

## SECTION - A

Answer ALL questions.

4X15=60

1. a) Find Inverse of the following method

$$A = \begin{bmatrix} 2 & -33 \\ 2 & -23 \\ 3 & -24 \end{bmatrix}$$

( Or )

- b) Solve the following equations by using Cremer's rule

$$x + y + z = 6$$

$$x - y - 2z = 2$$

$$2x - y + 3z = 9$$

2. a) Find Arithmetic mean and Geometric mean for the following data

Class	Frequency
0-10	05
10-20	10
20-30	15
30-40	10
40-50	10

( Or )

- b) Find mode for the following data

Class	Frequency
0-25	04
25-50	06
50-75	10
75-100	14
100-125	08
125-150	04

3. a) Find Coefficient of correlation of Karl Pearson's for the following data

Marks	Number of students
2 - 4	3
4 - 6	5
6 - 8	4
8 - 10	7
10 - 12	4
12 - 14	2

(Or )

- b) Calculate Karl Pearson's correlation for its following data

X: 9 8 7 6 5 4 3 2 1  
 Y: 5 6 7 8 3 4 2 4 2

4. a) Calculate two regression lines its following data and estimate y when x= 5

X: 2 4 3 5 6  
 Y: 4 7 8 4 2

(Or)

b) Find Fisher's Indian members

	2000		2011	
Goods	Rate	Quantity	Rate	Quantity
P	20	08	40	12
Q	50	11	60	10
R	40	15	50	42
S	10	20	20	35

SECTION - B

Answer any FOUR questions

4X5=20

5.  $A = \begin{bmatrix} 2 & -4 \\ 3 & -2 \end{bmatrix}$   $B = \begin{bmatrix} 5 & -10 \\ 14 & -8 \end{bmatrix}$   $C = \begin{bmatrix} 3 & -4 \\ 2 & -1 \end{bmatrix}$

Find  $A+(B+C)$  for the above matrices

6. Find Quartile deviation for the following data

Marks :                    0-5    5-10    10-15    15-20    20-25  
 No of Students:        12     14     20     22

7. Find Standard Deviation of the following data

x :    10    15    20    25    30    35  
 f:    04    06    10    12    10    05

8. Importance of Statistics

9. Methods of Data Collection

10. Histogram

11. Determinants of a Matrix

12. Producer's surplus