

# **CERTIFICATE/ DIPLOMA IN STATISTICAL ANALYSIS AND RESEARCH METHODOLOGY**

## **SARM 2: DESCRIPTIVE STATISTICS**

Max. Marks: 100

External: 70

Internal: 30

Pass: 40%

Credits: 6

### **OBJECTIVES**

Descriptive statistics summarize and organize characteristics of a data set, a collection of observations from a sample or entire population.

### **INSTRUCTIONS FOR THE PAPER SETTER/EXAMINER:**

1. The syllabus prescribed should be strictly adhered to.
2. The question paper will consist of three sections: A, B, and C. Sections A and B will have four questions from the respective sections of the syllabus and will carry 10 marks each. The candidates will attempt two questions from each section.
3. The Question paper will contain 60 percent theory and 40 percent numerical proportion.
4. Section C will have fifteen short answer questions covering the entire syllabus. Each question will carry 3 marks. Candidates will attempt any ten questions from this section.
5. The examiner shall give a clear instruction to the candidates to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated.
6. The duration of each paper will be three hours.

### **INSTRUCTIONS FOR THE CANDIDATES:**

Candidates are required to attempt any two questions each from the sections A and B of the question paper and any ten short questions from Section C. They have to attempt questions only at one place and only once. Second or subsequent attempts, unless the earlier ones have been crossed out, shall not be evaluated. Simple calculator can be used in the examination.

### **SECTION A**

**Unit 1:** Dispersion - Objectives and significance of Good Measures, Measures of Dispersion -

Range, Quartile Deviation, Mean Deviation and Standard Deviation (ungrouped data).

**Unit 2:** Co-efficient of variation (CV), Lorenz Curve, Meaning and Measures of skewness kurtosis, Moments

**Unit 3:** Correlation: Meaning, Properties and Types.

**Unit 4:** Methods of Correlation: Scatter Diagram, Karl Pearson's Correlation Co-efficient & Spearman's Rank, Correlation Co-efficient.

## **SECTION B**

**Unit 5:** Regression- Meaning, Properties, Types, Meaning of Line of Correlation, Difference between correlation and regression.

**Unit 6:** Measurement of Regression equations X on Y and Y on X

**Unit 7:** Index Numbers: Meaning and Uses and Types of Index Numbers, problems in the construction, Methods of Index Numbers: Laspayer's, Paasche and Fisher.

**Unit 8:** Tests of consistency of Index Number Formulae, Chain index or Chain Base Index Numbers, Base Shifting, Splicing and Deflation. Limitations of Index Numbers.

Note: Statistical analysis should also be taught with the help of MS Excel, SPSS or any other related software tool.

## **Suggested Readings**

A.M Goon, M.K Gupta and B. Dasgupta, fundamental of statistics Vol-I, World press Calcutta

Gupta SC: Fundamental of statistics, S. Chand & Company. New Delhi

Gupta, SP: Statistical Methods, S. Chand & Company. New Delhi

Monga, GS: Mathematics and Statistics for Economics, Vikas Publishing House, New Delhi.