Ts8M

Tenkasi District Common Examinations
Common Annual Examination - 2023

19.04.2023

Standard 8
MATHEMATICS
Part - A

Time: 2.30 Hours Marks: 100

I. Choose the correct answer. **5x1=5**

1) Which of these rational numbers which have additive inverse?
   a) 7 b) $\frac{-5}{7}$ c) 0 d) all of these
2) Factors of $9x^2 + 6xy$ are .....
   a) 3y, (x + 2) b) 3x, (3x + 3y) c) 6x, (3x + 2y) d) 3x, (3x + 2y)
3) What is the marked price of a hat which is bought for Rs.210 at 16% discount?
   a) Rs.243 b) Rs. 176 c) Rs.230 d) Rs.250
4) A flag pole 15m high casts a shadow of 3m at 10.a.m. The shadow cast by a building at the same time is 18.6m. The height of the building is .....
   a) 90m b) 91 m c) 92 m d) 93 m
5) What is the eleventh Fibonacci number?
   a) 55 b) 77 c) 89 d) 144

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

6) The smallest number to be added to 3333 to make it a perfect cube is .....
7) The ratio between the circumference and diameter of any circle is .....
8) ..... × $(-15m^2n^3p) = 45m^3n^3p^2$
9) Similar triangles have the same ..... but not necessarily the same size.
10) The range of the data 200, 15, 20, 103, 3, 197 is .....

III. Write True? or False. **5x1=5**

11) $7ab^3 \div 14ab = 2b^2$
12) Profit (or) Gain % = $\left(\frac{\text{profit}}{\text{c.p}} \times 100\right)\%$
13) In any triangle the centroid and the incentre are located inside the triangle.
14) Media and business people use pie charts.
15) Two numbers are said to be co-prime numbers if their HCF is 1.

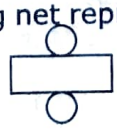
IV. Match the following. **5x1=5**

16) Area of the sector of a circle - x =20
17) Circumference of a semicircle - $x = \frac{8}{3}$
18) $\frac{x}{2} = 10$ - $(\pi + 2)r$
19) 20 = 6x – 4 - $\frac{\theta}{360^0} \times \pi r^2$
20) 2x – 5 = 3 – x - x = 4

Part - B

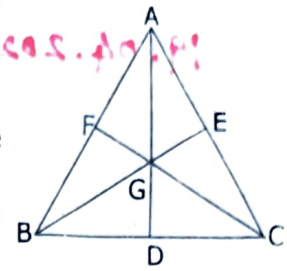
V. Answer the following (any 12). **12x2=24**

21) Find a rational number between $\frac{1}{3}$ and $\frac{5}{9}$
22) Simplify $\sqrt{2\frac{7}{9}}$
23) The radius of a sector is r = 16cm, and its central angle is 45°. Find the length of the arc.
24) Which 3-D shape do the following net represent? Draw it.



25) Expand $-2p(5p^2-3P+7)$
26) Solve the equation x – 7 = 6
27) 48 is 32% of which number?
28) If a company pays Rs.6 lakh for 15 workers for 20 days, how much would it head to pay for 5 workers for 12 days?
29) Check whether given sides are the sides of right - angled triangle, using pythagoras theorem. 12cm, 13cm, 15cm

30) ABC is a triangle and G is its centroid If AD = 12cm, BC = 8cm and BE = 9cm. Find the perimeter of ΔBDG.



31) Find the range of the given data
53, 42, 61, 9, 39, 63, 14, 20, 06, 26, 31, 4, 57

32) Form an ungrouped frequency distribution table for the weight of 25 students in STD IV given below.
25, 24, 20, 25, 16, 15, 18, 20, 25, 16, 20, 16, 15, 18, 25, 16, 24, 18, 25, 15, 27, 20, 20, 27, 25.

33) Define - Histogram

34) Using repeated substraction method, find the HCF of 42 and 70

35) Define - packing.

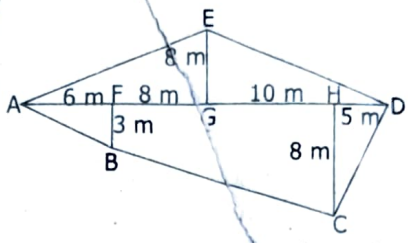
Part - C

VI. Answer the following (any 8). **8x5=40**

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

37) Find the cube root of 729 and 6859 by prime factorisation.

38) Find the area of the irregular polygon shaped fields given below.



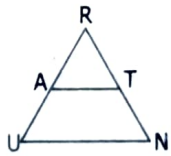
39) Using the identity $(a+b)^3 = a^3+3a^2b+b^3$ Find the value of the following
i) $(103)^3$ ii) $(52)^3$

40) The sum of the digits of a two - digit number is 8. If 18 is added to the value of the number, its digits get reversed. Find the number.

41) The income of a person is increased by 10% and then decreased by 10%. Find the change in his income.

42) Find the compound interest for $2\frac{1}{2}$ years on Rs.4000 at 10% p.a, if the interest is compounded yearly.

43) If A is the midpoint of RU and T is the midpoint of RN, prove that ΔRAT ~ ΔRUN



44) A survey gives the following information of food items preferred by people. Draw a pie chart.

Items	Vegetables	Meat	Salad	Fruits	Sprouts	Bread
No. of people	160	90	80	50	30	40

45) Draw the frequency polygon for the following data using histograms.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
No. of. Students	5	8	10	18	25	22	20	13	6	3

46) Find the codes of the following by using Atbash cipher table
i) G Z N R O
ii) V M T O R H S
iii) N Z G S V N Z G R X H
iv) H X R V M X V
v) H L X R Z O H X R V M X V

SIVAKUMAR.M,
Sri Ram Matric HSS,
Vallam-627803
Tenkasi District.

Part - D

VII. Answer all the questions. **2x8=16**

47) a) Construct a quadrilateral PLAY with PL = 7cm, LA = 6cm, AY = 6cm, PA = 8cm, and LY = 7cm. Also find its area.

(OR)

b) Construct a rectangle LIME with LI = 6cm and IE = 7cm. Also find its area.

48) a) A line passes through (6,0) and (0, 6) and an another line passes through (−3, 0) and (0, −3). What are the points to be joined to get a trapezium?

(OR)

b) Draw the graph of y = 5x.

- - - - - -