

**B.COM**  
**SEMESTER III**  
**STATISTICAL TECHNIQUES I**  
(Marks 100 – 75 Lectures)

**OBJECTIVES:**

1. To enable the students to gain understanding of statistical techniques as are applicable to business.
2. To give comprehensive knowledge of the subject to the students opting for professional and academic course where statistics is a part of the curriculum.

**1. INTRODUCTION: (4 Marks -5 Lectures)**

- Meaning and definition of statistics.
- Function, Scope and Limitation of statistics.
- Basic statistical Concepts- Population, Sample, Variable, Attribute, Parameter and statistic.

**2.COLLECTION OF DATA: (8 Marks-5 Lectures)**

- Types of Data- primary & secondary data.
- Sources ,Methods of collecting primary data.
- Clasiffication-Univariate frequency distribution,
- Bi-variate frequency distribution.

**3.GRAPHS AND DIAGRAMS: (12 Marks-10 Lectures)**

**Histogram**

- Frequency polygon
- Frequency curve and Ogives
- Simple Bar, Multiple and sub divided bar, pie diagrams.

**IV. SUMMARISATION MEASURES: (40 Marks-30 Lectures)**

- Measures of Central Tendency- Meaning, Objectives
- Requisites of a good average
- Arithmetic Mean, Median Mode (Without grouping) – Geometric Mean, Harmonic Mean
- Partition values-Quartiles, Deciles, And Percentiles.
- Measure of Dispersion – Meaning, Objectives
- Requisites of a good Measure of Dispersion-
- Absolute and relative measures
- Range, Quartile deviation, Mean Deviation, Standard deviation,
- Coefficient of range, Coefficient of Quartile deviation, Coefficient of Mean deviation and Coefficient of Variation.

- Skewness –Meaning
- Karl Person's and Bowley's measures of skewness and coefficient of skewness.
- Notion of Kurtosis.

**V. INDEX NUMBERS: (18 Marks-15Lectures)**

**Meaning**

- Types, uses and limitation
- Methods of constructing price and quantity index numbers by unweighted and weighted methods
- Weighted Aggregative – Laspeyre's, Paasche's and Fishers's formulae
- Weighted average of relatives - Arithmetic Mean and Geometric Mean
- Value index number –
- Fixed base, chain base indices, Base shifting,
- Deflating and splicing,
- Cost of living index numbers.

**VI. ANALYSIS OF TIME SERIES: (18 Marks-10Lectures)**

- Meaning and utility
- Components of time series
- Models of Time series – Additive and Multiplicative models.
- Measurement of Trend – semi averages, moving averages and methods of least squares (Straight line and second degree parabola).

**Books for Study and Reference:**

1. Gupta S.P  
Statistical Methods, Sultan Chand and Sons
2. Sancheti D.C. and Kapoor V.K  
Statistics (Theory, methods and Application) Sultan Chand and Sons
3. Levin Richard I and Rubin David S.  
Statistics for Management, Prentice Hall of India
4. Gupta C.B  
Fundamental of Statistics, Himalaya Publishing House
5. R.J.Shah  
Statistical Techniques.
6. Neeta Mazumdar