SARDAR PATEL UNIVERSITY
THIRD SEMESTER
(EFFECTIVE FROM JUNE, 2011)
COURSE CODE: US03FSTA01
FOUNDATION COURSE
(FOUNDATION OF STATISTICS-I)

Course credit: 2

No. of lectures per week: 2

All units carry equal Weightage

Weightage: Internal – 30%, External – 70%

Objectives:

The main objective of this course is to acquaint students with some basic concepts in Statistics. They will be introduced to some elementary statistical methods of analysis of data. At the end of this course students are expected to be able to analyze the data.

1. To tabulate statistical information given in descriptive form,

2. To use graphical techniques and interpret,

3. To compute various measures of central tendency, dispersion, skewness,

4. To analyze data pertaining to attributes and to interpret the results,

5. To apply statistics in the various fields.

Unit-I Collection of data-I

- ➢ **Introduction, meaning, applications and limitation of Statistics**
- ➢ **Survey Method**
- ➢ **Concept of a statistical population and sample from a population**
- ➢ **Experimental Method**
- ➢ **Methods of drawing sample from the population**
  - ➢ **Simple random sampling**
  - ➢ **Stratified random sampling**
  - ➢ **Systematic sampling**

Unit-II Collection of data-II

- ➢ **Primary data**
- ➢ **Methods of collecting primary data:**
  - ➢ **Direct personal inquiry method**
  - ➢ **Mailed Questionnaire method**
  - ➢ **Indirect oral investigation method**
- ➢ **Secondary data**
  - ➢ **Sources of secondary data**
- ➢ **Types of characteristics (data)**
  - ➢ **Attributes: Nominal and Ordinal**
  - ➢ **Variables: Discrete and Continuous**

Unit-III Presentation of data

- ➢ **Classification: Definition, Purpose, Rules and**

- ➤ **Types of classification**
  - ➤ **Geographical**
  - ➤ **Chronological**
  - ➤ **Quantitative**
  - ➤ **Qualitative**
- ➤ **Tabulation: Meaning & importance, Parts of a table, Requisites of good table**
- ➤ **Types of table**
  - ➤ **Simple or one way table**
  - ➤ **Two way table**
  - ➤ **Manifold table (Up to four) (with examples)**
- ➤ **Diagrammatic Graphical presentation of data:**
  - ➤ **Advantages**
- ➤ **Types of diagrams**
  - ➤ **Bar diagram: Simple, Sub-divided (Component), Percentage, Multiple**
  - ➤ **Pie chart**
- ➤ **Graphical presentation of data:**
  - ➤ **Histogram (with uniform class-width)**
  - ➤ **Frequency polygon**
  - ➤ **Frequency curves**
  - ➤ **Ogives**

Unit-IV Analysis of Quantitative data
- ➤ **Measures of central tendency (Mean, Median, Mode)**
- ➤ **Measures of dispersion**
- ➤ **Partition values**
- ➤ **Skewness (Bowley's and Karl-Pearson's coeff. Of skewness)**

References:
(i)   Gupta S.C. and Kapoor V.K. Fundamentals of applied statistics
(ii)   Ken Black, Business Statistics (4th edition) Willey student edition
(iii)   Gupta S.C, Fundamentals of statistics