

PAPER CODE: BB304: BUSINESS STATISTICS - I

Learning Objectives

- To develop Basic skills for quantitative application in business situations.
- To impart knowledge to the students about statistical tools and its applications. to build skills for statistical inference of business data

UNIT – I: INTRODUCTION TO STATISTICS:

Definitions, Importance, Scope, Limitations, Need for Data, Data Collection Methods. Classification of Data, Frequency Distribution – Types of Frequency Distributions. Tabulation of Data – Objectives of Tabulation – Parts and Types of Tables, Graphical Presentation – Functions of Graphs – Advantages and limitations of Graphs, Diagrams – Rules for Drawing Diagrams, One, Two and Three Dimensional Diagrams – Pictograms, Cartograms.

UNIT – II: MEASURES OF CENTRAL TENDENCY AND DISPERSION:

Introduction to Averages – Requisites for a Measure of Central Tendency, Mean - Combined Mean – Weighted Mean, Median, Mode, Relationship between Mean, Median and Mode. Measures of Dispersion, Range, SD for Grouped and Ungrouped – Advantages and Disadvantages, Coefficient of Variation.

UNIT – III: CORRELATION AND REGRESSION:

Scatter Diagram, Positive and Negative Correlation, Limits for Coefficient of Correlation, Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation.(Ranks are not equal only) Regression Analysis: Concept, Least Square Fit of a Linear Regression, Two Lines of Regression, Properties of Regression Coefficients(Simple problems only).

UNIT – I V: INTRODUCTION TO PROBABILITY:

Concepts – Random Experiment, Sample Space – Definitions of Probability, Simple Problems on Probability. Sampling -Definitions of Population, Sample, Parameter, Statistic, Principles of Sampling- Probability and Non Probability Sampling Methods, Sampling Distribution and Standard Error (SE).

UNIT – V: INDEX NUMBERS:

Introduction – Types – Characteristics – Construction Weighted and Unweighted Index Numbers – Price and Quantity/Volume Index Numbers – Tests – Time Reversal – Factor Reversal and Circular Tests – Chain and Fixed base – Changing of Base – Combining of Two of more Overlapping Indices Consumer Price Index – Problems in Construction.

REFERENCE BOOKS:

- Gupta SC: "Fundamental of Statistics" 6th Ed, Himalaya Publishers House, 2004.
- Sharma JK: "Business Statistics" 2nd Edition Pearson Education, 2007.
- Arora, PN, Arora, Sumeet and Arora, Amit: "Managerial Statistics", S. Chand, 1st Ed., 2009.
- Bharadwaj, RS: "Business Statistics", Excel books, 2nd Ed, 2008.

Learning Outcomes

- Data description and data presentation in a business environment Measures of Central Tendency
- Basic probability concepts and probability distributions as an aid to business decision making