MARTHOMA RESIDENTIAL SCHOOL, THIRUVALLA

THIRD TERMINAL EXAMINATION 2017-2018

MATHEMATICS

CLASS VII

TIME: $1^1/_2$Hrs
MAXMARKS: 80

Fill in the blanks

(10 marks)

1) $3^{-7} \times 3^4 =$ _____
2) $4a^2 + 2$ has degree _____.
3) $(-3b^2) + (-7b^2) =$ _____
4) Two circles are congruent if they have equal _____.
5) The exponential form of $-2 \times -2 \times -2 \times 5 \times 5 =$ _____.
6) $2^0 \div 3^0 =$ _____
7) Complete

$$86{,}000{,}000 = 8.6 \times 10^{\square}$$

8) The coefficient of p in $\frac{-2}{3}px^2$ is _____.
9) The corresponding parts of congruent triangles are always _____.
10) If $\frac{x}{-2} = 3$, then $x =$ _____.

Three Mark Questions

1) Express the number 300 as a product of powers of their prime factors.
2) Add: $5m^2 - 3mn + n^2$; $7m^2 + mn - 4n^2$
3) Solve $\frac{4x}{3} - \frac{7x}{5} = 1$
4) At what time will Rs1200 amount to Rs 1680 at 10% p.a ?
5) The window of a room is 20m long and 14m wide. If the carpenter works to put a metallic frame around it which costs Rs.120 per metre, then how much will the metallic frame cost?
6) A farmer sells 40 quintals of rice for Rs20,000. What quantity of rice (in quintals) would he sell in order to receive Rs24,000 ?
7) The sum of two consecutive numbers is (-27). Find the numbers.
8) Find the area of a triangle whose base is 9.6cm and the corresponding altitude is 5cm.

9) A wire is in the form of a semicircle of 7cm radius. Find the length of wire. ($\pi = \frac{22}{7}$)

10) Solve $(3t - 2)(t + 2) - 3t^2 = 5$

Four Mark Questions

1) Simplify using laws of exponents : $\frac{(3^3)^2 \times 5^2}{9^2 \times 5}$

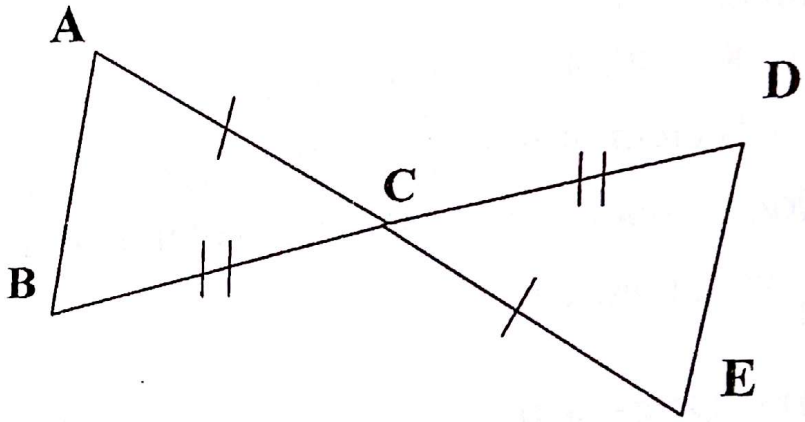
2) Multiply $(3x - 2y)(2x + 3y + 4z)$

3) Solve $\frac{2x+1}{3x-2} = 1\frac{1}{4}$

4) In the given figure, prove that

   a) $\Delta ACB \cong \Delta ECD$

   b) $AB = ED$



5) A man borrowed Rs 8000 from a bank at 8% per annum. Find the amount he has to pay after $4\frac{1}{2}$ years ?

Five Mark Questions

1) Simplify $3x^2 - 8ab + 4x^2 + 11ab$ and find the value if $x = 2, a = -1, b = -3$

2) The perimeter of a rectangle is 50cm. If its length exceeds its breadth by 5cm, find the length and breadth of the rectangle.

3) A room measures $12m \times 9m$. The floor of the room is to covered by marble tiles measuring $45cm \times 30cm$. How many tiles are needed?

4) From the sum of $x^2 - 2xy + y^2$; $14xy - 20y^2$ and $x^2 + 2xy + y^2$ subtract $x^2 - 4xy + 4y^2$.