DOON UNIVERSITY, DEHRADUN

Semester Mid-term Examination, First Semester, 2014

School of social science

M.Sc. (Economics)

Course: SSEI-113:co-ordinate geometry

Time Allowed: 2 Hours *Maximum Marks: 30*

Note: Attempt All Questions from Sections A, B, C.

SECTION : A (Short Answer Type Questions/ to be answered in about 25/75 words. Attempt any five Questions (2*5 marks= 10 marks)

1. Define the rectangular coordinate axis and quadrants of the co-ordinate geometry.
2. Find the value of x for which the points (x,-1), (2,1) and (4,5) are collinear.
3. Find the angle between the X-axis and the lune joining the points (3,-1) and (4,-2).
4. Find the equation of the line parallel to the x-axis and passing through (3,-5).
5. Find the equation of a line with slope -1 and cutting of an intercept of 4 unit negative direction of y axis.
6. Write down the different forms of the equation of a straight line.

SECTION: B: attempt any three. (Short Answer Type Questions to be answered in about 100/250 words) (Marks 10=5*2)

1. If the co-ordinates of two points A and B are (3,4) and (5,-2) respectively. Finds the co-ordinates of any point P if PA= PB and area of triangle PAB=10.
2. If the angle between two lines is 45 degree and slope of one of the line ½ find the slope of the other line.
3. Find the equation of the straight line which divides the join of the points (2,3) and (-5,8) in the ratio 3:4 and also perpendicular to it.

SECTION : C attempt any two questions. (Long Answer Type Questions to be answered in about 750 words (Marks 10=5*2)

1. Prove that the point (3,3) is equidistant from (0,-1), (-2,-3),(6,7) and (8,3). Find this distance and show that the point is the intersection of the diagonals of a rectangular formed by the four points.
2. As the number of units manufactured increased from 4000 to 6000 the total cost of the production increases from rs. 22000 to rs. 30000. Find the relationship between the cost y and the number of units made x if the relationship is linear.
3. Prove that the lines 3x-4y+5=0, 7x-8y+5=0 and 4x+5y=45 are concurrent.