

# DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: CSE/CSIT/IT

Academic Session: (MAY- AUG 2021)

Lecture Plan with Assignment questions

Subject with code: Discrete Mathematics (PCC CSE-202-G)

Name of Faculty with designation : Ms. Bhumika Chugh

S. No.	Lecture No.	Sem-Class	Unit	Topic/Chapter covered	Write Lecture Wise Questions
1	1	IV CSE/CSIT/IT	I	Set Theory- Introduction and Set operations	Numericals related to set operations
2	2	IV CSE/CSIT/IT	I	Identities of Set Theories, Representation of sets, Cartesian Product	Numericals related to identities of set thoery
3	3	IV CSE/CSIT/IT	I	Numericals of Set Theory	Numericals of Set Theory
4	4	IV CSE/CSIT/IT	I	Relations, types of relations, Binary relation, Equivalence Relation	Numericals based on relations
5	5	IV CSE/CSIT/IT	I	Partial order relation, POSET, Hasse Diagram	Numericals of Partial Order relations
6	6	IV CSE/CSIT/IT	I	Lattices and its types	Numericals of Lattices
7	7	IV CSE/CSIT/IT	I	Functions and its types	Numericals of functions
8	8	IV CSE/CSIT/IT	I	Theorems of functions	Practice of Theorems
9	9	IV CSE/CSIT/IT	I	Propositions	Practice of Propostional theorems
10	10	IV CSE/CSIT/IT	I	Logical operations and Conditional Statements	Practice of Propostional theorems
11	11	IV CSE/CSIT/IT	I	Quantifiers	Practice of Quantifiers
12	12	IV CSE/CSIT/IT	I	Logical Equivalence	Practice of Propostional logics
13	13	IV CSE/CSIT/IT	I	Numericals of Propositional Logic	Numericals of Propositional Logic
14	14	IV CSE/CSIT/IT	II	Pegion Hole Principle	Numericals of Pegion Hole Principle
15	15	IV CSE/CSIT/IT	II	Permutation	Practice of Permutation
16	16	IV CSE/CSIT/IT	II	Combination	Practice of combinations

17	17	IV CSE/CSIT/IT	II	Numericals of Permutation and Combination	Numericals of Permutation and Combination
18	18	IV CSE/CSIT/IT	II	Division Algorithm, Euclidean Algorithm	Practice of Algorithms
19	19	IV CSE/CSIT/IT	II	Theorem of Arithmetic	Practice of Algorithms
20	20	IV CSE/CSIT/IT	II	Linear Recurrence relation with constant coefficient	Numericals of Linear recurrence Relation
21	21	IV CSE/CSIT/IT	II	Numericals of Linear recurrence Relation	Numericals of Linear recurrence Relation
22	22	IV CSE/CSIT/IT	II	Homogenous Solutions, Particular solutions, Total Solutions	Numericals of Linear recurrence Relation
23	23	IV CSE/CSIT/IT	II	Recurrence Relations	Numericals of recurrence Relation
24	24	IV CSE/CSIT/IT	II	Generating Functions	Practice of generating functions
25	25	IV CSE/CSIT/IT	II	Solving Recurrence Relations using Generating Functions	Practice of generating functions
26	26	IV CSE/CSIT/IT	III	Defination and example of Algebraic structure (With one Binary operation)	Practice of Basic Algebraic Structure
27	27	IV CSE/CSIT/IT	III	Properties of Semi Group, Monoid, Group	Numericals based on Semi Group, Monoid, Group
28	28	IV CSE/CSIT/IT	III	Congruence Relation and Quotient Stures	Practice of Relations
29	29	IV CSE/CSIT/IT	III	Cyclic Group, Normal Subgroups	Practice of Algebraic Structures
30	30	IV CSE/CSIT/IT	III	Defination and example of Algebraic structure (With two Binary operation)	Practice of Algebraic Structures
31	31	IV CSE/CSIT/IT	III	Practice of Algebraic Structures	Practice of Algebraic Structures
32	32	IV CSE/CSIT/IT	III	Rings, integral domains, Fields	Practice of Algebraic Structures
33	33	IV CSE/CSIT/IT	III	Boolean Algebra, Identities of Boolean Algebra	Practice of Boolean Algebra
34	34	IV CSE/CSIT/IT	III	Practice of Boolean Algebra	Practice of Boolean Algebra
35	35	IV CSE/CSIT/IT	III	Duality, Representation of Boolean Function	Practice of Boolean Algebra
36	36	IV CSE/CSIT/IT	III	Types of Normal Forms	Practice of Normal Forms
37	37	IV CSE/CSIT/IT	IV	Graph Introduction	Practice of Graph
38	38	IV CSE/CSIT/IT	IV	Properties of Graphs	Practice of Graph
39	39	IV CSE/CSIT/IT	IV	Degree of Graph, Connectivity, Path, Cycle, Sub graph	Practice of Graph

40	40	IV CSE/CSIT/IT	IV	Homomorphism, Multigraph, Weighted Graph	Practice of Graph
41	41	IV CSE/CSIT/IT	IV	Eulerian Path and circuit, Planer Graph	Practice of Graph
42	42	IV CSE/CSIT/IT	IV	Euler Formula, Graph Colouring	Practice of Graph
43	43	IV CSE/CSIT/IT	IV	Trees introduction	Basic Definations of Tree
44	44	IV CSE/CSIT/IT	IV	Tree Traversals	Numericals of tree Traversal
45	45	IV CSE/CSIT/IT	IV	Spanning Tree and Minimum Spanning Tree	Practice of MST