Subject Code : RNENS7

PAPER VII – DISCRETE MATHEMATICS

Unit I

Mathematical Logic: Basic Notation, Connectives, Normal forms.

Unit II

Inference Theory: The inference theory for the statement calculus, Predicate Calculus, Inference 'Theory of the Predicate Calculus.

Unit III

Algebraic Structures: Algebraic Systems, Semi groups and Monoids, Grammars and languages, Groups.

Unit IV

Lattices and Boolean Algebra: Lattices as partially ordered sets, Boolean Algeabra, Boolean Functions.

Unit V

Basic concepts of Graph Theory, Storage representation and Manipulation of Graphics, Simple Procedence Grammars, Fault Detection in Combinational Switching Circuits.

Text Book:

1. J.P. Tremblay and R. Manohar, "Discrete Mathematical Structures with Applications to Computer Science", Tata McGraw Hill, Edition 1997, New Delhi.

References

1. Kenneth H.Rosen, "Discrete Mathematics and its Applications", McGraw Hill Book Company, 1999, New Delhi.
2. Kolman, Busby and Ross, "Discrete Mathematical Structures", Prenctice Hall of India, Fourth Edition 2002, New Delhi.

Unit I : Sections 1 – 1 to 1 – 3.5
Unit II : Sections 1 – 4 to 1 – 6.5
Unit III : Sections 3 - 1to 3 – 3.3 and 3 – 5 to 3 – 5.5
Unit IV : Sections 4 – 1 to 4 – 3.2
Unit V : Sections 5 – 1 to 5 – 4.4