.

38) Evaluate: (i) $\left(\frac{1}{2}\right)^3$ (ii) $\left(\frac{2}{5}\right)^4\times\left(\frac{5}{2}\right)^{-2}$

39) Kamalesh has a dining table, circular in shape of 70 cm whereas Tharun has a circular quadrant dining table of radius 140 cm. Whose dining table has a greater area?

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



41) Verify Euler's formula for the table given below:

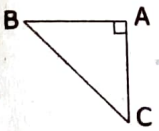
S.No.	Faces	Vertices	Edges
i)	4	4	6
ii)	10	6	12
iii)	32	60	90

42) Find the product of (i) $(2x+3)(2x-4)$ (ii) $(m^2-n)(5m^2n^2-n^2)$

43) Divide: (i) $27y^3\div 3y$ (ii) $x^3y^2\div x^2y$

44) By selling a bicycle for ₹4,275, a shopkeeper loses 5%. For how much should he sell it to have a profit of 5%?

45) In the figure, AB ⊥ AC.



i) What type of Δ is ABC?
ii) What are AB and AC of the ΔABC?
iii) What is CB called as?
iv) If AC = AB then, what is the measure of ∠B and ∠C?

46) 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 an assistant leader

PART - D

VII. Answer all the questions: **2×8=16**

47) a) Construct a quadrilateral MATH with MA = 4 cm, AT = 3.6 cm, TH = 4.5 cm, MH = 5 cm and ∠A = 85°. Also find its area. **(OR)**

b) Construct a Trapezium AIMS in which $\overline{AI}$ is parallel to $\overline{SM}$, AI = 6 cm, IM = 5 cm, AM = 9 cm and MS = 6.5 cm. Also find its area.

48) a) Plot the following points in a graph sheet.
A(5, 2), B(−7, −3), C(−2, 4), D(2, 0), E(7, −4) **(OR)**

b) Draw straight lines by joining the points A(2, 5), B(−5, −2), M(−5, 4), N(1, −2). Also find the point of intersection.

SIVAKUMAR. M
Sri Ramm Matric
Vallanni-627809

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