Note:-
      1. All Questions are compulsory.
      2. Numbers on the right indicate full marks.

Section A

Q.1. Select and write the correct answer. **(4)**

    1. Find the inclination of a line whose slope is 1

      A) $\dfrac{\pi}{2}^{c}$ B) $\dfrac{\pi}{4}^{c}$

      C) $\dfrac{3\pi}{4}^{c}$ D) $\dfrac{\pi}{6}^{c}$

    2. A line passes through (2, 2) and is perpendicular to the line $3x + y = 3$. Its y-intercept is

      A) $\dfrac{1}{3}$ B) $\dfrac{2}{3}$

      C) 1   D) $\dfrac{4}{3}$

Q.2. Answer the following. **(3)**

    1. Write the following equation in $ax + by + c = 0$ form. $y = 2x – 4$

    2. Obtain the equation of the line containing the point : B(4,-3) and parallel to the X-axis.

    3. Write the equation of the line : Parallel to the X-axis and at a distance of 5 unit from it and above it.

Section B
Attempt any Four

Q.3   Find the distance between parallel lines $9x + 6y – 7 = 0$ and $3x + 2y + 6 = 0$ **(2)**

Q.4   If A(1, 3) and B(2, 1) are points, find the equation of the locus of point P such that PA = PB. **(2)**

Q.5   Find the distance of the origin from the line $x = –2$ **(2)**

Q.6   Find the equation of the line containing the point A(4, 3) and having inclination 120° **(2)**

Q.7   Find the equation of the line having inclination 135° and making X-intercept 7 **(2)**

Q.8   Find the slope, x-intercept, y-intercept of line $2x + 3y – 6 = 0$ **(2)**

Section C
Attempt any Two

Q.9   Find the equations of the diagonals of the rectangle whose sides are contained in the lines $x = 8$, $x = 10$, $y = 11$ and $y = 12$ **(3)**

Q.10   If the line $3x + 4y = p$ makes a triangle of area 24 square unit with the co-ordinate axes then find the value of p. **(3)**

Q.11   Find the equation of the line parallel to the X-axis and passing through the point of intersection of lines $x + y – 2 = 0$ and $4x + 3y = 10$ **(3)**

Section D
Attempt any One

Q.12 The vertices of a triangle are A(1, 4), B(2, 3) and C(1, 6). Find equations of the medians. **(4)**

Q.13 Find the equations of perpendicular bisectors of sides of the triangle whose vertices are P(–1, 8), Q(4, –2) and R(–5, –3) **(4)**