CERTIFICATE/ DIPLOMA IN STATISTICAL ANALYSIS AND RESEARCH METHODOLOGY

SARM 5: STATISTICAL INFERENCE

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

OBJECTIVE:

- To provide core knowledge required for statistical applications.
- To equip learners with the skills of using appropriate statistical techniques for applications in various fields.

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: Theory of Estimation: Point estimation and Interval estimation

Unit 2: Sampling distributions of a Statistics- Small Sample test or student-t test and its

applications: t-test for single mean, difference of means, Paired t-test

Unit 3: Large Sample test: Introduction, Sampling of Attributes- test for Single Proportion, test for difference in proportion

SECTION B

Unit 4: F-statistics: meaning, equity of population variances

Unit 5: Chi-square test- goodness of fit, independent of attributes, test of variance (for population), equality of several population proportions

Unit 6: Analysis of Variance: One-way and Two-way

Unit 7: Interpretation of data and Report writing.

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

- Anderson, D.R.; Sweeney, D.J. and Williams, T.A., "Statistics for Business and Economics", 2nd edition (2011), Thompson, New Delhi.

- Cooper, D. R., and Schindler, P.S., "Business Research Methods", 9th Edition,Tata McGraw-Hill, New Delhi.

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

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

- Lehmann, E.L. (1986): Testing Statistical hypotheses (Student Edition).

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

- Zacks, S. (1971): Theory of Statistical Inference, John Wiley and Sons. New York.