

M.E.S. COLLEGE OF ARTS & COMMERCE, ZUARINAGAR - GOA
B.A. (CBCS) III SEMESTER END (REGULAR/REPEAT) EXAMINATION, JANUARY 2022
SEC- ECONOMICS - DATA ANALYSIS I (ECS-101)

Duration: 02 Hours

Total Marks: 80

Instruction:

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- i) All questions are compulsory, however internal choice is available.*
- ii) Answer sub-questions in Question No. 1 and Question No. 2 in about 100 words.*
- iii) Answer Question No. 3 to Question No. 6 are in about 400 words.*
- iv) Figures to the right indicate marks assigned to each question/sub-question.*
- v) The use of simple calculator is permitted.*
- vi) Paper carries a maximum of 80 marks.*

Q. 1. Answer Any Four of the following: **(4×4=16)**

- a) Explain any four features of spreadsheets.
- b) Write a short note on qualitative data.
- c) Distinguish between primary and secondary data.
- d) How can rows be transformed into columns on a spreadsheet.
- e) Explain the process of coding.
- f) Find range and coefficient of range for the following:
65, 70, 82, 59, 81, 76, 57, 60, 55, and 50

Q.2. Answer Any Four from the following: **(4×4=16)**

- a) Briefly explain the significance of measure of dispersion.
- b) Calculate standard deviation and mean for the following data:

X	5	15	25	35	45	55	65
F	8	12	10	8	3	2	

- c) What is the measure of dispersion? Which is the best method of finding dispersion and why?
- d) What are the disadvantages of the arithmetic mean?
- e) Explain the interpretation of regression equation using example.
- f) Differentiate between causation and correlation.

Q. 3. a) The following table shows marks of 65 students in econometrics **(12)**

- i) Calculate average marks of group.
- ii) Calculate median and mode for the following data given below:

Marks obtained	0-10	10-20	20-30	30-40	40-50	50-60
No. Of students	12	18	27	20	17	6

OR

b) The following data gives weight in (kgs) of 10 individuals selected in a survey: **(12)**

75, 55, 52, 67, 78, 56, 49, 300, 65, 70

(i) Find the median and mean for these data

(ii) Does this data contain an outlier? If so, exclude the value and recalculate the mean and median.

Q. 4. a) Calculate the inter-quartile, quartile deviation and coefficient of quartile deviation given below: **(12)**

Class interval	0-15	15-30	30-45	45-60	60-75	75-90	90-105
Frequency	8	26	30	45	20	17	4

OR

b) Calculate standard deviation and mean for the following data: **(12)**

X	5	15	25	35	45	55	65
F	8	12	10	8	3	2	6

Q. 5. a) Obtain the Rank Correlation Coefficient for the following data: **(12)**

X	39	65	62	90	82	75	25	98	36	78
Y	47	53	58	86	62	68	60	91	51	84

OR

b) Calculate Karl Pearson's coefficient of correlation for the following data: **(12)**

X	6	8	12	15	18	20	24	28	31
Y	8	13	14	11	20	10	22	26	28

6. a) Using the data given below fit regression line such that $Y=f(X)$. **(12)**

X	3	5	6	9	4	11
Y	2	3	4	6	5	8

OR

b) The table shows the number of four wheelers registered (Y) for 5 cities and the sale of four-wheeler Tyres (X) in the cities. Given the regression equation is: **(12)**

$$X = 65.29 + 0.488 Y.$$

- i) Estimate the various sum of squares.
- ii) Calculate and comment on the goodness of fit.

X	600	630	720	750	800
Y	1250	1100	1300	1350	1500