**1/2 mark and 1mark questions**

1. For what value of k, the following system of equations has a unique solution: x – ky = 2 and 3x + 2y = -5
2. In a rectangle ABCD, AB = x + y, BC = x – y, CD = 9 and DA = 3. Find the values of x and y?
3. Show that the pair of linear equations 7x + y = 10 and x + 7y = 10 are consistent?
4. Write the condition for the pair of linear equations in two variables to be parallel lines?
5. If x = a and y = b is solution for the pair of equations x – y = 2 and x + y = 4 then find the values of a and b?
6. Whether the following pair of linear equations are parallel? Justify.

6x – 4y + 10 = 0, 3x – 2y + 6 = 0

1. For what value of ‘t’ the following pair of linear equations has no solution? 2x – ty = 5 and 3x + 2y = 11.
2. Formulate a pair of linear equations in two variables “5 pencils and 7 pens together cost ₹ 50, whether 7 pencils and 5 pens together cost ₹ 46”.
3. Two angles are complementary and one angle is 180 more than the other, then find the angles?
4. Write number of solutions of following equations

x + 2y – 8 = 0

2x + 4y = 16

1. Write a linear equation which is parallel to x + 3y + 5 = 0?
2. Sanjay says, “Equations of two parallel lines differ only in constant terms”. Do you agree with him? Justify.
3. Swathi says, “A linear equation in two variables has two solutions only”. Do you agree with her? Justify.
4. What are consistent lines?
5. Solve: 2x – (4 – x) = 5 – x?
6. What is the condition that ax + by + c = 0 represents a linear equation in two variables?

**Two marks questions**

1. “If we multiply or divide both sides of a linear equation by a non-zero number, then the roots of that linear equation will remain the same”. Is it true? If so, justify with an example.
2. If the present ages of A and B are in ratio 9:4 and after 7 years the ratio of their ages will be 5:3, then find their present ages?
3. Solve the following pair of linear equations by substitution method

2x – 3y = 19 and 3x – 2y = 21.

1. If the measure of angles of a triangle are x0, y0 and 400 and difference between the measures of angles x0 and y0 is 300, then find the values of x0 and y0?
2. Given the linear equation 3x + 4y = 11. Write linear equation in two variables such that their geometrical representations form parallel lines and interesting lines?
3. Solve the pair of linear equations 2x + 3y = 8 and x + 2y = 5 by elimination method?
4. For what value of ‘m’ the following system of equations will have no solutions? why? mx + 4y = 10 and 9x + 12y = 30.
5. 10 students of class X took part in a mathematics quiz. If the number of girls is four more than the number of boys, then find the number of boys and the number of girls who took part in that quiz?
6. Express as Algebraic expressions of the following

(i) Five times of a number, when increased by 10 gives 20

(ii) The digits in ones and tens places of a two-digit number are ‘x’ and ‘y’ then find the number.

1. For what value of ‘k’, the pair of equations 3x + 4y + 2 = 0 and 9x + 12y + k = 0 represent coincident lines?

**Four marks questions**

1. Solve the following pair of equations by reducing them to a pair of linear equations

+ = 2 and - = 1

1. Draw the graph of the following pair of linear equations in two variables and find their solutions.

2x + y = 5 and 3x – 2y = 4

1. Draw the graph of the following pair of linear equation in two variables and find the area of the triangle formed by the lines and X – axis.

3x – y – 2 = 0 and 2x + y – 8 = 0

1. Draw the graph of the following pair of linear equation in two variables and check whether they are consistent or not?

2x – 3y = 5 and 4x – 6y = 15

1. Solve the equations by graphically 3x + 4y = 10 and 4x – 3y = 5>
2. 6 pencils and 4 note books together cost Rs. 90/- whereas 8 pencils and 3 note books together cost Rs. 86/-. Find the cost of one pencil and that of one note book?
3. A fraction becomes if 1 is added to both numerator and denominator . If however, 5 is subtracted from both numerator and denominator, the fraction becomes . What is the fraction?
4. There is a motor-boat, whose speed in still water is 18 km/h. It takes 1 hour more to go 24km upstream than to return down stream to the same spot. Find the speed of the stream?
5. Half of the perimeter of a rectangular garden, whose length is 4m more than its width, is 36m. Find the dimensions of the garden? (Use graph)
6. Solve the pair of equations

= 4 and = -2

1. Solve the pair of linear equations by Elimination method.

2x + y – 5 = 0 and 3x – 2y – 4 = 0

1. The sum of two-digit number and the number obtained by reversing the digits is 66. If the digits of the number differ by 2, find the number. How many such numbers are there?
2. In a garden, there are some bees and flowers. If one bee sits on each flower then one bee will be left. If two bees sit on each flower, one flower will be left. Find the number of bees and number of flowers?
3. Father’s age is three times the sum of ages of his two children. After 5 years his age will be twice the sum of ages of two children. Find the age of father?