

**Faculty Name** : **Vijaya Mishra**  
**Discipline** : **CSE**  
**Semester** : **3rd**  
**Subject** : **Discrete Structures**  
**Lesson Plan Duration** : **15 weeks( July 2018 to November 2018)**  
**Work Load(Lecture/ Practical)per week (in** : **03 Lecture, 01 Tutorial**

WEEK	LECTURE DAY	THEORY
		TOPIC (INCLUDING ASSIGNMENT AND TEST)
1st	I	Sets and subsets
	II	Venn Diagrams
	III	Operations on Sets
2nd	I	Laws of Set Theory
	II	Power Sets, Products
	III	Partition of sets
3rd	I	The Principle of Inclusion- Exclusion
	II	Propositions and Logical operations
	III	Truth Tables, Equivalence and Implications
4th	I	Laws of Logic
	II	Normal forms
	III	
5th	I	Predicates and quantifiers
	II	Mathematical Induction
	III	Assignment 1/ Class Test
6th	I	Product sets and Partitions
	II	Relations and Diagraphs
	III	Paths in relations and diagraphs
7th	I	Properties of Relations, Equivalence
	II	Partially Ordered Relations
	III	Computer representation of relations and diagraphs
8th	I	Manipulation of relations, Transitive Closure
	II	Warshall's algorithm
	III	Posets
9th	I	Hasse Diagrams
	II	Lattice
	III	Assignment 2 / Class Test
10th	I	Injective, Subjective and Bijective Function
	II	Composition, Identity and Inverse
	III	Review of Permutation and combination-Mathematical Induction
11th	I	Pigeon hole Principle
	II	Principle of inclusion and exclusion
	III	Generating Function
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12th	II	Recurrence Relations
	III	

13th	I	Assignment 3/ Class test
	II	Semi groups, Monoids and Groups
	III	Product and Quotient of algebraic Structures
14th	I	Isomorphism, Homomorphism, Automorphism
	II	Cyclic groups
	III	Normal Sub group
15th	I	Codes and Group codes
	II	Ring Homomorphism and Isomorphism
	III	Assignment 4/ Class test