(7 pages)

**Reg. No. :** .....

**Code No. : 10799 E** **Sub. Code : EMEC 12**

B.A. (CBCS) DEGREE EXAMINATION, NOVEMBER 2023.

First Semester

Economics – Core

STATISTICS FOR ECONOMICS – I

(For those who joined in July 2023 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The number of questions in questionnaire should be

   (a) 5

   (b) 10

   (c) 50

   (d) as small as possible keeping in view the purpose of the survey

2. The word statistics is derived from the _____ word 'Status'.

   (a) English (b) Latin

   (c) Italy (d) Greek

3. _____ classification refers to the classification of data according to some characteristics that can be measured.

   (a) Geographical (b) Chronological

   (c) Quantitative (d) Qualitative

4. The number of observations corresponding to a particular class is known as the _____ of that class.

   (a) Frequency (b) Total

   (c) Limits (d) Interval

5. It is a moderately asymmetrical frequency distribution, the values of mean is 40 and median is 45, estimate the value of the mode

   (a) 5 (b) 85

   (c) 55 (d) 42.5

6. In a symmetrical distribution

   (a) Mean > Median > Mode

   (b) Mean < Median < Mode

   (c) Mean = Median = Mode

   (d) Mean > Median < Mode

7. When mean is 79 and standard deviation is 8, C.V =

(a) 9.875 (b) 10.127

(c) 632 (d) 71

8. _____ is used in the study of the degree of inequality in the distribution of income and wealth.

(a) Coefficience of variation

(b) Variance

(c) Measures of dispersion

(d) Lorenz curve

9. _____ implies that, as one variable is increasing, the other is also increasing.

(a) Positive correlation

(b) Negative correlation

(c) Regression

(d) Linear correlation

10. Regression analysis reveals _____ between two variables.

(a) degree of relationship

(b) average relationship

(c) no relationship

(d) true relationship



PART B — (5 × 5 = 25 marks)

Answer ALL questions by choosing (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain the method of collecting primary data through 'Direct Personal Interview'.

Or

(b) Define Secondary Data and mention the precautions to be takes before using the secondary data.

12. (a) What is meant by classification? State the objectives of classification.

Or

(b) Represent the data in histogram and frequency polygon.

| Class Interval : | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 |
|---|---|---|---|---|---|
| Frequency : | 36 | 87 | 121 | 154 | 133 |

| Class Interval : | 90-100 | 100-110 | 110-120 | 120-130 |
|---|---|---|---|---|
| Frequency : | 95 | 50 | 30 | 10 |

13. (a) Calculate arithmetic mean from the following data.

| Marks : | 0-10 | 10-30 | 30-60 | 60-100 |
|---|---|---|---|---|
| No. of students : | 5 | 12 | 25 | 8 |

Or

(b) Explain the uses of median.

14. (a) Calculate Quartile Deviation and its coefficient from the following data.

| Height of students (in cms) : | 120 | 122 | 124 | 126 | 130 | 140 | 150 | 160 |
|---|---|---|---|---|---|---|---|---|
| No. of students : | 1 | 3 | 5 | 7 | 10 | 3 | 1 | 1 |

Or

(b) From the observation given below find out Karl Pearson's coefficient of Skewness.

Scores : 25, 26, 25, 25, 20, 25, 30, 25, 14, 25

15. (a) Find out Spearman's rank correlation coefficient.

X : 52 53 42 60 45 41 37 38 25 27

Y : 65 68 43 38 77 48 35 30 25 50

Or

(b) Given the following data.

$\overline{X} = 36$, $\overline{Y} = 85$, $\sigma_x = 11$, $\sigma_y = 8$, $r = 0.66$

Find the two regression equations and estimate the value of $X$ when $Y = 75$.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions by choosing (a) or (b).

Each answer should not exceed 600 words.

16. (a) Clearly explain the uses and limitations of statistics.

Or

(b) Discuss the requirements of a good questionnaire.



17. (a) Discuss the various types of diagrams.

Or

(b) Describe the parts of a Table and State the rules that serve as a guide in tabulating statistical materials.

18. (a) Find Median for the following frequency distribution.

| Class Interval : | 30-32 | 32-34 | 34-36 | 36-38 | 38-40 | 40-42 |
|---|---|---|---|---|---|---|
| f : | 3 | 8 | 24 | 31 | 50 | 61 |

| Class Interval : | 42-44 | 44-46 | 46-48 | 48-50 |
|---|---|---|---|---|
| f : | 38 | 21 | 12 | 2 |

Or

(b) Calculate the mode for the data given below.

| Marks : | 50-53 | 53-56 | 56-59 | 59-62 | 62-65 | 65-68 |
|---|---|---|---|---|---|---|
| No. of students : | 3 | 8 | 14 | 30 | 36 | 28 |

| Marks : | 68-71 | 71-74 | 74-77 |
|---|---|---|---|
| No. of students : | 16 | 10 | 5 |

19. (a) Compute mean deviation from mean for the following data.

| Height (cm) : | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 |
|---|---|---|---|---|---|---|---|---|---|
| No. of persons : | 15 | 20 | 32 | 35 | 33 | 22 | 20 | 10 | 8 |

Or

(b) Calculate standard deviation for he data given below.

| Class : | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
|---|---|---|---|---|---|---|---|
| Frequency : | 8 | 12 | 17 | 14 | 9 | 7 | 4 |

20. (a) Describe the various types of correlation with examples.

Or

(b) Calculate the Karl Pearson's coefficient of correlation from the following data using 44 and 26 respectively as the assumed mean of X and Y.

X : 43 44 46 40 44 42 45 42 38 40 42 57

Y : 29 31 19 18 19 27 27 29 41 30 26 10

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