

# 5303 H

## 2.10: Advanced Statistical Analysis

### Unit-I

Moments and Kurtosis, Probability including mathematical expectations, Bayesian Approach. Interpretation of Statistical Data: meaning, errors of interpretation and precautions

### Unit-II

Interpolation and Extrapolation, Vital Statistics: Meaning, Measurement of Mortality, fertility and population growth

### Unit-III

Non-parametric tests: Sign test, Run test, Signed Rank Test, Kruskal Wallis Test, Median Test, Kolmogorov-Smirnov Test, Mann-Whitney U Test, Kendall's Coefficient of concordance.

### Unit-IV

Statistical Decision Theory and Statistical Quality Control

### Unit-V

Partial and Multiple Correlation and Regression, Issues in Regression: Multicollinearity, Heteroscedasticity and Autocorrelation.

Suggested Readings:

1. Gujarati, Damodar N & Sangeetha: Basic Econometrics, Tata McGraw Hill
2. Gupta, S.P.: Statistical Methods, Sultan Chand & Sons, New Delhi
3. Gupta, B.N. : Business Statistics, S.B.P.D. Publication, Agra
4. Hooda, R.P. – Statistics for Business and Economics, Vikas Publishing  
सांख्यिकी के मूल तत्व
5. Nagar K.N. : Meenaskhi Prakashan, Meerut
6. Sancheti and Kapoor: Statistics (Theory, Methods & Application), Sultan Chand & Sons