QB365 Question Bank Software Study Materials

Coordinate Geometry 50 Important 1 Marks Questions With Answers (Book Back and Creative)

10th Standard

Maths

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

1) The area of triangle formed by the points (−5, 0), (0, −5) and (5, 0) is

(a) 0 sq.units **(b) 25 sq.units** (c) 5 sq.units (d) none of these

2) A man walks near a wall, such that the distance between him and the wall is 10 units. Consider the wall to be the Y axis. The path travelled by the man is

(a) x = 10 (b) y = 10 (c) x = 0 (d) y = 0

3) The straight line given by the equation x = 11 is

(a) parallel to X axis **(b) parallel to Y axis** (c) passing through the origin (d) passing through the point (0,11)

4) If (5, 7), (3, p) and (6, 6) are collinear, then the value of p is

(a) 3 (b) 6 **(c) 9** (d) 12

5) The point of intersection of 3x − y = 4 and x + y = 8 is

(a) (5, 3) (b) (2, 4) **(c) (3, 5)** (d) (4, 4)

6) The slope of the line joining (12, 3), (4, a) is $\frac{1}{8}$. The value of 'a' is

(a) 1 (b) 4 (c) -5 **(d) 2**

7) The slope of the line which is perpendicular to a line joining the points (0, 0) and (– 8, 8) is

(a) –1 **(b) 1** (c) $\frac{1}{3}$ (d) -8

8) If slope of the line PQ is $\frac{1}{\sqrt{3}}$ then slope of the perpendicular bisector of PQ is

(a) $\sqrt{3}$ **(b)** $-\sqrt{3}$ (c) $\frac{1}{\sqrt{3}}$ (d) 0

9) If A is a point on the Y axis whose ordinate is 8 and B is a point on the X axis whose abscissae is 5 then the equation of the line AB is

(a) 8x + 5y = 40 (b) 8x - 5y = 40 (c) x = 8 (d) y = 5

10) The equation of a line passing through the origin and perpendicular to the line 7x - 3y + 4 = 0 is

(a) 7x - 3y + 4 = 0 (b) 3x - 7y + 4 = 0 **(c) 3x + 7y = 0** (d) 7x - 3y = 0

11) Consider four straight lines

(i) l_1 : 3y = 4x + 5

(ii) l_2 : 4y = 3x - 1

(iii) l_3 : 4y + 3x =7

(iv) l_4 : 4x + 3y = 2

Which of the following statement is true?

(a) l_1 and l_2 are perpendicular (b) l_1 and l_4 are parallel **(c) l_2 and l_4 are perpendicular** (d) l_2 and l_3 are parallel

12) A straight line has equation 8y = 4x + 21. Which of the following is true

(a) The slope is 0.5 and the y intercept is 2.6 (b) The slope is 5 and the y intercept is 1.6

(c) The slope is 0.5 and the y intercept is 1.6 (d) The slope is 5 and the y intercept is 2.6

13) When proving that a quadrilateral is a trapezium, it is necessary to show

(a) Two sides are parallel **(b) Two parallel and two non-parallel sides** (c) Opposite sides are parallel

(d) All sides are of equal length

14) When proving that a quadrilateral is a parallelogram by using slopes you must find

(a) The slopes of two sides **(b) The slopes of two pair of opposite sides** (c) The lengths of all sides

(d) Both the lengths and slopes of two sides

15) (2, 1) is the point of intersection of two lines.

(a) x - y - 3 = 0; 3x - y - 7 = 0 **(b) x + y = 3; 3x + y = 7** (c) 3x + y = 3; x + y = 7 (d) x + 3y - 3 = 0; x - y - 7 = 0

16) Find the ratio in which the line segment joining the points (-3, 10) and (6,-8) is internally divided by (-1, 6) _____

(a) 7:2 (b) 3:4 **(c) 2:7** (d) 5:3

17) If the points (0, 0), (a, 0) and (0, b) are colllinear, then _____

(a) a = b (b) a + b **(c) ab = 0** (d) $a \neq b$

18) The area of triangle formed by the points (a, b+c), (b, c+a) and (c, a+b) is _____

(a) a+b+c (b) abc (c) $(a+b+c)^2$ **(d) 0**

19) Find the equation of the line passing the point which is parrallel to the y axis (5, 3) is _____

(a) y = 5 (b) y = 3 **(c) x = 5** (d) x = 3

20) Find the value of P, given that the line $\frac{y}{2} = x - p$ passes through the point (-4, 4) is _____

(a) -4 **(b) -6** (c) 0 (d) 8

21) Find the slope and the y-intercept of the line $3y - \sqrt{3x} + 1 = 0$ is _____

(a) $\frac{1}{\sqrt{3}}, \frac{-1}{3}$ (b) $-\frac{1}{\sqrt{3}}, \frac{-1}{3}$ (c) $\sqrt{3}, 1$ (d) $-\sqrt{3}, 3$

22) In a right angle triangle, right angled at B, if the side BC is parallel to x axis, then the slope of AB is _____

(a) $\sqrt{3}$ (b) $\frac{1}{\sqrt{3}}$ (c) 1 (d) not defined

23) The y-intercept of the line 3x - 4y + 8 = 0 is _____

(a) $-\frac{8}{3}$ (b) $\frac{8}{3}$ **(c) 2** (d) $\frac{1}{2}$

24) The area of the triangle whose vertices are (2, - 3), (3, 2) and (- 2, 5) is _____

