



CBSE NCERT Based Chapter wise Questions (2025-2026)

Class-X

Subject: MATHEMATICS

Chapter Name : Coordinate Geometry (Chap : 7)

Total : 16 Marks (expected) [MCQ(1+1)-1 Mark, CBQ-(1)-4 Marks]

Level - 2 (Higher Order)

MCQ Type :

1. The coordinates of the point where the line $\frac{x}{a} + \frac{y}{b} = 7$ intersects y-axis are :
(A) (a, 0) (B) (0, b) (C) (0, 7b) (D) (7a, 0)

(Hints : Put $x = 0$)

2. The area of the triangle OAB, the coordinates of the points A (4, 0), B(0, -7) and O is origin, is :
(A) 11 sq. units (B) 18 sq. units (C) 28 sq. units (D) none of these

(Hints : It is a right-angled triangle right angle at O)

3. The line $\frac{x}{2} + \frac{y}{4} = 1$ intersects the axes at P and Q, the coordinates of the midpoint of PQ are :
(A) (1, 2) (B) (2, 0) (C) (0, 4) (D) (2, 1)

(Hints : P(2, 0) and Q(0, 4))

4. The distance between the lines $2x + 4 = 0$ and $x - 5 = 0$, is :
(A) 9 units (B) 1 unit (C) 5 units (D) 7 units

(Hints : Draw the graph of two lines)

5. if 'a' is any positive integer such that the distance between the points P(a, 2) and Q(3, -6) is 10 units, then the value of 'a' is :
(A) -3 (B) 6 (C) 9 (D) 3

(Hints : Use distance formula)

6. The perimeter of triangle formed by the points (0, 0), (2, 0) and (0, 2) is :
(A) 4 units (B) 6 units (C) $6\sqrt{2}$ units (D) $4 + 2\sqrt{2}$ units

(Hints : Find length of three sides)

7. Two points of line segment are (a, b) and (-a, -b), then the length of the line segment is :
(A) $\sqrt{a^2 + b^2}$ (B) $2\sqrt{a^2 + b^2}$ (C) $\frac{2}{3}\sqrt{a^2 + b^2}$ (D) none of these

(Hints : use distance formula)

8. If the points (a, 0), (0, b) and (1, 1) are collinear, then :
(A) $a^2 + b^2 = ab$ (B) $a + b = ab$ (C) $a + b = a^2b^2$ (D) $a^2 + b^2 = 0$

(Hints : use section formula)

9. The distance between $(\tan \alpha, 0)$ and $(0, 1)$ is :
(A) $\sec^2 \alpha$ (B) $\cot^2 \alpha$ (C) $\sec \alpha$ (D) $\cot \alpha$

(Hints : Use distance formula)

10. The ratio in which the line joining the points (5, 3) and (-1, 6) is divided y-axis is :

Ⓐ 5 : 3

Ⓑ 2 : 3

Ⓒ 4 : 5

Ⓓ 5 : 1

(Hints : Use section formula and take x-coordinate = 0)

CBQ Type :

11. Social Awareness for No-smoking

To raise social awareness about hazards of smoking, a school decided to start 'No smoking' campaign. 10 students are asked to prepare campaign banners in the shape of a triangle. The vertices of one of the triangle are P(-3, 4), Q(3, 4) and R(-2, -1).



Based on the above information, answer the following questions.

(I) Find the coordinates of centroid of $\triangle PQR$.

(II) If S be the mid-point of line segment joining P and Q, then find the coordinates of S.

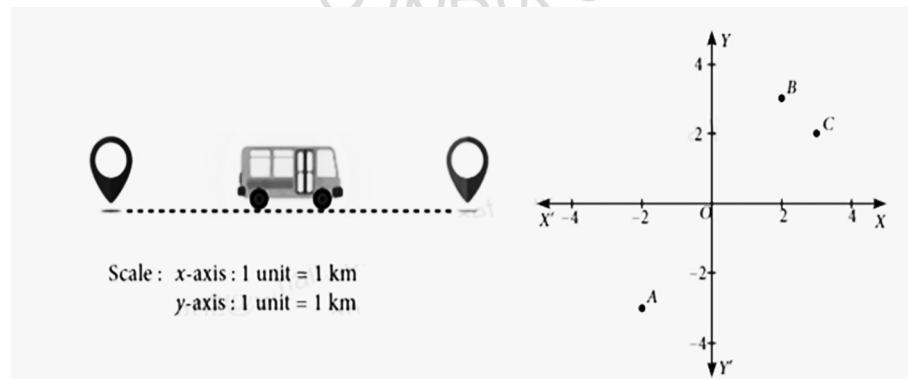
(III) A. If T be the mid-point of line segment joining R and Q and U be the mid-point of line segment joining R and P, then find the coordinates of centroid of $\triangle ASTU$.

OR

(III) B. Find the length of TU.

12. Choosing Best Route :

There are two routes to travel from source A to destination B by bus. First bus reaches at B via point C and second bus reaches from A to B directly. The position of A, B and C are represented in the following graph :



Based on the above information, answer the following questions.

(I) Find the distance between A and B.

(II) Find the measure of $AC + BC$.

(III) A. If the fare for first bus is ₹10/km, then what will be the fare for total journey by that bus ?

OR

(III) B. If the fare for second bus is ₹15/km, then what will be the fare to reach to the destination by this bus ?

13. Spreading Awareness on Plastic :

Use students of residential society undertake to work for the campaign "say no to Plastics". Group A took the region under the coordinates (3, 3), (6, y), (x, 7) and (5, 6) and group B took the region under the coordinates (1, 3), (2, 6), (5, 7) and (4, 4).



Based on the above information, answer the following questions :

(I) If region covered by group A forms a parallelogram, where the coordinates are taken in the given order, then find x and y.
(II) Find the perimeter of the region covered by group A.
(III) A. If the coordinates of region covered by group B, taken in the same order forms a quadrilateral, then find the length of each of its diagonals.

OR

(III) B. If region covered by group B forms a rhombus, where the coordinates are taken in given order, then find the perimeter of this region.

ANSWER

1. (C)
2. (D)
3. (A)
4. (D)
5. (C)

6. (D)
7. (B)
8. (B)
9. (C)
10. (D)

11. (I) $\left(\frac{-2}{3}, \frac{7}{3}\right)$ (II) (0, 4) (III) A. $\left(\frac{-2}{3}, \frac{7}{3}\right)$ (III) B. 3 units.
12. (I) 7.2 km (II) 8.5 km (III) A. ₹ 85 (III) B. ₹ 108
13. (I) $x = 8, y = 4$ (II) $2(\sqrt{10} + \sqrt{13})$ units (III) A. $4\sqrt{2}$ units, $2\sqrt{2}$ units, (III) B. $4\sqrt{10}$ units