

CN5003 QUANTITATIVE TECHNIQUES IN MANAGEMENT

DETAILED SYLLABUS

OBJECTIVES

- To study the various quantitative methods applied to the elements of management.
- To study the effect of production management, finance management, decision theory and managerial economics.

UNIT I OPERATIONS RESEARCH

Introduction to Operations Research - Linear Programming – Graphical and Simplex Methods, Duality and Post – Optimality Analysis – Transportation and Assignment Problems.

UNIT II PRODUCTION MANAGEMENT

Inventory Control - EOQ - Quantity Discounts - Safety Stock – Replacement Theory – PERT and CPM – Simulation Models – Quality Control.

UNIT III FINANCIAL MANAGEMENT

Working Capital Management – Compound Interest and Present Value methods – Discounted Cash Flow Techniques – Capital Budgeting.

UNIT IV DECISION THEORY

Decision Theory – Decision Rules – Decision making under conditions of certainty, risk and uncertainty – Decision trees – Utility Theory.

UNIT V MANAGERIAL ECONOMICS

Cost Concepts – Break-even analysis – Pricing Techniques – Game theory Applications.

REFERENCES

1. Frank Harrison, E., The Managerial Decision Making Process, Houghton Mifflin Co., Boston, 1999.
2. Hamdy A.Taha, Operations Research: An Introduction, Prentice Hall, 2010.
3. Kumar, A.C.S, Operations Research, Yes Dee Publishing Pvt Ltd, 2015.
4. Levin, R.I, Rubin,D.S., and Stinson J., Quantitative Approaches to Management, McGraw Hill College, 1993.
5. S.L.Tang, Irtishad U.Ahmad, Syed M.Ahmed, Ming Lu, Quantitative Technique for Decision making in Construction, Hongkong University Press, HKU, 2004.
6. Schroeder, R.G, Operations Management, McGraw Hill, 2009.
7. Vohra, Nd., Quantitative Techniques in Management, Third Edition, Tata McGraw-Hill Company Ltd, 2007.