

Title: Industrial Statistics

Course No:

Semester: 7th

Paper: I (Major)

No. of Credits: 4+2

Course Objectives: To inculcate in students the understanding of statistical tools in Index Numbers and Time series Analysis.

Course Outcomes: On successful completion of this course, the students will be able to:

- Comprehend the basic knowledge of Index numbers and Time Series Analysis
- To use these statistical techniques in real life problems.

Theory: 4 credits

UNIT -I

Concept of Index Numbers, Uses of Index Numbers, Problems in the Construction of Index Numbers, Classification of Index Numbers, Methods of Constructing Index Numbers, Unweighted Index Numbers, Weighted Index Numbers, Computation of price and quantity index numbers by Laspeyre's, Paasche's, Drobish-Bowley, Marshall Edgeworth and Fishers' methods, Limitations of Index Numbers.

UNIT -II

Criteria for good index number: Unit test, Time Reversal test, Factor Reversal tests and Circular test, Cost of living Index number, Chain Base Index Number, Errors in the measurement of price and quantity index numbers and their control, Base shifting, Splicing and deflation of Index numbers with examples.

UNIT -III

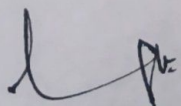
Introduction of time series analysis, Uses of Time series Analysis, Mathematical Models of Time Series, Components of Time Series: Trend, Linear and Non- Linear trend, Seasonal Variations and Irregular variation, Measurement of Trend by using Free hand curve method, Semi-Average method, Moving average method, fitting of straight line by the method of Least Square. Merits and Demerits of these methods.

UNIT -IV

Deseasonalisation, Determination of seasonal variations by method of Simple Averages, Ratio to Trend method, Ratio to Moving Average method and Link relative method, Merits and Demerits of these methods. Concepts of Auto Regression Series, Auto correlation, Correlogram.

Members:

- 1) Prof. Khurshed Ahmad Khan.....
- 2) Dr. Showkat Maqbool Ganai.....
- 3) Dr. Mahnaz Shafi Chishti.....
- 4) Prof. Nisar Ahmad Khan.....
- 5) Dr. Rayees Ahmad Dar.....


Dr. Sheikh Bilal Ahmad
(Chairperson)