Coordinate Geometry - Unit No. 7 Test # 1

Time: 30 Minutes Total Marks: 20

Part A – Multiple Choice Questions (1 × 5 = 5 marks)

1. The equation of a line in symmetric form is:

- (a) x/a + y/b = 1
- (b) (x−x1)/1 + (y−y1)/m = (z−z1)/1
- (c) ax + by + c = 0
- (d) y − y1 = m (x − x1)

2. The gradients of two parallel lines are:

- (a) equal
- (b) zero
- (c) negative reciprocals of each other
- (d) always undefined

3. 2x + 3y – 6 = 0 in the slope-intercept form is:

- (a) y = -2/3x + 2
- (b) y = 2/3x - 2
- (c) y = 2/3x + 1
- (d) y = -2/3x - 2

4. The midpoint of a line segment with endpoints (−2, 4) and (6, −2) is:

- (a) (4, 2)
- (b) (2, 1)
- (c) (1, 1)
- (d) (0, 0)

5. If the product of the gradients of two lines is −1, then the lines are:

- (a) Parallel
- (b) Perpendicular
- (c) Collinear
- (d) Coincident

Part B – Short Questions (2 × 5 = 10 marks)

1. Define Equation of Line in Point-Slope Form.

2. Find the midpoint of the segment joining (2, 3) and (10, 7).

3. Find the coordinates of the midpoint between (5, 7) and (15, 3).

4. Find the equation of a line with slope -5 and y-intercept -7.

5. Find the distance between the points (12, 5) and (8, -4).

Part C – Long Question (5 × 1 = 5 marks)

1. Two friends live at coordinates (2, 6) and (9, 12). Find the straight-line distance between their houses.

Coordinate Geometry - Unit No. 7 Test # 2

Time: 30 Minutes Total Marks: 20

Part A – Multiple Choice Questions (1 × 5 = 5 marks)

1. The midpoint of a line segment with endpoints (−2, 4) and (6, −2) is:

- (a) (4, 2)
- (b) (2, 1)
- (c) (1, 1)
- (d) (0, 0)

2. A line passing through points (1, 2) and (4, 5) is:

- (a) y = x + 1
- (b) y = 2x + 3
- (c) y = 3x − 2
- (d) y = x + 2

3. The equation of a line in point-slope form is:

- (a) y = m (x + c)
- (b) y − y1 = m (x − x1)
- (c) y = c + mx
- (d) ax + by + c = 0

4. The equation of a straight line in the slope-intercept form is:

- (a) y = m(x + c)
- (b) y − y1 = m(x − x1)
- (c) y = c + mx
- (d) y = mx + c

5. The equation of a line in symmetric form is:

- (a) x/a + y/b = 1
- (b) (x−x1)/1 + (y−y1)/m = (z−z1)/1
- (c) ax + by + c = 0
- (d) y − y1 = m (x − x1)

Part B – Short Questions (2 × 5 = 10 marks)

1. Define Slope of a Line.

2. Find the midpoint between (4, −2) and (−6, 3).

3. Find the distance between the points (12, 5) and (8, -4).

4. Find the distance between A(2, 3) and B(7, 8).

5. Find the coordinates of the midpoint between (5, 7) and (15, 3).

Part C – Long Question (5 × 1 = 5 marks)

1. Two friends live at coordinates (2, 6) and (9, 12). Find the straight-line distance between their houses.

Coordinate Geometry - Unit No. 7 Test # 3

Time: 30 Minutes Total Marks: 20

Part A – Multiple Choice Questions (1 × 5 = 5 marks)

1. A line passing through points (1, 2) and (4, 5) is:

- (a) y = x + 1
- (b) y = 2x + 3
- (c) y = 3x − 2
- (d) y = x + 2

2. The equation of a line in point-slope form is:

- (a) y = m (x + c)
- (b) y − y1 = m (x − x1)
- (c) y = c + mx
- (d) ax + by + c = 0

3. Distance between two points P(1,2) and Q(4,6) is:

- (a) 5
- (b) 6
- (c) √13
- (d) √25

4. The equation of a line in symmetric form is:

- (a) x/a + y/b = 1
- (b) (x−x1)/1 + (y−y1)/m = (z−z1)/1
- (c) ax + by + c = 0
- (d) y − y1 = m (x − x1)

