

**MCOM (Annual System) Being Taught at Commerce Colleges
Affiliated with
Bahauddin Zakariya University, Multan**

Quantitative Techniques in Business

Probability and Decision Making

Definitions and Basic Rules of Probability — Marginal, Joint and Conditional Probability: Definition and calculation
Applications of Probability in Business Situations — Bayes' Rule — Combinatorics: Definition and use in calculating probability — Expected Value: Use as decision rules in assessment of the value of perfect and imperfect information
Other Decision Rules: Maximin Rule, Maximax Rule, Minimax Rule, Hurwicz Criterion

Decision Trees

Definition, Structure, Drawing, Interpretation of Decision Tree — Use of Decision Tree in calculating probabilities

Statistics

Statistical Analysis — Types of Statistical Data — Summarizing and Tabulating Statistical Data — Creating and Charting Frequency Distributions — Characteristics of Distributions — Averages — Absolute and Relative Dispersion
Skewness and Kurtosis — Normal Distribution: Introduction and use in solving business problems — Binomial Distribution: Introduction and use in solving business problems — Normal Approximation to Binomial Distribution

Statistical Inference

Need and Significance of Statistical Inference in Business — Sampling: Introduction and types — Point and Interval Estimation — Testing of hypothesis: Related Terminology, One Sample and Two Sample tests of Population Means for small and large population(s) — Tests based on Chi-Square Distribution — Statistical Process Control by means of Control Charts

Linear Correlation and Regression

Methodology and calculation — Least Square Principle — Rank Correlation

Multiple and Non-linear Regression

Normal Equation and Matrix approaches of estimation — Non-linear models: Exponential, Logarithmic and Learning Curves

Forecasting- Time Series Analysis

Definition and Application — Moving Average — Exponential Smoothing — Decomposition of Time Series — Use of Regression in Time Series Analysis — Use of Moving Averages in Time Series Analysis

Linear Programming

Linear Programming: Definition — Limitations and Constraints — Optimization — Graphical Linear Programming Solution

Simplex Method

Formulating the Simplex Model — Comparing Simplex and Graphical Solutions

Note: Mathematics will be same as before. No change required. Will be reproduced from existing syllabus. The Arithmetic and geometric progression will be deleted. Books authored by local authors will be deleted.

READING

Recommended

1. Lucey, T. (2004), "Quantitative Techniques", 6th ed, Thomson Asia Pte Ltd. Bangalore
2. Srivastava, S.C. and Srivastava, S.S. (2005), "Quantitative Techniques", Anmol Publications,
3. Tulsian, P.C. and Pandly, V., (2006), "Quantitative Techniques: Theory and Problems", Pearson Education

Further

1. Srivastava, U.K., Shenoy, G.V. and Sharma, S.C. (2005), "Quantitative Techniques for Managerial Decisions", New Age International Publications,
2. Rao, A. B., (2004), "Quantitative Techniques in Business", Jaico Publishing House