TUTORIAL 2

1)

The joint pdf of random variable if $f(x,y) = x + y, 0 \le x \le 1, 0 \le y \le 1$. Find the correlation coefficient between X & Y.

2)

The joint probability density function of the two dimensional random variable (X,Y) is

$$f(x,y) = \begin{cases} 2 - x - y, 0 \le x \le 1, 0 \le y \le 1 \\ 0, \ otherwise \end{cases}.$$

Find the correlation coefficient between X & Y.

3) The equation of two regression lines obtained by in a correlation analysis

is as follows: 3x + 12y = 19 , 3y + 9x =46. (i) Calculate the correlation

coefficient (ii) Mean value of X &Y.

4) The equations of two regression lines are 8x-10y+66 = 0 and 40x-18y-214 =0. Variance of x is 9. Find the mean values of x and y and correlation coefficient between x and y.