

**BACHELOR OF COMMERCE - FOURTH SEMESTER**  
**QUANTITATIVE TECHNIQUES – II**

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Code: SC 4.6

Contact Hours: 56

Credits: 4

Univ Code:

Work load: **4 hours per week**

Evaluation: Continuous Internal Assessment – **30 Marks**  
Semester-End Examination – **70 Marks**

**Objectives:** To equip the students with statistical tools to analyse the data inputs to come out with scientific inference and to forecast the trends.

**Pedagogy:** Combination of lectures, simple cases for application of statistical tools – shed light on practical issues (e.g., construction of SENSEX, WPI), assignments, etc.

**Module 1:** **Correlation** -meaning and definition, types of correlation, methods of studying correlation – scatter diagram, simple graph, Karl Pearson's Co-efficient of Correlation, Spearman's rank co-efficient of Correlation, Correlation of grouped bivariate data, probable error (theory and problems)

**Module 2:** **Regression** - meaning, definition, uses, methods of studying regression, regression line, regression equation, deviation taken from arithmetic mean and assumed mean, regression equation in a bivariate grouped regency, deviation taken from assumed mean (theory and problems).

**Module 3:** **Time Series** -meaning, definition, uses, methods of time series, secular trend, seasonal variations, cyclical variation, irregular variations, measurement of secular trend, graphic method, semi-average method, moving average method, method of least squares (theory and problems).

**Module 4:** **Index Numbers** -meaning, definition, characteristics, problems in construction of index numbers, methods of construction of index numbers, un-weighted index number, simple aggregate method, simple average of price relatives methods, weighted index numbers, Laspeyer's method, Paasche's method, Fisher's Ideal Method, time reversal test, factor reversal test, consumer price index meaning and need, construction of a consumer price index, methods of constructing consumer price index, limitations of index numbers (theory and problems).

**Module 5:** **Probability** -meaning, usefulness, event, samples space, mutually exclusive events, exhaustive events, independent events, dependent events, simple and compound events (theory and problems).

**Recommended Books**

1. Statistical Methods - S.P. Gupta
2. Fundamentals of Statistics - S.C. Gupta-