

Monthly Test, August - 2024

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Standard : 10

TIME : 45 minutes

Mathematics

Mark : 25

Part - I

1 x 1 = 1

Choose the best Answer

- 1) A straight line has equation  $8y = 4x + 21$ . Which of the following is true
- The slope is 0.5 and the y intercept is 2.6
  - The slope is 5 and the y intercept is 1.6
  - The slope is 0.5 and the y intercept is 1.6
  - The slope is 5 and the y intercept is 2.6

Part - II

3 x 2 = 6

Answer any 3 questions. Question No. 5 is compulsory :

- In the Figure , AD is the bisector of  $\angle BAC$ , if  $AB = 10$  cm,  $AC = 14$  cm and  $BC = 6$  cm. Find BD and DC.
- Find the equation of a line whose intercepts on the  $x$  and  $y$  axes are 4, -6
- Show that the points  $P(-1.5, 3)$ ,  $Q(6, -2)$  and  $R(-3, 4)$  are collinear.
- The vertices of a triangle are  $A(-4, 3)$ ,  $B(1, -1)$  and  $C(5, 1)$ . Find the length of the median through the vertex C.

Part - III

2 x 5 = 10

Answer any 2 questions. Question No. 8 is compulsory :

- State and Prove Angle bisector Theorem.
- Find the area of the quadrilateral formed by the points  $(8, 6)$ ,  $(5, 11)$ ,  $(-5, 12)$  and  $(-4, 3)$
- Let  $A(3, -4)$ ,  $B(9, -4)$ ,  $C(5, -7)$  and  $D(7, -7)$ . Show that  $ABCD$  is a trapezium.

Part - IV

1 x 8 = 8

Answer the question.

- 9) a) Construct a  $\Delta PQR$  which the base  $PQ = 4.5$  cm,  $\angle R = 35^\circ$  and the median  $RG$  from  $R$  to  $PQ$  is 6 cm.

(OR)

- b) Construct a triangle  $\Delta PQR$  such that  $QR = 5$  cm,  $\angle P = 30^\circ$  and the altitude from  $P$  to  $QR$  is of length 4.2 cm.

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