DESCRETE MATHS SYLLABUS

Unit-1

Set Theory: Introduction, Types of set, Subsets, Operation of sets, Cartesian Products of setsMultisets, Venn Diagrams

Unit-2

Relations: Definition, Operations on relations, Properties of relations, Composite Relations, equivalence relation,Equality of relations, Order of relations, Matrix Representation of relations.

Unit-3

Functions: Definition, Classification of functions, Operations on functions, Difference between function and a relation,Even and odd functions.

Natural Numbers: Introduction, Mathematical Induction: principle of mathematical Induction

Partial order sets: Definition, Partial order sets, Combination of partial order sets or Component of Poset, Hasse diagram.

Unit-4

Boolean Algebra: Introduction, Axioms and Theorems of Boolean algebra, Algebraic manipulation of Boolean expressions. Simplification of Boolean Functions, Logic gates, Digital circuits.

Propositional Logic: Proposition, well formed formula, Truth tables, Tautology, Satisfiability, Contradiction, Algebra of proposition.

Unit-5

Graphs: Definition and terminology, Representation of graphs, simple graph,Multigraph and pseudo graph,Matrix representation of graph, Bipartite graphs, Planar graphs, Euler and Hamiltonian paths.