3. Pair of Linear Equations

8 Marks:

1. Solve graphically $2x-y=5$ and $3x+2y=11$
2. Solve graphically $x+3y=6$ and $2x-3y=12$
3. Solve graphically $2x+y-6=0$ and $4x-2y-4=0$
4. Solve graphically $x+y=4$ and $2x+y=3$
5. Solve graphically $2x+y-5=0$ and $3x-2y-4=0$
6. Solve graphically $2x+3y=11$ and $2x-4y+24=0$
7. Solve graphically $3x+4y=10$ and $2x-2y=2$
8. Solve graphically $3x+4y+6=0$ and $3x-y-9=0$
9. Solve graphically $2x+3y=13$ and $4x+5y=23$
10. Solve graphically $x+y=5$ and $2x+2y=10$
11. Determine whether the equations $2x-2y-2=0$ and $4x-4y-5=0$ are consistent or inconsistent by drawing the graphs.
12. Draw the graphs of the equations $x-y+1=0$ and $3x+2y-12=0$ Determine the coordinates of the vertices of the triangle formed by these lines and the x-axis, and shade the triangular region.
13. Solve graphically $2x+2y=8$, $2x-3y=1$
14. Solve graphically $2x-y+3=0$, $3x-5y+1=0$
15. Solve graphically $3x-y=7$ and $2x+5y+1=0$
16. Solve graphically $x-y+1=0$ and $3x+2y-12=0$
17. Solve graphically $2x+y=6$ and $y=2x+2$
18. Solve graphically $2x-y-5=0$ and $x-y-3=0$
19. By the graphical method, find whether the following of equation are consistent or not $3x+y-5=0$, $2x-y-5=0$. If consistent, find its solution from the graph.
20. Solve graphically $2x-3y=1, 4x-3y+1=0$
21. Solve graphically $2x-y-2=0$, $4x-y-4=0$

1 Mark:

1) The general form of linear equation in two variables is _____

2) Write a linear equation in two variables such that the general representation of the pair so formed is parallel to $2x-3y+5=0$

3) $a_1x+b_1y+c_1=0$ and $a_2x+b_2y+c_2=0$ are the pair of L.E., then match the following.

a) $\frac{a_1}{a_2}=\frac{b_1}{b_2}=\frac{c_1}{c_2}$	i) Intersecting lines
b) $\frac{a_1}{a_2}\neq\frac{b_1}{b_2}$	ii) Parallel lines
c) $\frac{a_1}{a_2}=\frac{b_1}{b_2}\neq\frac{c_1}{c_2}$	iii) Coincident lines

4) The graph of linear equations in two variables represents a _____

5) Express the given situation as a linear equation "The cost of 5 pencils and 7 pens together is ₹ 50".

6) The pair of equations $y=2$ and $y=-3$ has _____ solution

7) Find the point of intersection of the lines $x=2$ and $y=3$?

8) i) Check whether $5x-3y=11$ and $10x-6y=22$ are consistent or inconsistent ii) $2x-3y=8$, $4x-6y=9$ iii) $3x+2y=5$, $2x-3y=7$

9) The area of triangle formed by the lines $y=x$, $x=6$ and $y=0$ is _____

10) The area of triangle formed by the lines $x=3, y=4$ and $x=y$ is _____

11) The sum of the digits of a two digit number is 9. If 27 is added to it, the digits of the number get reversed. The number is _____

12) Draw rough diagrams representing i) intersecting lines ii) parallel lines iii) Coincident lines

13) i) Point on positive x-axis is _____ ii) point on negative x-axis is _____ iii) Point on positive y-axis is _____ iv) point on negative y-axis is _____