

Centre for Management Studies

Dibrugarh University

Course Code : 10800 [MBA (PT)]

Course Name : Quantitative Techniques

Course Type : Core

Prerequisites : None

Objective : The primary objective of this course is to make students comfortable with basic quantitative techniques that are required in management decision making

Evaluation : *Internal assessment*: 40 marks (1 Sessional Examination – 10 marks; 1 Practical Examination – 10 marks, Attendance – 5 marks, Assignment – 15 marks); *End Semester Examination*: 60 marks

Instructor : Himadri Barman (himadri@cmsdu.org; <http://himadri.cmsdu.org>)

Detailed Course Outline

Unit I: Basics of Set Theory; Functions; Matrices – types, basic operations, solving equations; Determinants – solving equations.

Unit II: Differentiation – basic rules, standard differentials, simple use in business; Integration – simple indefinite and definite integrals, simple use in business; Partial Differentiation.

Unit III: Nature and Scope of statistics – uses of statistics to business; Collection , Classification and tabulation of data; Diagrammatic and graphic representation of data; Measures of Central Tendency, Measures of Dispersion; Correlation and Regression; Index Numbers – the basic models; Time Series – moving average.

Unit IV: Probability Basics; Probability Distributions – Binomial, Poisson & Normal; Sampling Basics, Decision Theory – decision making under certainty, uncertainty & risk.

Unit V: Definition of OP, History and Importance; LPP – assumptions and uses, Graphical Method, Simplex Method – only two variable problems.

Suggested Books:

1. Agarwal, D R: Quantitative Methods, Vrinda Publications, New Delhi
2. Srivastava, U K, Shenoy, G V & Sharma, S C: Quantitative Techniques of Managerial Decisions, New Age, New Delhi
3. Kalavathy, S: Operations Research, Vikas Publishing House, New Delhi
4. Sharma, J K: Mathematics for Business & Economics, Asian Books Private Limited, New Delhi
5. Srinivasa, G & George, D: Business Mathematics and Statistics, New Age, New Delhi