

SX-S114
ANDHRA UNIVERSITY
DEPARTMENT OF MATHEMATICS
M.Sc MATHEMATICS
I SEMESTER

M 105 DISCRETE MATHEMATICS

W.E.F. 2003-2004 AB

UNIT I

Graphs, digraphs, network, multigraph, Elementary results, structure based on connectivity, characterization, theorems on trees, tree distances, binary trees

Chapters 1,2, and 3 of textbook I

UNIT II

Eulerian graphs, Hamiltonian graphs, Spanning trees, Fundamental cycles, unrestricted graphs, minimal spanning trees, kruskal algorithm, prim's algorithm

Chapter 4 of text book I and 8.5 of text book II

UNIT III

Definition of lattices, Modular lattices and distributive lattices

Chapter 1 of text book of III

UNIT IV

Basic properties: Boolean polynomials, ideals, minimal forms of Boolean polynomials, Application of Lattices, Switching circuits

Chapter 2 of Text Book III

Text Book I: Graph Theory applications By L.R.Foulds, Narosa publishing House, and New Delhi

Text Book II: Discrete Mathematical Structures by Kolman and Busby and Sharon Ross, Prentice Hall of India-2000 3rd Edn.

Text Book III: Applied Abstract Algebra by Rudolf Lidl and Gunter Pilz, Published by Springer verlag.