CERTIFICATE/ DIPLOMA IN STATISTICAL ANALYSIS AND RESEARCH METHODOLOGY

SARM 1: INTRODUCTION TO STATISTICS

Max. Marks: 100
External: 70
Internal: 30
Pass: 40%
Credits: 6

OBJECTIVES:

The objective of the course is to make the students familiar with various techniques used in summarization and analysis of data. The focus will be on providing basic knowledge of statistics, which deals with data, collection of data, analysis, interpretation and representation of data. It deals with how to analyse statistical data properly and understand the role of formal statistical theory and informal data analytic methods.

INSTRUCTIONS FOR THE PAPER SETTER/ EXAMINER:

1. The syllabus prescribed should be strictly adhered to.
2. Question Paper will have 70 Multiple Choice questions (MCQs) and four choices of answers will be there covering the entire syllabus. Each question will carry 1 mark. All questions will be compulsory; hence candidates will attempt all the questions.
3. Paper-setters/Examiners are requested to distribute the questions from section A and Section B of the syllabus equally i.e., 35 questions from section A and 35 questions from Section B.
4. The examiner shall give clear instructions to the candidates to attempt questions.
5. The duration of each paper will be two hours.

INSTRUCTIONS FOR THE STUDENTS

The question paper shall consist of 70 Multiple Choice questions. All questions will be compulsory and each question will carry 1 mark. There will be no negative marking. Students are required to answer using OMR (Optimal Mark Recognition) sheets.

SECTION A

Unit 1: Statistics: definition, importance and Scope, limitations, Distrust

Unit 2: Collection of data: Types and Sources

Unit 3: Classification and Tabulation of data

Unit 4: Diagrammatic and Graphical presentation of data (with MS-Excel)

SECTION B

Unit 5: Sample, Population, Characteristics of good sample, type of sampling techniques, Sampling errors.

Unit 6: Measures of Central Tendency- Mean (Direct, Short cut and step deviation methods), Merits & Demerits.

Unit 7: Median (Direct, Short cut and step deviation methods) and Mode: Inspection and grouping method, Merits & Demerits

Unit 8: Geometric Mean, Harmonic Mean: Meaning, Merits & Demerits.

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.

Singh, D. and Chaudhary, F.S. (1986): Theory and Analysis of Sample Survey Designs. New Age International Publishers.

Cochran, W.G. (1977): Sampling Techniques (3rd edition), Wiley.