



AH-607

Seat No. _____

B. Sc. (Sem. VI) Examination

March - 2019

ES - MATH - 32 : Business Mathematics - IV

Time : 2 Hours]

[Total Marks : 50

1 Attempt any **three** : **30**

- (1) Find the graphical solution of min.

$$Z = 3x + 5y$$

$$\text{s.t.c. } -3x + 4y \leq 12$$

$$-2x + y \leq 2$$

$$2x + 3y \geq 12$$

$$x \leq 4 \text{ and } y \geq 2; x, y \geq 0.$$

- (2) Find the graphical solution of max.

$$Z = 5x + 7y$$

$$\text{s.t.c. } x + y \leq 4$$

$$3x + 8y \leq 24$$

$$10x + 7y \leq 35$$

$$x, y \geq 0.$$

- (3) Find the graphical solution of min.

$$Z = x + y$$

$$\text{s.t.c. } 5x + 10y \leq 50$$

$$x + y \geq 1$$

$$y \leq 4$$

$$x, y \geq 0.$$

- (4) Find the graphical solution of max.

$$Z = 3x + 4y$$

$$\text{s.t.c. } x - y \geq 0$$

$$-x + 2y \leq 2$$

$$x, y \geq 0.$$

- (1) Find out the coefficients of correlation in the following case.

x	23	27	28	29	30	31	33	35	36	39
y	18	22	23	24	25	26	28	29	30	32

- (2) Find the equations of regression line and the correlation coefficient from the following data.

x	28	41	40	38	35	33	46	32	36	33
y	30	34	31	34	30	26	28	31	26	31

- (3) The regression equations of two variables are $5y = 9x - 22$ and $20x = 9y + 350$.

Find \bar{x} , \bar{y} and b_{yx} , b_{xy} and r .
