

Name of the Faculty: Ms. Karuna
Discipline: Computer science & Engg.
Semester:5th
Subject: Automata Theory(CSE 301N)
Work Load (Lecture/Practical) per week (in hours): Lectures- 3 Hours

Week	Theory	
	Lecture Day	Topic (including assignment/test)
1st	1st	Study and Central Concepts of Automata Theory
	2nd	Applications of Finite Automata
	3rd	An Introduction of Deterministic Finite Automata(DFA) and Non-Deterministic Finite Automata(NFA)
2nd	4th	Finite Automata with Epsilon (ϵ) Transitions
	5th	Regular Expression and Languages
	6th	Finite Automata and Regular Expressions
3rd	7th	Applications of Regular Expressions, Algebraic Laws of Regular Expressions
	8th	Closure Properties of Regular Languages
	9th	RE to NFA, DFA Conversion
4th	10th	DFA to RE, Equivalence
	11th	Minimization of NFA and DFA automata
	12th	Revision of UNIT -01
5th	13th	Parse Trees, Context Sensitive Grammar
	14th	Applications of Context Free Grammars
	15th	Regular Grammar, Ambiguity in Grammars and Languages
6th	16th	Normal forms of context free grammars
	17th	Subfamilies of Context Free Languages (CFL),
	18th	Closure Properties of CFL
7th	19th	Chomsky Theorem, Chomsky Hierarchy, Chomsky Normal Form
	20th	Greibach Normal Form
	21st	Introduction to Pumping Lemma
8th	22nd	Applications of Pumping Lemma
	23rd	Revision of UNIT -02
	24th	Mealey and Moore Machines Introduction
9th	25th	Mealey to Moore Conversion
	26th	Moore to Mealey conversion
	27th	Equivalence of Moore and Mealey Machines and its Designing.
10th	28th	Introduction of Push Down Automata (PDA)
	29th	Equivalence of PDA's and CFG's
	30th	Deterministic Push Down Automata
	31st	Applications of PDA. Parikh Theorem and Parikh Mapping

11th	32nd	Kleene's Theorem
	33rd	Revision of UNIT-03
12th	34th	Turing Machine, Programming Techniques for Turing Machine
	35th	Extensions of Turing Machine, Restricted Turing Machines,
	36th	Universal Turing Machines and Designing of Turing Machines
13th	37th	Time and Tape Complexity Measures of Turing machines
	38th	Post's Correspondence Problem (PCP)
	39th	Post's Correspondence Problem (PCP),
14th	40th	Rice's Theorem
	41st	Decidability of Membership
	42nd	Emptiness and Equivalence Problems of Languages
15th	43rd	Revision of Unit-04
	44th	Revision
	45th	Revision