T1-Coordinate Geometry And Practical Geometry

Model Question Paper III

9th Standard

Maths

Reg.No. : | | | | | | |

I. Answer all the questions

Time : 01:45:00 Hrs

Total Marks : 60

Part-A

5 x 1 = 5

1) The point (x,0) where x < 0 lies on

(a) ox (b) oy (c) OX' (d) OY'

2) The diagonal of a square formed by the points (1,0) (0,1) (−1,0) and (0,−1) is

(a) 2 (b) 4 (c) $\sqrt{2}$ (d) 8

3) The distance between the points (0,8) and (0,−2) is

(a) 6 (b) 100 (c) 36 (d) 10

4) The distance between the points (a, b) and (−a, −b) is

(a) 2a (b) 2b (c) 2a + 2b (d) $2\sqrt{a^2+b^2}$

5) The point which is on y-axis with ordinate −5 is

(a) (0, −5) (b) (−5, 0) (c) (5, 0) (d) (0, 5)

Part-B

5 x 1 = 5

6) State whether the following statement are true / false.

(5, 7) is a point in the IV quadrant.

(a) True (b) False

7) State whether the following statement are true / false.

(5, 2) and (-7, 2) are points on the line parallel to y-axis .

(a) True (b) False

8) State whether the following statement are true / false.

(-5, 2) lies to the left of y-axis

(a) True (b) False

9) State whether the following statement are true / false.

(-2, 3) lies in the II quadrant.

(a) True (b) False

10) State whether the following statement are true / false.

For any point on the x-axis its y-coordinate is zero.

(a) True (b) False

Part-C

10 x 2 = 20

11) Plot the following points in the rectangular coordinate system C (-2, -3)

12) Locate the points (-2, -5) and (-5, -2) in the rectangular coordinate system. Observe that if we interchange the abscissa and ordinate of a point, then it may represent a different point in the Cartesian plane.

13) Identify the quadrants of the points A (2, 3), B (-2, 3), C (-2, -3) and D (2, -3). Discuss the type of the diagram by joining all the points.

14) Find the distance between the points (−7, 2) and (5, 2)

15) Find the distance between the points (−3, −4), (5, −7)

16) Show that the three points (4, 2), (7, 5) and (9, 7) lie on a straight line

17) Show that the following points (3, −2), (3, 2), (−1, 2) and (−1, −2) taken in order are vertices of a square

18) Show that (4, 3) is the centre of the circle which passes through the points (9, 3), (7, −1) and (1, −1). Find also its radius.

19) Construct the circumcentre of the ΔABC with AB = 5cm, $\angle A = 70^o$ and $\angle B = 60^o$. Also draw the circumcircle and find the circumradius of the DABC.

20) Construct ΔABC whose sides are AB = 6cm, BC = 4cm and AC = 5.5cm and locate its orthocentre.

Part-D

10 x 3 = 30

21) Plot the following points in the coordinate system and specify their quadrant

(4, -5)

22) Write down the abscissa for the following points.

(-5, -3)

23) The ordinates of two points are each -6. How is the line joining them related with reference to x-axis?

24) If the length of the line segment with end points (2, -6) and (2, y) is 4, find y.

25) Show that the origin is the circum-centre of the triangle formed by the vertices (1, 0), (0, -1) and $\left(\frac{-1}{2}, \frac{\sqrt{3}}{2}\right)$

26) Draw the circumcircle for

(i) an equilateral triangle of side 6cm.

(ii) an isosceles right triangle having 5cm as the length of the equal sides.

27) Construct the right triangle whose sides are 4.5cm, 6cm and 7.5cm. Also locate its circumcentre.

28) Construct the orthocentre of ΔLMN, where LM = 7cm, $\angle M$ = 130c and MN = 6cm.

29) Construct an equilateral triangle of sides 6cm and locate its orthocentre.

30) Draw and locate the orthocentre of a right triangle PQR right angled at Q, with PQ = 4.5 cm and QR = 6 cm.

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