

BUSINESS STATISTICS (IMB-103)

- 1. Introduction:** Statistics as a subject; Functions, Importance and Limitations of Statistics; Planning and Execution of a statistical investigation; Census and sample investigation; Descriptive and Inferential statistics.
- 2. Data Collection, Editing and Presentation:** Classification of data, Organisation of Data using data array, Tabulation, Graphical Presentation, Types of Diagram, Exploratory Data analysis.
- 3. Measures of Central Tendency:** Definition and utility; Characteristics of a good average; Different measures of average; Arithmetic Mean; Median; Other positional measures – quartiles, deciles, percentiles; Mode; Relation between Mean, Median and Mode; Geometric and Harmonic Mean. Choice of a suitable measure of central tendency.
- 4. Measures of Dispersion:** Meaning and objective of dispersion; Characteristics of a good measure of dispersion; Different measures of dispersion – Range, Quartile deviation, Mean deviation, Mean Absolute deviation, Standard deviation; Comparison of the different measures of dispersion. Measures of relative dispersion – Coefficient of Variation. Combined mean and standard deviation; Moments, Skewness and Kurtosis: Moments; Coefficients based on moments; Sheppard's correction; Skewness; Measures of skewness; Kurtosis and its measures.
- 5. Correlation and Regression:** Analysis of Bivariate data. Correlation Analysis – Meaning of correlation; Scatter Diagram; Karl Pearson's coefficient of linear correlation; Calculation of the correlation coefficient from grouped data; Properties of the correlation coefficient; Advantages and limitations of the coefficient of correlation; Idea of rank correlation; Spearman's rank correlation coefficient. Regression Analysis – Two lines of regression; Some important results relating to regression lines; Correlation Coefficient and the two Regression Coefficients; Coefficient of determination; Concept of multiple regression.

Book:

1. Business Statistics, Patri and Patri, Kalyani
2. Business Statistics, Sharma and Khatua, Pearson
3. Statistics-Theory and Practice, Pillai and Bhagavati, S.Chand