

Course Name: Bachelor of Science Discipline : Mathematics (Those who join in 2015 and after) Self-Learning Course:

Subject	Credit	Ext =Tot	Subject Code
Advanced Programming Techniques	5	100 = 100	U1MASL51

SELF LEARNING

ADVANCED PROGRAMMING TECHNIQUES

Credit: 5 TOTAL MARKS: 100 Subject code: U1MASL51

Objectives:

To know various techniques of programming

Unit I:Dynamic programming: Introduction – The recursive equation approach – Characteristics of dynamic programming – Dynamic programming algorithm – Solution of discrete dynamic programming.

(Chapter 13)

Unit II: Integer Programming: Introduction – Gomory's all –I.P.P method – Construction of Gomory's constraints – Fractional cut methods - Branch and Bound method

(Chapter 7)

- Unit III: Advanced Linear Programming: Introduction Revised simplex method (Chapter 9)
- Unit IV: Non Linear Programming: Introduction Formulating a non-linear programming –

General NLPP – Constrained optimization with equality constraints (Chapter 24)

Unit V: Non Linear Programming methods: Graphical solutions – Kuhn-Tucker conditions with non-negative constraints

(Chapter 25)

Text Book

1. Kanti Swarup, P.K. Gupta and Man Mohan, Operations Research, Sultan and Sons, Reprint 2006

Reference Book(s)

- 1. P.K. Gupta and Man Mohan, Problems in quantitative techniques, Sultan and Sons.
- 2. Hamdy A. Taha, Operations Research, 8th edition, prentice Hall, New Delhi, 2008