



DEPARTMENT OF COMPUTER SCIENCE & DESIGN

Lesson Plan & Work-done Diary for AY: 2026-27 (ODD Semester)

Course with Code: Theory of Computation(BCS503)				Faculty: Dr. Nasreen Fathima			Semester: 5
Class No.	Date Planned (DD/MM/YY)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM/YY)	Topics	Remarks if any deviation
Module 1							
1.		Introduction to course					
2.		Introduction to Finite Automata,	Chalk& Talk				
3.		Structural Representations	Chalk& Talk				
4.		Automata and Complexity, The Central Concepts of Automata Theory	Chalk& Talk				
5.		Deterministic Finite Automata,	Chalk& Talk				
6.		Nondeterministic Finite Automata	Chalk& Talk				
7.		An Application of finite Automata: Text Search	Chalk& Talk				
8.		An Application of finite Automata: Text Search	Chalk& Talk				
9.		Finite Automata with Epsilon- Transitions and Applications	Chalk& Talk				
10.		Finite Automata with Epsilon- Transitions.	Chalk& Talk				
11.		Finite Automata with Epsilon- Transitions and Applications	Chalk& Talk				
12.		Finite Automata with Epsilon- Transitions and Applications	Chalk& Talk				
13.		Revision/ Solving QP problems	Chalk& Talk				





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Module 2							
14.		Regular Expressions	Chalk& Talk				
15.		Finite Automata and Regular Expressions	Chalk& Talk				
16.		Finite Automata and Regular Expressions	Chalk& Talk				
17.		Problems on RE	Chalk& Talk				
18.		Proving Languages not to be Regular	Chalk& Talk				
19.		Problems on RE and FA	Chalk& Talk				
20.		Closure Properties of Regular Languages	Chalk& Talk				
21.		Problems on closure Properties, Equivalence and Minimization of Automata	Chalk& Talk				
22.		Problems on Minimization of automata	Chalk& Talk				
23.		Applications of Regular Expressions	Chalk& Talk				
24.		Revision/ Solving QP problems	Chalk& Talk				





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Module 3							
25		Context-Free Grammars,					
26		Parse Trees,	Chalk& Talk				
27		Ambiguity in Grammars and Languages	Chalk& Talk				
28		Ambiguity in Grammars and Languages problems	Chalk& Talk				
29		Definition of the Pushdown Automaton	Chalk& Talk				
30		Problems on Pushdown Automaton	Chalk& Talk				
31		The Languages of a PDA	Chalk& Talk				
32		Equivalence of PDA's and CFG's	Chalk& Talk				
33		Deterministic Pushdown Automata	Chalk& Talk				
34		Deterministic Pushdown Automata problems	Chalk& Talk				
35		Revision/ Solving QP problems	Chalk& Talk				





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Module 4							
36		Normal Forms for Context-Free Grammars,					
37		Types of Normal Forms for Context-Free Grammars,	Chalk& Talk				
38		Types Normal Forms for Context-Free Grammars,	Chalk& Talk				
39		The Pumping Lemma for Context-Free Languages	Chalk& Talk				
40		The Pumping Lemma for Context-Free Languages	Chalk& Talk				
41		Problems of Pumping lemma	Chalk& Talk				
42		Problems of Pumping lemma	Chalk& Talk				
43		Closure Properties of Context-Free Languages.	Chalk& Talk				
44		Closure Properties of Context-Free Languages.	Chalk& Talk				
45		Revision/ Solving QP problems	Chalk& Talk				





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Module 5							
46		Introduction to Turing Machines:					
47		Problems That Computers Cannot Solve	Chalk& Talk				
48		The Turing Machine	Chalk& Talk				
49		The Turing Machine problems	Chalk& Talk				
50		Programming Techniques for Turing Machines	Chalk& Talk				
51		Extensions to the Basic Turing Machine	Chalk& Talk				
52		Undecidability	Chalk& Talk				
53		Problem on Undecidability	Chalk& Talk				
54		A Language That Is Not Recursively Enumerable.	Chalk& Talk				
55		Revision/ Solving QP problems	Chalk& Talk				



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	Activity	Planned	Actual	Remarks
1	Theory Classes	50		
2	Assignments/ Quizzes/ Self-study	3		
3	Tutorials/ Extra classes	5		
4	Internal Assessments	3		
5	ICT based Teaching (% of usage in Curriculum)	-		
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	