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**63 (FY) SEM-3/SEC/ECOSEC2013**

**2025**

**ECONOMICS**

Paper : ECOSEC2013

**( Data Analysis )**

Full Marks : 50

Pass Marks : 20

Time : Two hours

**The figures in the margin indicate full marks for the questions.**

1. Choose the correct answer : 1×5=5

(a) The method of collecting first-hand data includes –

(i) Mailed questionnaire

(ii) Personal interview

(iii) Telephonic interview

(iv) All of the above

(b) Mode refers to the value within a series that occurs \_\_\_\_\_ numbers of times.

(i) Maximum

(ii) Minimum

(iii) Zero

(iv) Infinite

(c) Which of the following is not a measure of central tendency ?

(i) Mode

(ii) Mean

(iii) Range

(iv) Median

(d) If the variance of the data is 121, the standard deviation of the data is :

(i) 121

(ii) 11

(iii) 13

(iv) 12

(e) Which of the following are types of correlation ?

(i) Positive and Negative

(ii) Simple, Partial and Multiple

(iii) Linear and Nonlinear

(iv) All of the above

2. Answer the following questions in brief : (**any five**)  $2 \times 5 = 10$

(a) Write *two* merits of secondary data.

(b) If covariance between  $x$  and  $y$  is 10 while variance of  $x$  and variance of  $y$  are 16 and 9 respectively, find coefficient of correlation.

(c) The mean and median of a distribution are 9.87 and 9.97 respectively. Find mode of the distribution.

(d) Write *two* assumptions of Karl Pearson's correlation coefficient.

- (e) Distinguish between Questionnaire and Schedule.
- (f) Prove that the geometric mean of two regression coefficients is the coefficient of correlation.
- (g) What do you mean by SPSS?

3. Answer the following questions : **(any five)**  
5×5=25

- (a) What are the requisites of an ideal measure of Central Tendency?
- (b) Calculate Standard Deviation from the following data :  
  
Size of Class : 0-10 10-20 20-30 30-40 40-50  
  
Frequency : 4 12 21 15 8
- (c) Distinguish between Positive and Negative Correlation.

- (d) Write *five* merits of arithmetic mean.
- (e) Distinguish between Absolute and Relative measures of dispersion.
- (f) Find Mean Deviation and its coefficient from the following data :

Marks	:	4	6	8	10	12	14	16
No. of								
Students:		2	1	3	6	4	3	1

- (g) The following are the marks of 9 students in Accountancy and Auditing.

Marks in									
Accountancy:	70	55	40	60	25	50	35	80	85
Marks in									
Auditing	:50	40	60	70	30	45	55	65	80

Calculate Coefficient of correlation with the help of Rank Correlation Method.

(h) Distinguish between Positive and Negative Correlation.

4. Answer the following: *(any one)*  $10 \times 1 = 10$

(a) Calculate Mean, Median and Mode from the following data:  $4+4+2=10$

Marks	No. of students
00-10	4
10-20	2
20-30	18
30-40	22
40-50	21
50-60	19
60-70	10
70-80	3
80-90	1

(b) Two lines of regression are given below:  
 $4+3+3=10$

$$8x - 10y = -66$$

$$40x - 18y = 214$$

And variance  $x = 9$

Find :

- (i) Average values of  $x$  and  $y$ .
  - (ii) Correlation coefficient between the two variables.
  - (i) Standard deviation of  $y$ .
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