

Lesson Plan

Name of the Faculty : Dr. Pardeep Singh
Discipline : Applied Sciences & Humanities
Semester : 4th (Comp. Sc & Engg.)
Subject : Discrete Mathematics (PC-CS-202A)
Lesson Plan Duration : 15 Weeks (from February 2024 to May 2024)

Work Load: Lecture: 04, Tutorials: 00 per week

Week	Theory	
	Lecture Day	Topic(including assignment /test)
1 st	1 st	Sets and subsets
	2 nd	Venn Diagrams
	3 rd	Operations on sets ,Laws of Set Theory
	4 th	Power Sets and Products
2 nd	5 th	Partition of sets, The Principle of Inclusion- Exclusion
	6 th	Logic : Propositions and Logical operations
	7 th	Truth tables, Equivalence
	8 th	Implications, Laws of Logic
3 rd	9 th	Normal forms
	10 th	Predicates
	11 th	Quantifiers
	12 th	Mathematical Induction
4 th	13 th	Test
	14 th	Relations, diagraphs and lattices Product sets
	15 th	Partitions
	16 th	Relations and diagraphs
5 th	17 th	Paths in relations and diagraphs
	18 th	Properties of relations
	19 th	Equivalence and partially ordered relations
	20 th	Computer representation of relations and diagraphs
6 th	21 st	Manipulation of relations
	22 nd	Transitive closure
	23 rd	Warshall's algorithm
	24 th	Posets and Hasse Diagrams
7 th	25 th	Lattice
	26 th	Test
	27 th	Definitions and types of functions

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8 th	29 th	Injective function
	30 th	Subjective
	31 st	Bijective Function
	32 nd	Composition
9 th	33 rd	identity and inverse
	34 th	Review of Permutation and combination
	35 th	Mathematical Induction
	36 th	Pigeon hole principle
10 th	37 th	Principle of inclusion and exclusion
	38 th	Generating function
	39 th	Recurrence relations
	40 th	Test
11 th	41 st	Algebraic structures with one binary operation - semi groups
	42 nd	Monoids
	43 rd	Groups
	44 th	Product and quotient of algebraic structures
12 th	45 th	Isomorphism
	46 th	Homomorphism
	47 th	Homomorphism
	48 th	Automorphism
13 th	49 th	Cyclic groups
	50 th	Normal sub group
	51 th	Codes and group codes
	52 th	Codes and group codes
14 th	53 th	Ring homomorphism
	54 th	Ring Isomorphism
	55 th	Ring Isomorphism
	56 th	Test
15 th	57 th	Revision
	58 th	Revision
	59 th	Revision
	60 th	Revision

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