Tirunelveli District
Common Quarterly Examination, September - 2024

TVL8M

Standard 8
MATHS
Part - I

Time: 2.30 Hours

Marks: 100

20×1=20

A] Choose the correct answer:

1) The square of 43 ends with the digit _____
   a) 9   b) 6   c) 4   d) 3

2) If the are 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) If 48% of 48 = 64% of x, then x =
   a) 64   b) 56   c) 42   d) 36

4) Two similar triangles will always have _____ angles
   a) a cut   b) obtuse   c) right   d) matching

5) How many outcomes can you get when you toss three coins once?
   a) 6   b) 8   c) 3   c) 2

B] Fill in the blanks

6) The multiplicative inverse of −1 is _____
7) The meeting point of more than two edges in a polyhedron is called as _____
8) $6xy \times$ _____ $= -12x^3y$
9) Loss or gain percentage is always calculated on the _____
10) In any triangle _____ sides are opposite to equal angles.

C] True or False:

11) The average of two rational numbers lies between them.
12) The additive inverse of $\frac{-11}{-17}$ is $\frac{11}{17}$
13) The longest chord of a circle is diameter.
14) $8x^3y^2 \div 4x^2y = 2xy$
15) Depreciation value is calculated by the formula $P\left(1 - \frac{r}{100}\right)^n$

D] Match the following

16) $5x(x^2-y^2+xy)$ - $2\pi r$ units
17) $5x(4xy-4)$ -   congruent triangle
18) Circumference of the circle   -   similar triangle
19) Symbol $\equiv$ - $20x^2y-20x$
20) Symbol $\sim$ - $5x^3-5xy^2+5x^2y$

Part - II

Answer any 12 questions of the following: 12×2=24

21) The product of two rational number is $\frac{-2}{3}$ if one number is $\frac{3}{7}$ then find the other.

22) Compare $\frac{3}{4}$ and $\frac{5}{6}$

23) Write the following numbers is scietific notation
    (i) 1642.392
    (ii) Earth's volume is about 1,083,000,000,000 cubic kilometers

24) Find the square root of 324 by prime factorisation

25) Find the square root of 9801 by long division method.

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

27) Find the number of edges of a polyhedron using Euler's formula if it has 4 faces, 4 vertices.

28) Find the length of the arc of a sector of central angle is 45° and radius is 6 cm.

29) Multiply $3x^2y$ and $(2x^3y^3-5x^2y+9xy)$

30) Divide: $(4m^2n+9n^2m+3mn)$ by 4mn.

31) If the side of a square is $4xy^3$ then find its area.
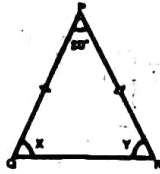
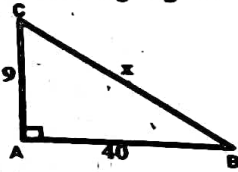32) If x% of 600 is 450, then find the value of x.

TVL8M

2

33) Find the compound interest on principal Rs.4000, at 5% p.a. for 2 years, compounded annually.

34) Find the values of x and y in the following figure

35)

Find the unknown side in the following triangle

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

Part – III

Answer any 8 questions of the following: 8×5=40
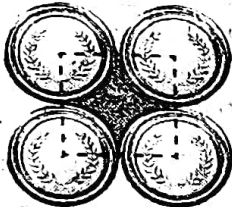
37) Write the following rational numbers in ascending and descending order

$$\frac{-3}{5}, \frac{7}{-10}, \frac{-15}{20}, \frac{14}{-30}, \frac{-8}{15}$$

38) Find the value of $\sqrt{42.25}$

39) Solve for x: (i) $\dfrac{2^{2x-1}}{2^{x+2}} = 4$ (ii) $\dfrac{5^5 \times 5^{-4} \times 5^x}{5^{12}} = 5^{-5}$

40)

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 $\left(\pi = \frac{22}{7}\right)$

41) Find the perimeter and area of the figure $\left(\pi = \frac{22}{7}\right)$
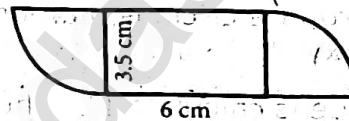
42)
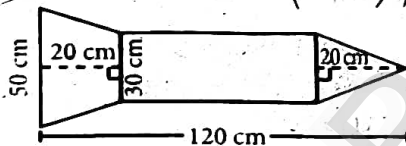
A rocket drawing has the measures as given in the figure. Find its area.

43) Expand: $x^2(x+y+z) + y^2(x+y+z) + z^2(x-y-z)$

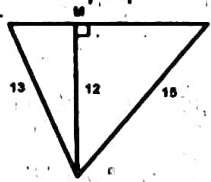44) Divide: $81(p^4q^2r^3 + 2p^3q^3r^2 - 5p^2q^2r^2)$ by $(3pqr)^2$

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

46) The population of a town is increasing at the rate of 6% p.a. It was 238765 in the year 2018. Find the population in the year 2016 and 2020.

47) Find LM, MN, LN and also the area of ΔLON.

48) 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 – IV

8 Mark questions: 2×8=16

49) a] Construct a quadrilateral DEAR with DE = 6 cm, EA = 5 cm, AR = 5.5 cm, RD = 5.2 cm and DA = 10 cm. Also find its area.   **(OR)**

b] Construct a trapezium BOAT in which $\overline{BO}$ is parallel to $\overline{TA}$, BO = 7 Cm, OA = 6 cm, BA = 10 cm and TA = 6 cm. Also find its area.

50) a] Plot the following points in a graph sheet A(5, 2), B(0, −5), C(−1, −1), D(8, −4), E(−2, 4), F(−4, 0)   **(OR)**

b] Draw the graph of x = 5.

- - - - - - -

V.S. GILBERT SAMUEL M.SC., B.ED.,
PALAYAMKOTTAI, TIRUNELVELI.