

2024

Time :As in Programme

Full Marks : 100

The figures in the right-hand margin indicate marks.

Answer all questions.

PART-I

1. Answer all the following Questions in one word. 1x10
- a. The word statistics has been derived from the latin word _____.
 - b. The incomplete data usually leads us to _____ conclusions.
 - c. For finding out the per capita income of a country _____ average is used.
 - d. Coefficient of variation is defined as _____.
 - e. If the Kurtosis of a distribution is 3, it is called _____ distribution.
 - f. The regression line X on Y and Y on X intersect at _____.
 - g. Correlation coefficient is a _____ number.
 - h. If r is the coefficient of correlation then $\sqrt{1-r^2}$ is termed as _____.
 - i. Laspeyre's method deals with _____ bias.
 - j. The _____ price index measures the average price of goods and services.

(Turn Over)

PART-II

2. Answer the following question in 50 words each. 2x9
- a. Explain the term 'nominal' in scales of measurement.
 - b. Define Ogive with the help of a graph.
 - c. Mention two drawbacks of Geometric Mean.
 - d. Write down two characteristics of measures of dispersion.
 - e. Define Bowley's coefficient of skewness.
 - f. What are the two normal equations for an exponential curve ?
 - g. Define probable error of correlation coefficient.
 - h. Explain the term 'Value Index Number'.
 - i. What is the role of 'Normal period' in study of index number ?

PART-III

3. Answer any eight questions of the followings in 250 words each. 5x8
- a. Distinguish between continuous and Discrete frequency distribution.
 - b. Write down the merits, demerits and uses of mode as a measure of central tendency.
 - c. Define Quartile Deviation. Write down its role as a measure in dispersion.
 - d. Find the coefficient of variations for first 20 natural numbers.
 - e. Define Kurtosis. What are the different types of Kurtosis.

- f. Show that correlation coefficient is lies between -1 to +1.
- g. Explain the values of $r=0$, -1 and +1 are related with regression lines.
- h. Describe about rank correlation. How it plays the significant role in study of correlation.
- i. Define Index number and write down the uses of Index number.
- j. Describe about the cost of living Index number and its uses.

PART-IV

Answer any four of the following in 800 words each. 8x4

4. What do you mean by data ? Briefly discuss the qualitative, quantitative, nominal and ordinal data.
5. Find the mean and variance of first 'n' natural numbers. Also find its coefficient of variation.
6. Define skewness. What are different measures ? Discuss briefly.
7. State and prove any three properties of regression coefficients.
8. Outline the mathematical tests for an ideal index numbers. Illustrate these with respect to fisher's Ideal Index number.