5. 2x + 3y – 6 = 0 in the slope-intercept form is:

- (a) y = -2/3x + 2
- (b) y = 2/3x - 2
- (c) y = 2/3x + 1
- (d) y = -2/3x - 2

Part B – Short Questions (2 × 5 = 10 marks)

1. Define Equation of Line in Point-Slope Form.

2. Find the distance between the points (12, 5) and (8, -4).

3. Find the midpoint between (4, −2) and (−6, 3).

4. Find the slope of the line through (1, 2) and (4, 6).

5. Find the midpoint of the segment joining (2, 3) and (10, 7).

Part C – Long Question (5 × 1 = 5 marks)

1. Find the equation of the perpendicular bisector of the segment joining A(3, 5) and B(9, 8).

Coordinate Geometry - Unit No. 7 Test # 4

Time: 30 Minutes Total Marks: 20

Part A – Multiple Choice Questions (1 × 5 = 5 marks)

1. 2x + 3y – 6 = 0 in the slope-intercept form is:

- (a) y = -2/3x + 2
- (b) y = 2/3x - 2
- (c) y = 2/3x + 1
- (d) y = -2/3x - 2

2. If the product of the gradients of two lines is −1, then the lines are:

- (a) Parallel
- (b) Perpendicular
- (c) Collinear
- (d) Coincident

3. A line passing through points (1, 2) and (4, 5) is:

- (a) y = x + 1
- (b) y = 2x + 3
- (c) y = 3x − 2
- (d) y = x + 2

4. The midpoint of a line segment with endpoints (−2, 4) and (6, −2) is:

- (a) (4, 2)
- (b) (2, 1)
- (c) (1, 1)
- (d) (0, 0)

5. The equation of a straight line in the slope-intercept form is:

- (a) y = m(x + c)
- (b) y − y1 = m(x − x1)
- (c) y = c + mx
- (d) y = mx + c

Part B – Short Questions (2 × 5 = 10 marks)

1. Define Slope of a Line.

2. Find the distance between the points (12, 5) and (8, -4).

3. Find the midpoint of the segment joining (2, 3) and (10, 7).

4. Find the equation of a line with slope -5 and y-intercept -7.

5. Find the equation of the line passing through (3, 7) and (5, 11).

Part C – Long Question (5 × 1 = 5 marks)

1. Two friends live at coordinates (2, 6) and (9, 12). Find the straight-line distance between their houses.

Coordinate Geometry - Unit No. 7 Test # 5

Time: 30 Minutes Total Marks: 20

Part A – Multiple Choice Questions (1 × 5 = 5 marks)

1. The midpoint of a line segment with endpoints (−2, 4) and (6, −2) is:

- (a) (4, 2)
- (b) (2, 1)
- (c) (1, 1)
- (d) (0, 0)

2. The equation of a line in normal form is:

- (a) $y = mx + c$
- (b) $x/a + y/b = 1$
- (c) $(x-x1)/\cos\alpha = (y-y1)/\sin\alpha$
- (d) $x\cos\alpha + y \sin\alpha = p$

3. $2x + 3y – 6 = 0$ in the slope-intercept form is:

- (a) $y = -2/3x + 2$
- (b) $y = 2/3x - 2$
- (c) $y = 2/3x + 1$
- (d) $y = -2/3x - 2$

4. Distance between two points P(1,2) and Q(4,6) is:

- (a) 5
- (b) 6
- (c) $\sqrt{13}$
- (d) $\sqrt{25}$

5. If the product of the gradients of two lines is −1, then the lines are:

- (a) Parallel
- (b) Perpendicular
- (c) Collinear
- (d) Coincident

Part B – Short Questions (2 × 5 = 10 marks)

1. Define Slope of a Line.

2. Find the coordinates of the midpoint between (5, 7) and (15, 3).

3. Find the distance between the points (12, 5) and (8, -4).

4. Find the midpoint between (4, −2) and (−6, 3).

5. Find the equation of a line with slope -5 and y-intercept -7.

Part C – Long Question (5 × 1 = 5 marks)

1. An airplane is flying from city A at (40°N, 100°W) to city B at (50°N, 80°W). Calculate the straight-line distance between the two cities.