(a) 11 (b) 12 **(c) 14** (d) 13

25) AD is the median of triangle ABC with vertices A (- 3, 2), B (5, - 2) and C (1, 3) The area of triangle ABD is _____

(a) 5 **(b) 6** (c) 7 (d) 8

26) If (a, b), (c, d) and (a - c, b - d) are collinear, then _____

(a) $\frac{a}{b} = \frac{c}{d}$ (b) $\frac{a}{d} = \frac{b}{c}$ (c) $\frac{a}{c} = \frac{d}{b}$ (d) $\frac{a}{b} = \frac{b}{c}$

27) If the area of the triangle formed by the points (- 2, 3), (4, - 5) and (- 3, Y) is 10 square units, then Y = _____

(a) 1 (b) -1 **(c)** $\frac{23}{3}$ (d) $\frac{-22}{3}$

28) The area of quadrilateral formed by the points (0, 0), (1, 0), (1, 4) and (0, 2) is _____

(a) 4 (b) 8 **(c) 12** (d) 16

29) The area of the rhombus formed by the points (3, 0), (0, 4), (- 3,0) and (0, - 4) is _____

(a) 24 (b) 30 (c) 32 (d) 36

30) The point (x, y) lies on the line joining (3, 4) and (-5, -6) if _____

(a) 4x - 5y = 1 (b) 5x - 4y = 1 **(c) 5x - 4y + 1 = 0** (d) 4x + 5y = 1

31) If the points A(6, 1), B(8 , 2), C(9, 4) and D(p, 3) are the vertices of a parallelogram,taken order then the value of p is _____

(a) -7 **(b) 7** (c) 6 (d) -6

32) What can be said regarding a line if its slope is negative?

(a) acute **(b) obfuse** (c) zero (d) None of these

33) Find the inclination whose slope is $\frac{1}{\sqrt{3}}$

(a) 30° (b) 60° (c) 90° (d) 45°

34) Slope of the line joining the points (4, - 6) and (-2, -5) is _____

(a) $\frac{1}{6}$ **(b)** $\frac{-1}{6}$ (c) 6 (d) -6

35) The points A (1, - 2), B(3, 4) and C (4, 7)

(a) form a right triangle (b) form an isosceles triangle (c) form an equilateral triangle **(d) collinear**

36) The points A(4, 4), B(3, 5) and C (- 1, - 1) form _____

(a) Right triangle (b) isosceles triangle (c) equilateral triangle (d) None of these

37) slope of the median through B if the vertices of ΔABC are A (2, 4), B (- 3, 1) and C (4, -7) is _____

(a) $\frac{12}{5}$ (b) $\frac{-12}{5}$ (c) $\frac{5}{12}$ **(d)** $\frac{-5}{12}$

38) The slopes of two line segments are equal.
Which of the following is correct?

(a) The line segments are parallel (b) The end points of the line segments are collinear

(c) The line segments are perpendicular (d) The end points of line segments are non-collinear

39) The equation of straight line which passes through the point (2, - 3) and parallel to x-axis is _____

(a) x = -2 (b) x = 2 **(c) y = -3** (d) y = 3

40) The equation of straight line parallel to y-axis and at a distance 3 units to the right is _____

(a) x = 1 (b) x = 2 (c) x = -3 **(d) x = 3**

41) Area of the triangle formed by the Co-ordinate axes and the line ax + by = 2ab is _____

(a) ab **(b) 2ab** (c) $\frac{ab}{2}$ (d) 4ab

42) Equation of line parallel to ax + by + c = 0 is _____

(a) $x + y + k = 0$ **(b)** $ax + by + k = 0$ (c) $x + y = -c$ (d) $bx + ay = c$

43) The condition for the lines $a_1x + b_1y + c_1 = 0$ and $a_2x + b_2y + c_2 = 0$ to be perpendicular is _____

(a) $a_1a_2 + b_1b_2 = 0$ (b) $a_1b_1 + a_2b_2 = 0$ (c) $a_1a_2 - b_1b_2 = 0$ (d) $a_1b_1 - a_2b_2 = 0$

44) Equation of line perpendicular to 2x + 5y = 7 and passing through the point (- 1, 4) is _____

(a) x - y +13 = 0 (b) x + y +13 = 0 (c) 2x + 5y +13 = 0 **(d) 5x - 2y +13 = 0**

45) The value of k if the lines 4x + ky - 8 and 4x + 3y = 5 are parallel is _____

(a) 3 (b) 5 (c) 4 (d) 2

46) If the points (0, 0), (a, 0), and (0, b) are collinear, then _____

(a) a = b (b) a + b = 0 **(c) ab = 0** (d) a ≠ b

47) If the mid point of the line segment joining the points $A\left(\frac{x}{2}, \frac{y+1}{2}\right)$ and B(x + 1 ,y - 3) is C(5, -2), then find the values of x, y

(a) (6, -1) (b) (-6, 1) (c) (-2, 1) (d) (3, 5)

48) The area of triangle formed by the points (a, b + c),(b, c + a) and (c, a + b) is _____

(a) a + b + c (b) abc (c) $(a + b + c)^2$ **(d) 0**

49) The four vertices of a quadrilateral are (1, 2), (-5 , 6), (7 , -4), and (k, -2) taken in order. If the area of quadrilateral is zero then find the value of k

(a) -4 (b) -2 (c) 6 **(d) 3**

50) The slope of the straight line perpendicular to x-axis is:

(a) 1 (b) 0 **(c)** ∞ (d) -1