

Paper Code: 3321

**Third Year T.D.C. Arts**  
**Paper – I**  
**QUANTITATIVE TECHNIQUES IN ECONOMICS**

**UNIT – I**

Statistics – Definition, Importance, Scope and Limitations of Statistics, Primary and Secondary Data, Methods of Collecting Primary Data, Secondary Data, Classification and Tabulation of Data, Presentation of Data – Diagrams and Graphs.

**UNIT – II**

Measures of Central Tendency : Mean, Median, Mode, Geometric Mean and Harmonic Mean.

Measures of Dispersion – Range, Mean Deviation, Standard Deviation, Coefficient of Variation, Quartile Deviation, Skewness.

**UNIT – III**

Correlation- Meaning, Causation & Correlation, Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation, Probable Error.

Simple Linear Regression- Introduction, Lines of Regression, Estimation of Regression Coefficient and Regression Lines.

**UNIT – IV**

Time Series – Introduction, Components of Time Series, Measurement of Trends – Methods of Moving Averages and Least Squares.

Index Numbers – Meaning, Significance and Types of Index Numbers, Methods of Constructing Index Numbers- Simple Price Relative Methods and Aggregative Methods.

**UNIT – V**

Sampling and Types of Sampling, Interpolation – Newton, Binomial and Lagrangian Methods, Statistical System in India, National Sample Survey Organisation (NSSO), Central Statistical Organisation (CSO).

## Basic Reading List

1. Croxton, Crowden and Klein (1971) – Applied General Statistics, Prentice Hall of India, New Delhi.
2. Gupta, S.C. (1993) – Fundamentals of Applied Statistics, S. Chand and Sons, New Delhi.
3. Nagar, A.L. and Das, R.K. (1993) – Basic Statistics, Oxford University Press, New Delhi.
4. Speigal, M.R. (1992) – Theory and Problems of Statistics, McGraw Hill Book Co., London.
5. Levin and Rubin – Statistics for Management, Prentice Hall of India, New Delhi.
6. Srivastava, S.C. and Sangy Srivastava – Fundamentals of Statistics, Anmol Publications Pvt. Ltd., New Delhi.
- 7<sup>प</sup> कैलाशनाथ नागर – सांख्यिकी के मूल तत्व, मीनाक्षी प्रकाशन, मेरठ।
- 8<sup>प</sup> सुदामा सिंह, ओ.पी. सिंह एवं वाई.के. सिंह – अर्थशास्त्र गणित एवं प्रारम्भिक सांख्यिकी, राधा पब्लिकेशन, नई दिल्ली।
- 9<sup>प</sup> राव, गुप्ता एवं सुथार – व्यावसायिक सांख्यिकी।