

MARTHOMA RESIDENTIAL SCHOOL, THIRUVALLA
ANNUAL EXAMINATION 2019

STD - VIII

MATHEMATICS

Time : 2 1/2 hr

Mark : 80

I Answer the following Questions

- a) Find the number of sides of a regular polygon if each of its interior angle is 108° (3)
b) The dimensions of a cuboid are in the ratio 3 : 2 : 1 and total surface area is 1078cm^2 (3)

Find (i) the dimensions of the cuboid

(ii) volume of the cuboid (3)

- c) The diagonal of rectangle is 17m and it's breadth 8m . Find (3)

(i) length of the rectangle

(ii) area of the rectangle

(iii) perimeter of the rectangle (4)

II

- a) If $a + b = 9$ and $ab = 24$. Find the value of $a^2 + b^2$ and $a^3 + b^3$ (3)

- b) Factorise (i) $x^2 - 9x + 8$ (3)

(ii) $x^2 - 12x + 36$ (3)

- c) Find the quotient and the remainder (if any) when $2x^3 - 8x^2 + 5x - 8$ is divided by $x - 2$. (4)

III

- a) If four times a number added to 3 is equal to 15 less than five times the number, then find the number. (3)

- b) The sides of a triangle are $x^2 - 3xy + 8$, $4x^2 + 5xy - 3$ and $6 - 3x^2 + 4xy$. Find it's perimeter. (3)

- c) The external dimensions of closed wooden box are 27cm, 15cm, and 8cm. If it is made up of wood of 2cm thickness. Calculate (4)

(i) capacity of the box

(ii) volume of wood used in making the box

IV

- a) Find the area of a triangle whose sides are 13cm, 15cm, 14cm . (3)

- b) A cube of edge 5cm and a cuboid which dimensions 10cm X x cm X 5 cm are equal in volume. (3)

Find (i) The value of x

(ii) Total surface area of the cuboid

- c) Find the difference between the compound interest and simple interest on a sum of Rs.5000 for 3 years at the rate of 10% p.a (4)

V

- a) If 17 % of a number is 425 Find the number (3)
- b) A farmer sells his product at a loss of 8% If his selling price is Rs 27600 What is his actual loss ? What is his cost price (3)
- c) In an examination 24% students failed in maths, 27% students Failed in science and 20% students failed in both subjects. (4)
- (i) Find the percentage of students who failed
- (ii) If 552 students passed in both the subject
Find the total number of students appeared in the examination

VI

- a) Evaluate $\frac{-125}{72} \times \frac{9}{-5} \times \frac{16}{64}$ (3)
- b) Find the square root of 24336 by Divison Method (3)
- c) In an election between two candidates a candidate scored 47% votes and Lost by 5460 votes. Find the total votes polled. (4)

VII

- a) Evaluate $\frac{\sqrt{169} - \sqrt{144}}{\sqrt{256} + \sqrt{9}}$ (3)
- b) Evaluate : $\frac{3}{4} + \frac{5}{6} + \frac{-1}{4} + \frac{-7}{6}$ (3)
- c) A man sold two article for Rs 2970 each, gaining 10% on one and losing 10% on the other. Find his gain or loss percent on the whole transaction. (4)

VIII

- a) In how many years will the interest on Rs 7250 amount to Rs 8700, the rate of interest being 4% (3)
- b) The volume of a cube is 343 cm^3 , Find the (3)
- (i) Length of an edge of the cube
- (ii) Total surface area of the cube
- c) Constrict a quadrilatrcal PQRS If $PQ = 4.5 \text{ cm}$, $QR = 4\text{cm}$, $PS = 3.5\text{cm}$ $RS = 3\text{cm}$ and $PR = 5.7\text{cm}$. (4)