Panipat Institute of Engineering & Technology
Department of CSE-AI&DS
LESSON PLAN

Subject: Theory of Computation **Subject code:** PC-CS-AIDS-301A
Semester: 5TH

S.No	Topic	CO Covered	Assignment No.	Teaching Methodology
1	Study the concept of automata theory	CO1	1	ON BOARD
2	Applications of finite automata. Intro of deterministic finite automata. (DFA)	CO1		ON BOARD
3	Non deterministic finite automata (NDFA)	CO1		ON BOARD
4	Designing of FA	CO1	1	ON BOARD
5	Finite automata with e transitions	CO1	1	ON BOARD
6	Regular expression (RE) of finite automata.	CO1	1	ON BOARD
7	Applications of regular expressions	CO1	1	ON BOARD
8	Algebraic laws of RE	CO1	1	ON BOARD
9	Closure properties of RE	CO1	1	ON BOARD
10	RE to NFA	CO1	1	ON BOARD
11	DFA to RE	CO1	1	ON BOARD
12	Minimization of NFA and DFA	CO1	1	ON BOARD
13	DFA conversions	CO1	2	ON BOARD
14	Parse tree	CO2	2	ON BOARD
15	Context sensitive grammar	CO2	2	ON BOARD
16	Applications of CSG	CO2	2	ON BOARD
17	Regular grammar	CO2	2	ON BOARD
18	Ambiguity and normal forms of CFG	CO2	2	ON BOARD
19	Closure properties of CFL	CO2	2	ON BOARD
20	Chomsky normal form and greibach normal forms	CO2	2	ON BOARD
21	Pumping lemma theorem and its applications	CO2	2	ON BOARD
22	Minimizations of finite automata	CO2	2	ON BOARD
23	Recursive languages.	CO2	2	ON BOARD
24	Intro to mealy and Moore machines	CO3	2	ON BOARD
25	Equivalence of Moore and mealy machines	CO3	2	ON BOARD
26	Designing of Moore and mealy machines	CO3	2	ON BOARD
27	Intro to PDA	CO3	3	ON BOARD
28	Language of PDA	CO3	3	ON BOARD
29	Designing of DPDA	CO3	3	ON BOARD
30	Designing of NPDA	CO3	3	ON BOARD
31	Convert of PDA to CFG	CO3	3	ON BOARD
32	Convert of CFG to PDA	CO3	3	ON BOARD
33	Equivalence of PDA and CFG	CO3	3	ON BOARD
34	Parikh theorem	CO3	3	ON BOARD
35	Kleene's theorm	CO3	3	ON BOARD
36	Intro to Turing Machine	CO4	3	ON BOARD

37	Programming technique of turing machine	CO4	3	ON BOARD
38	Extensions of turing machine	CO4	4	ON BOARD
39	Designing of Turing machine, Rice theorem, decidability introduction	CO4	4	ON BOARD
40	Time and space complexity of turing machine	CO4	4	ON BOARD
41	Linear Bounded Automata	CO4	4	ON BOARD
42	LR(k) Grammars	CO4	4	ON BOARD
43	Computability	CO4	4	ON BOARD