**Syllabus:**

**Basics of Propositional Logic:** Chapter 1, Sections 1.1

**Propositional Equivalences:** Chapter 1, Sections 1.2

**Predicates and Quantifiers:** Chapter 1, Sections 1.3

**Introduction to Proofs:** Chapter 1, Section 1.6

**Functions, Sequences and Summations:** Chapter 2, Sections 2.1, 2.2, 2.3, 2.4

**The basics of Counting, The pigeonhole principle:** Chapter 5, Section 5.1, 5.2

**Permutations and Combinations, Binomial Coefficients:** Chapter 5, Section 5.3, 5.4

**An introduction to discrete probability, Probability theory:** Chapter 6, Section 6.1, 6.2

**Conditional Probability :** Chapter 6, Section 6.3

**Graphs:** Graphs & Graphs Models, Basic Terminology, Representation of graphs, Connectivity, Euler and Hamilton Path, Shortest Path Problem

**Trees:** Introduction to trees, Traversal Algorithms, Minimum Spanning Trees

**\*Practice the marked problems in the pdf version of the book given in TSR**