

TSISM

Tenkasi District  
Common Annual Examination - 2024

Time: 2:30 Hours

Standard 8  
MATHEMATICS  
Part - A

Marks: 100

5x1=5

## I. Choose the correct answer:

- $\frac{5}{4}$  is a rational number which lies between .....  
a) 0 and  $\frac{3}{4}$       b) -1 and 0      c) 1 and -2      d) -4 and -5
- Closure property is not true for division of rational numbers because of the number .....  
a) 1      b) -1      c) 0      d)  $\frac{1}{2}$
- 15% of 25% of 10000 = .....  
a) 375      b) 400      c) 425      d)  $\frac{4}{5}$
- The graphical representation of grouped data is .....  
a) Bar graph      b) Pictograph      c) pie chart      d) Histogram
- How many outcomes can you get when you toss three coins once?  
a) 6      b) 8      c) 3      d) 2

5x1=5

## II. Fill in the blanks:

- The value of  $\left(\frac{-3}{6}\right) \times \left(\frac{18}{-9}\right)$  is .....
- The value of y in the equation  $y - 9 = (-5) + 7$  is .....
- Corresponding sides of similar triangles are .....
- If a class size is 10 and range is 80 then the number of classes are .....
- $H \times RVM \times V = \dots\dots\dots$

5x1=5

## III. Say True or False:

- A Cube has 6 faces.
- The shifting of a number from one side of an equation to other is called transposition.
- The present value of a machine is Rs.16800. It depreciates at 25% p.a. Its worth after 2 years is Rs.9450.
- The incentre is equidistant from all the vertices of a triangle.
- A histogram is a graph of a continuous frequency distribution.

5x1=5

## IV. Match the following:

- |                                |   |
|--------------------------------|---|
| 16) Area of the sector         | - $4x^2 - 9$                                |
| 17) Perimeter of a semi circle | - $x = 4$                                   |
| 18) $(2x + 3)(2x - 3)$         | - $\frac{\theta}{360^\circ} \times \pi r^2$ |
| 19) $20 = 6x - 4$              | - 00 03 03 08 19 08 14 13                   |
| 20) addition                   | - $(\pi + 2)^r$                             |

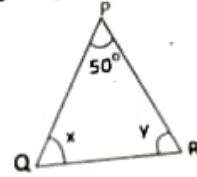
## Part - B

## V. Answer any 12 of the following:

12x2=24

- Write the decimal form of the following rational number (i)  $\frac{1}{4}$
- Evaluate :  $(5^0 + 6^{-1}) \times 3^2$
- Find the square root of 324 by Prime Factorisation.

- 24) Find the area of the sector. If the length of the arc = 48m and r = 10 m
- 25) Verify Euler's formula. If faces = 20 vertices = 13, Edges = 30
- 26) Simplify:  $\frac{14p^3q^4}{12p^3q^4}$
- 27) Expand:  $(y - 5)^2$
- 28) Convert the following statement into linear equation.  
The sum of 4 times a number and 18 is 28
- 29) A family went to a hotel and spent Rs.350 for food and paid extra 5% as GST. Calculate the CGST and SGST.
- 30) If 6 container lorries can transport 135 tonnes of goods in 5 days, how many more lorries are required to transport 180 tonnes of goods in 4 days?
- 31) Find the unknown in the following figure.
- 32) Check 9, 40, 41 are the sides of right angled triangles using Pythagoras theorem.
- 33) Define: Range
- 34) Define: Cryptology

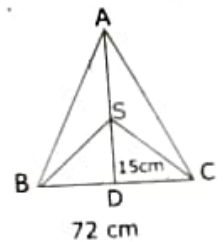
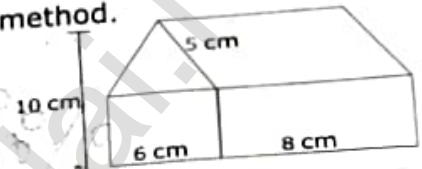


**Part - C**

8x5=40

**VI. Answer any 8 of the following:**

- 35) Verify the identity property for addition and multiplication for the rational numbers  $\frac{15}{19}$  and  $-\frac{18}{25}$
- 36) Find the square root of 11025 by long division method.
- 37) Find the area of the house drawing given in the figure.
- 38) A circle of radius 70 cm is divided into 5 equal sectors. Find the area of each of the sectors.
- 39) Factorise: a)  $x^2 + 8x + 15$  b)  $7C^2 + x - 5$
- 40) Find the C.I for the data given below. Principal = Rs.5000, r = 4% p.a. n = 1½ years interest compounded half yearly.
- 41) In  $\Delta ABC$ , S is the circumcentre BC = 72cm and DS = 15cm. Find the radius of its circum circle.
- 42) Income from various sources for Government of India from a rupee is given below.



Source	Corporation tax	Income tax	Customs	Excise duties	Service tax	others
Income (in paise)	19	16	9	14	10	32

43) The distribution of heights (in cm) of 100 people is given below. Construct a histogram and the frequency Polygon imposed on it.

Height (in cm)	125-135	136-146	147-157	158-168	169-179	180-196	191-201
Frequency	12	22	18	24	15	7	2

44) Using repeated subtraction method find the H.C.F of 280 and 420

**Part - D**

**VII. Answer the following:**

2x8=16

- 45) a) Construct the following quadrilaterals with the given measurements and also find their area. PQRS. PQ=QR=3.5 cm Rs=5.2 cm SP = 5.3 cm and  $\angle Q = 120^\circ$   
(OR)
- b) Construct a rectangle BEAN with BE = 5 cm and BN = 3 cm. Also find its area.
- 46) a) Graph the equation  $y = x + 1$   
(OR)
- b) If the points P(5, 3) Q(-3, 3), R(-3, -4) and S form a rectangle, then find the coordinate of S.