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 January, 2020 to April, 2020)

Work Load: Lecture: 03, Tutorials: 00 per week

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

		Induction
	27th	Pigeon hole principle
10th	28th	Principle of inclusion and exclusion
	29th	Generating function-Recurrence relations
	30th	Test
11th	31st	Algebraic structures with one binary operation - semi groups
	32nd	Monoids and Groups
	33rd	Product and quotient of algebraic structures
12th	34th	Isomorphism
	35th	Homomorphism
	36th	Automorphism
13th	37th	Cyclic groups
	38th	Normal sub group
	39th	Codes and group codes
14th	40th	Ring homomorphism
	41st	Ring Isomorphism
	42nd	Test
15th	43rd	Revision
	44th	Revision
	45th	Revision

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