

Open Elective Course

(For students of other than science stream)

MATOET4.1(B) : Mathematical Finance

Teaching Hours: 3Hours/week	Credits: 3
Total Teaching Hours:42Hours	Max.Marks:100 (S.A-60+I.A.-40)

Course Learning Outcomes: This course will enable the students to

- Understand how to compute profit and loss, discount and Banker's discount.
- Understand the concept of Linear equations and inequalities and their use in solving the Linear Programming Problems.
- Formulation of Transportation Problem and its application in routing problem.

Unit-I:Commercial Arithmetic

Bill of exchange, Bill of discounting procedure. Basic formula related to profit, loss, discount and brokerage, Successive discount, True discount, Banker's discount.

14 Hrs

Unit-II:Linear Programming

Linear equations and inequalities- Rectangular coordinates, straight line, parallel and intersecting lines and linear inequalities, Introduction to linear programming, Mathematical formulation of LPP, Solution of a LPP by graphical method, special cases in graphical method

14 Hrs

Unit-III:Transportation problem

Introduction, Formulation of Transportation problem, Initial basic feasible solution, Steps in solving a transportation problem, optimality check, special cases in Transportation problem. The Traveling salesman Problem (Routing Problem).

14Hrs

Reference Books:

1. R S Agarwal, Objective Arithmetic, S. Chand & Company Ltd. 2022.
2. Mizrahi and Sullivan, Mathematics for Business and Social Sciences an Application approach, John Wiley & sons Inc., 1976.
3. Qazi Zameeruddin, Vijay K Khanna, S K Bhambri, Business Mathematics- II Edition, Vikas Publishing House,2009.
4. S. Kalavathy, Operation Research, Fourth edition, Vikas publication house Pvt.Ltd, 2013.
5. Sreenivasa Reddy M, Operations Research 2nd edition, Sanguine Technical publishers, Bangalore, 2015.
6. S. D. Sharma, Operation Research, Kedar Nath Ram Nath, 2014.