SEMESTER–I

MDC-1 (T): Basics of Statistics

Credits: 2   **Full Marks: ESE-70 + CIA-30 = 100**

Course Objective:

- To introduce the basic idea of descriptive statistics including graphical representation
- To introduce the concept of simple linear regression

Course Outcomes:

After the completion of the course, the students will be able to:
- Identify the basic problem in statistics
- Understand the statistical data, graphical presentation,
- Apply various statistical methods to analyze the statistical data
- Use the Correlation coefficient
- Apply simple linear regression analysis.

UNIT I   No. of hours: 04
Definition and scope of Statistics, concepts of population and sample. Data: quantitative and qualitative, variables, frequency and non frequency. Presentation of data: tabular and graphical including bar, line diagram and pie chart.

UNIT II   No. of hours: 06
Histogram and ogives. Measures of Central Tendency: mean, median, mode, geometric and harmonic mean and their properties.

UNIT III   No. of hours: 05
Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation. Moments, skewness and kurtosis

UNIT IV   No. of hours: 05
Bivariate data: Scatter diagram, Karl Pearson product moment correlation coefficient and its properties. Simple linear regression

SUGGESTED READING:

1. Goon A.M., Gupta M.K. and Dasgupta B. (2002): Fundamentals of Statistics, Vol. I & II, The World Press, Kolkata.
2. Miller, Irwin and Miller, Marylees (2006): John E. Freund's Mathematical Statistics with Applications, Pearson Education, Asia.
3. Mood, A.M. Graybill, F.A. and Boes, D.C. (2007): Introduction to the Theory of Statistics, Tata McGraw-Hill Pub. Co. Ltd.
4. Gupta, S. C. and Kapoor, V. K. (2020): Fundamentals of Mathematical Statistics, S. Chand & Sons, New Delhi.

Credits: 1   **No. of hours: 10**   **Full Marks: ESE-70 + CIA-30 = 100**

Practical Based on Unit 1, 2, 3, and 4 of MDC-1 (T)