

CSE-2733: Intermediate Discrete Mathematics

Homework problems are colored by **Light BLUE**

Lesson Plan

Lecture Hour	Topics	Chapters	Problems to be discussed in class and Assignment problems
1	Languages: Finite State Machines Language: The Set Theory of Strings Problem Solving	Chapter 6(6.1) Pg.310-316 EXERCISE (6.1) Pg. 317-318	Definition-6.1, 6.2, 6.4, 6.5, 6.6, 6.7, 6.9, 6.10 Example-6.1, 6.3, 6.7, 6.8 Exercise-No. 1, 3, 4, 8, 10
2	Finite State Machines: A First Encounter Problem Solving	Chapter 6(6.2) Pg.320-324 EXERCISE (6.2) Pg.324	Definition-6.13 Example-6.17, 6.19 Exercise- No.1, 3
3	Relations: The Second Time Around Relations Revisited: Properties of Relations Problem Solving	Chapter 7(7.1) Pg.337-342 EXERCISE (7.1) Pg.343	Definition-7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7 Example-7.1, 7.4, 7.5, 7.6, 7.8, 7.9, 7.11, 7.12 Exercise- No.1, 5, 6
4	Computer Recognition: Zero-One Matrices and Directed Graphs Problem Solving	Chapter 7(7.2) Pg.344-352 EXERCISE (7.2) Pg.354-355	Definition-7.8, 7.9, 7.10, 7.14, 7.15 Example-7.17, 7.19, 7.21, 7.22, 7.25, 7.27, 7.28 Exercise- No.1, 18, 4, 5, 19
5	Equivalence Relations and Partitions Problem Solving and Gate questions	Chapter 7(7.4) Pg.366-369 EXERCISE (7.4) Pg.370	Definition-7.21, 7.22 Example-7.53, 7.54, 7.55, 7.56, 7.58 Theorem-7.6, 7.7(Only Statement) Exercise-No. 1, 3, 5, 8
6	The Principle of Inclusion and Exclusion Problem Solving	Chapter 8(8.1) Pg.386-391 EXERCISE (8.1) Pg.396-397	Theorem- 8.1(Only Statement) Example-8.1, 8.2, 8.4, 8.5, Exercise-No.1 3, 5, 6
7	Syllabus Introduction Generating Functions, Introductory Examples Problem Solving	Chapter 9(9.1) Pg.415-417 EXERCISE (9.1) pg. 417	Example-9.1, 9.2, 9.3 Exercise- No.1, 2, 5
8	Definition and Examples: Calculational Techniques Problem Solving	Chapter 9 (9.2) Pg.418-426 EXERCISE (9.2) Pg.431	Definition- 9.1 Example-9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 9.10, 9.11, 9.14 Exercise- No.1, 2, 4, 5, 3, 6, 7
9	The First-Order Linear Recurrence Relation Problem Solving	Chapter 10(10.1) Pg.447-452 EXERCISE (10.1) Pg.455	Example-10.1, 10.2, 10.4, 10.7 Exercise- No.1, 2, 3, 4, 5
10	The Second-Order Linear Homogeneous Recurrence Relation with Constant Coefficients Problem Solving	Chapter 10(10.2) Pg.457-467 EXERCISE(10.2) Pg.468	Example-10.9, 10.10, 10.18, 10.20, 10.21, 10.23 Exercise- No.1, 3