UDAAN 2024

Coordinate Geometry

DHA-01

1. If $C(-1,1)$ is the mid-point of the line segment joining $A(-3,b)$ and $B(1,b+4)$, then the value of $'b'$ is:
   (A) 1   (B)   3
   (C) -1 ✓   (D)   2

2. Which of the following are the coordinates of the intersection points of the diagonals of the rectangle $ABCD$ with vertices $A(0,3), B(3,0), C(1,-2)$ and $D(-2,1)$?
   (A) $\left(\dfrac{1}{2}, \dfrac{1}{2}\right)$ ✓   (B) $\left(-\dfrac{1}{2}, -\dfrac{1}{2}\right)$
   (C) $(1.5, 1.5)$ (D) $(2,-1)$

3. If the centroid of the triangle formed by $(9,a), (b,-4)$ and $(7,8)$, is $(6,8)$, then the value of a and b are:
   (A) $a=4, b=5$ (B) $a=5, b=4$
   (C) $a=5, b=2$ (D) $a=20, b=2$

4. If a point $P\left(\dfrac{23}{5}, \dfrac{33}{5}\right)$ divides line AB joining two points $A(3,5)$ and $B(x,y)$ internally in ratio 2:3, then the values of x and y will be:
   (A) $x=4, y=7$ (B) $x=5, y=9$
   (C) $x=7, y=9$ ✓   (D) $x=7, y=8$

5. The coordinates of the third vertex of an equilateral triangle whose two vertices are at $(3,4), (-2,3)$ are:
   (A) $(1,7)$

   (B) $(5,1)$

   (C) $\left(\dfrac{1+\sqrt{3}}{2}, \dfrac{7-5\sqrt{3}}{2}\right)$ or $\left(\dfrac{1-\sqrt{3}}{2}, \dfrac{7+5\sqrt{3}}{2}\right)$ ✓

   (D) $(-5,5)$

6. In right angled triangle $ABC, m\angle B = 90°, \triangle ABC$ is in the first and second quadrant on the graph paper. The coordinates of the points A and C are (2,5) and (–2, 3) respectively. Find the possible pairs of coordinates of point B from the following alternatives.
   (A) $(-2,5)$ or $(2,3)$ (B) $(5,2)$ or $(3,2)$
   (C) $(-2,2)$ or $(5,3)$ (D) $(2,-2)$ or $(5,3)$

7. Find the distance of the point (36, 15) from origin.
   (A) 39 units ✓   (B) 37 units
   (C) 36 units   (D) 35 units

8. The x-coordinates of a point P is twice its y-coordinates. If P is equidistant from Q(2, –5) and R(–3, 6), then find the coordinates of P.

Note: Kindly find the Video Solution of DHAs Questions in the DPPs Section.

Answer Key

1.	(C)		**5.**	(C)
2.	(A)		**6.**	(A)
3.	(D)		**7.**	(A)
4.	(C)		**8.**	(16, 8)