

Lesson Plan of the 5th semester for session 2020-21 (July- Dec)

Name of the faculty: Ms. Neha Malik
Designation: Assistant Professor
Discipline: Computer Science and Engg.
Semester: 5th
Subject: **FL&A (PCC-CSE-305G)**
Lesson Plan duration: 15 weeks
Work Load per week in hours: Lectures- 03

Week	Lecture day	Topic (Including Assignment/Test)
UNIT – I		
1	1	Fundamentals, Introduction to Finite Automata
	2	Finite automaton model
	3	Acceptance of strings, and languages
2	4	Deterministic finite automaton
	5	Non deterministic finite automaton, transition diagrams
	6	NFA with ϵ -transitions - Significance, acceptance of languages
3	7	Conversions and Equivalence: Equivalence between NFA with and without ϵ transitions
	8	NFA to DFA conversion
	9	Minimization of FSM
4	10	Equivalence between two FSM's
	11	Properties and limitation of Finite automata
	12	Finite Automata with output- Moore and Melay machines.

5	13	Conversion of mealy to moore machine
	14	Conversion of moore to mealy machine
	15	Revision of Finite automata
UNIT – II		
6	16	Arden's method
	17	Regular Languages: Regular sets, Regular expressions, identity rules
	18	Recursive definition of regular expression
UNIT III		
7.	19	Regular expression conversion to Finite automata
	20	Finite automata to regular expression
	21	Introduction to regular language
8.	22	Pumping lemma for regular language
	23	Application of regular languages
	24	Revision of regular languages
UNIT III		
9.	25	The Chomsky hierarchy: Regular grammars, unrestricted grammars
	26	Relation between different Grammars
	27	Introduction to CFG
11.	28	Derivation trees, Right most and leftmost derivation of strings
	29	Ambiguity in context free grammars.
	30	Ambiguity in context free grammars.(Continued)
12.	31	Minimization of Context Free Grammars.
	32	Chomsky normal form

	33	Greiback normal form,.
13.	34	Push Down Automata: Push down automata, definition, model
	35	Deterministic and non-deterministic PDA
	36	Desigining of PDA
14.	37	Equivalence of PDA to CFG
	38	Revision of PDA
	39	Revision of CNF and GNF
		UNIT – IV
15.	40	Turing Machine: Turing Machine, definition, model .
	41	Design of TM, Computable functions, Construction Undesirability
	42	Variants of TM, Halting problem of TM, PCP Problem of TM
16.	43	Linear Bounded automata, Tm as Enumerators
	44	Chruch-Turing thesis, universal TM, reduction between languages
	45	Rice's Theorem, undecidable problem