

Tsi8M

Tenkasi District
Common Half Yearly Examination - 2024



16-12-24

Time: 2.30 Hours

Standard 8**MATHS****Part - I**

Marks: 100

9x1=9**I. Choose the correct answer.**

- 1) $\frac{-5}{4}$ is a rational number which lies between
 - a) 0 and $\frac{-5}{4}$
 - b) -1 and 0
 - c) -1 and -2,
 - d) -4 and -5
- 2) $(-2)^{-3} \times (-2)^{-2} = \dots\dots\dots$
 - a) $\frac{-1}{32}$
 - b) $\frac{1}{32}$
 - c) 32
 - d) -32
- 3) The radius of a circle of diameter 24cm is
 - a) 8 cm
 - b) 12 cm
 - c) 48 cm
 - d) 6 cm
- 4) 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) $-6x^2y$
- 5) Factors of $4 - m^2$ are
 - a) $(2+m)(2+m)$
 - b) $(2-m)(2-m)$
 - c) $(2+m)(2-m)$
 - d) $(4+m)(4-m)$
- 6) Sum of a number and its half is 30 then the number is
 - a) 15
 - b) 20
 - c) 25
 - d) 40
- 7) 15% of 25% of 10000 =
 - a) 375
 - b) 400
 - c) 425
 - d) 475
- 8) The area of a rectangle of Length 21cm and diagonal 29cm is
 - a) 609 cm^2
 - b) 580 cm^2
 - c) 420 cm^2
 - d) 210 cm^2
- 9) How many 2 digit numbers contain the number 7?
 - a) 10
 - b) 18
 - c) 19
 - d) 20

II. Fill in the blanks.**5x1=5**

- 10) The cube root of 540×50 is
- 11) A cube has faces
- 12) One-Sixth of a number when subtracted from the number itself gives 25. Then the number is
- 13) The sum which amounts to Rs.2662 at 10% p.a in 3 years, compounded yearly is
- 14) In any triangle sides are opposite to equal angles

III. Say True or False.**5x1=5**

- 15) If $8^x = \frac{1}{64}$, the value of x is -2
- 16) Linear equation in one variable has only one variable with Power 2
- 17) Depreciation value is calculated by the Formula, $P\left(1 - \frac{r}{100}\right)^n$
- 18) 8, 15, 17 is a Pythagorean triplet.
- 19) Every third Fibonacci number is a multiple of 2

IV. Match the following.**5x1=5**

- | | | |
|------------------------|---|-------------------------------------|
| 20) $(a^m)^n$ | - | $K = \frac{y}{x}$ |
| 21) $\frac{x}{2} = 10$ | - | $\frac{1}{2} \times d_1 \times d_2$ |
| 22) direct proportion | - | 5 |
| 23) area of Rhombus | - | $x = 20$ |
| 24) 5th Fibonacci term | - | a^{mn} |

Tsi8M

2

V. Answer any 10 questions.

10x2=20

25) The sum of two rational numbers is $\frac{4}{5}$. If one number is $\frac{2}{15}$, Then find the other.

26) Evaluate $\sqrt[3]{\frac{9261}{8000}}$

27) The radius of a sector is 21cm and its central angle is 120° . Find area of the sector

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

29) Find the volume of the Cube whose side is $(x + 1)$ cm

30) Find the value of 998^2 by using $(a-b)^2$ identity

31) A number when decreased by 20% gives 80. Find the number

32) The value of a motor cycle 2 years ago was Rs.70000. It depreciates at the rate of 4% p.a. Find its present value

33) Find the Unknowns in the following figures.



34) Can a right triangle have sides that measure 5cm, 12cm and 13 cm?

35) Using repeated subtraction method, Find the HCF of 42 and 70

VI. Answer any 8 questions.

8x5=40

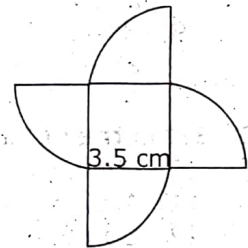
36) Solve for x: $\frac{2^{2x-1}}{2^{x+2}} = 4$

37) Simplify: $\left[\frac{4}{3} - \left(\frac{-3}{2}\right)\right] + \left[\frac{-5}{3} \div \frac{30}{12}\right] + \left[\frac{-12}{9} \times \frac{-27}{16}\right]$

38) Verify the distributive property $a \times (b+c) = (a \times b) + (a \times c)$ for the rational numbers.

$$a = \frac{-1}{2}, b = \frac{2}{3} \text{ and } c = \frac{-5}{6}$$

39) Find the perimeter and area of the given figure



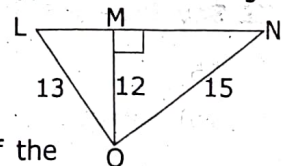
40) Find the product of $(2x + 5y)$ and $(3x-4y)$

41) Factorise $49x^2 - 84xy + 36y^2$

42) The Length of a rectangle is $\frac{1}{3}$ of its breadth. If its perimeter is 64m, Then find the length and breadth of the reactangle.

43) If 81 students can do a painting on a wall of length 448m in 56 days, then how many students can do the painting on a similar type of wall of length 160 m in 27 days?

44) Find LM, MN, LN and also area of $\triangle LON$



45) Using repeated subtraction method, Find the HCF of the following. 1014 and 654

VII. Answer any two questions.

2x8=16

46) Construct a quadrilateral MIND, $MI = 3.6$ cm, $ND = 4$ cm, $MD = 4$ cm, $\angle M = 50^\circ$ and $\angle D = 100^\circ$ Find its area

(OR)

Construct a Parallelogram CALF with $CA = 6$ cm $CF = 6$ cm and $AF = 10$ cm. Also Find its area.

47) Draw the graph $y = x - 4$

(OR)

Draw the graph of $y = 5x$