GLS UNIVERSITY
Faculty Of Computer Applications & Information Technology
iMSc(IT) Programme
221601104 Mathematics for Computer Science – I
Assignment – 1

1. Find the distance between following pairs of points.

   (6,3) and (6,7)

   (2,-1) and (3,4)

   (6,7) and (-1,-5)

   (x, 0) and (0, y)

   (-a, a) and (b, -b)

   (1,1) and (3,3)

2. Find the value of x if the distance between A (-8, 2) and B (x, -4) is 10.

3. Show that A (0, 1), B(1, 0), and C(0, -1) are the vertices of an equilateral triangle.

4. Show that the points (1,1), (-2,7) and (3,-3) are collinear.

5. Find the co-ordinates of a point which divides the line joining the points (1, 2) and (4, 7) in ratio 2:5.

6 The point P (6,7) divides AB in the ratio 2:3 from A. If the co-ordinates of A are (2,1). Find the co-ordinates of B.

7. What is the slope of the line passing through the points J (-2, 3) and K(2, 7)?

8. Find the equation of the line passing through (2, -1) and parallel to the line $2x – y = 4$.

9. Find the measure of the angle between the lines $2x-y+1 = 0$ and $x + y + 7 =0$.

10. Show that the triangle whose vertices are (8,2),(5,-3)and (0,0) is isosceles.

11. Determine x so that 2 is the slope of the line passing through points (2,5) and (x,3).

12. Find the measure of angle between $x+y=0$ and $x-y=0$.

13. Find the equation of the line passing through points (1, 2) and (1,-1).

14. Find the equation of the line having intercepts 2 and -1 on the axis.

15. Find the slope and intercepts of the followings:
    i) $x+y+1=0$
    ii) $y-5=0$
    iii) $4x+3y+4=0$
    iv) $ax+by-ab=0$

16. Find the equation of the line passing through the point A(-2,4) having slope equal to -4/5

17. Prove that the lines $2x+7y-4=0$ and $4x+14y+1= 0$ are parallel.

18. Find the equation of the line passing through (2, -1) and perpendicular to the line $2x – y = 4$.

19. Find the coordinates of the point which will divide the line joining the points (3, 5) and (11, 8) externally in the ratio 5: 2.

20. Fill in the blanks:

a) If two lines are parallel then their slope must be _____.

b) (5,0) point lies on _____axis.

c) (0,2) point lies on _____axis.

d) (-2,-5) point lies in _____quadrant.

e) The intersection point of X-axis and Y-axis is called _____.

f) The slope of the line x+y+1 =0 is _____.

g) The y-intercept of line y-5=0 is _____

h) The x-intercept of line 4x+3y+4 =0 is _____.

I) Ths slope of line ax+by-ab=0 _____