Self Assessment Test

By : www.udgamwelfarefoundation.com

Time : 1.5 Hours

Class : 9 Standard

COG0901

Maximum Marks : 50

Section A : Multiple Choice Questions (1 mark each)

1. The coordinates of the origin are
   (a) (A) $(0, 1)$
   (b) (B) $(1, 0)$
   (c) (C) $(0, 0)$
   (d) (D) $(1, 1)$
2. Point $(-3, 4)$ lies in which quadrant?
   (a) (A) I
   (b) (B) II
   (c) (C) III
   (d) (D) IV
3. The abscissa of point $(7, -5)$ is
   (a) (A) -5
   (b) (B) 7
   (c) (C) 0
   (d) (D) 12
4. The ordinate of point $P(-2, 5)$ is
   (a) (A) -2
   (b) (B) 5
   (c) (C) 7
   (d) (D) -7
5. The point $(x, 0)$ always lies
   (a) (A) on y-axis

(b) (B) on x-axis

(c) (C) in I quadrant

(d) (D) in II quadrant

6. If a point lies in the IV quadrant, then

   (a) (A) $x < 0, y < 0$

   (b) (B) $x > 0, y < 0$

   (c) (C) $x < 0, y > 0$

   (d) (D) $x > 0, y > 0$

7. Which point lies on both axes?

   (a) (A) $(0, 0)$

   (b) (B) $(1, 0)$

   (c) (C) $(0, 1)$

   (d) (D) $(2, 2)$

8. Which of the following points lies in the third quadrant?

   (a) (A) $(2, 3)$

   (b) (B) $(-2, -3)$

   (c) (C) $(-2, 3)$

   (d) (D) $(2, -3)$

Section B : Short Answer Questions (2 marks each)

1. Plot the point $A(2, 3)$ on the Cartesian plane using TikZ.

2. Find the coordinates of a point which is 5 units to the right of $(2, -1)$.

3. Write the quadrant in which each of the following points lie: $(4, -5)$, $(-3, -2)$.

4. The x-coordinate of a point is -7. If it lies on the y-axis, what are its coordinates?

5. Plot points $P(0, 2)$ and $Q(-3, 0)$ and state the axes on which they lie.

6. Find the distance of the point $(0, -6)$ from the origin.

Section C : Long Answer Questions (4 marks each)

1. Plot the points $A(2, 3)$, $B(-2, 3)$, $C(-2, -3)$, $D(2, -3)$. Join them in order and name the figure formed.

2. A point lies on the x-axis at a distance of 4 units from the origin. Write its coordinates. Also plot both possible points.

3. Plot points $A(1,2)$, $B(3,2)$, $C(3,5)$, $D(1,5)$. What figure is obtained? Find its perimeter.

4. Write the signs of the abscissa and ordinate of points in each of the four quadrants with a diagram.

Section D : Case Study (5 marks)

Case Study: A city planner is working on designing a new park in the city using the Cartesian plane to represent locations. The origin $(0,0)$ represents the city center. The park is planned at point $P(4,3)$, the library at point $L(-2,3)$, and the hospital at point $H(-2,-3)$. The planner wants to understand distances and positions of these landmarks to make efficient walking paths and crossings. Based on this coordinate geometry model, answer the following questions:

1. The park $P(4,3)$ lies in which quadrant?
   (a) (A) I
   (b) (B) II
   (c) (C) III
   (d) (D) IV

2. Which of the following represents the hospital?
   (a) (A) $(2,-3)$
   (b) (B) $(-2,-3)$
   (c) (C) $(-3,2)$
   (d) (D) $(3,-2)$

3. What is the distance of the park P from the origin?
   (a) (A) 5
   (b) (B) 4
   (c) (C) 3
   (d) (D) 7

4. Which landmark lies on the negative x-axis?
   (a) (A) Park
   (b) (B) Library
   (c) (C) Hospital
   (d) (D) None

5. Which two landmarks are symmetric with respect to the x-axis?
   (a) (A) Park and Library
   (b) (B) Library and Hospital
   (c) (C) Park and Hospital
   (d) (D) Park and Origin