

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - AI & ML

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

Course with Code: Theory of Computation(BCS503)				Faculty: Dr. Anil Kumar C J			Semester & Section: 5
Class No.	Date planned	Topics to be covered	TLP Planned	Class No.	Date of Conduction	Topics	Remarks if any deviation
Module - 1							
1.		Introduction to Finite Automata,	PPT Chalk& Talk				
2.		Structural Representations	PPT Chalk& Talk				
3.		Automata and Complexity	PPT Chalk& Talk				
4.		The Central Concepts of Automata Theory.	PPT Chalk& Talk				
5.		Deterministic Finite Automata,	PPT Chalk& Talk				
6.		Deterministic Finite Automata,	PPT Chalk& Talk				
7.		Nondeterministic Finite Automata	PPT Chalk& Talk				

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - AI & ML

8		Nondeterministic Finite Automata	PPT Chalk& Talk				
9		An Application: Text Search,	PPT Chalk& Talk				
10		Finite Automata with Epsilon-Transitions, QP discussions	PPT Chalk& Talk				

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Module - 2							
1.		Regular Expressions,	PPT Chalk& Talk				
2.		Finite Automata and Regular Expressions,	PPT Chalk& Talk				
3.		Finite Automata and Regular Expressions,	PPT Chalk& Talk				
4.		Proving Languages not to be Regular.	PPT Chalk& Talk				

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - AI & ML

5		Proving Languages not to be Regular.	PPT Chalk& Talk				
6		Closure Properties of Regular Languages,	PPT Chalk& Talk				
7		Closure Properties of Regular Languages,	PPT Chalk& Talk				
8		Equivalence and Minimizatis on of Automata,	PPT Chalk& Talk				
9		Applications of Regular Expression	PPT Chalk& Talk				
10		Applications of Regular Expression, QP Discussion	PPT Chalk& Talk				

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Module - 3							
1.		Context-Free Grammars	PPT Chalk& Talk				
2.		Context-Free Grammars	PPT Chalk& Talk				

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - AI & ML

3		Ambiguity in Grammars and Languages	PPT Chalk& Talk				
4		Ambiguity in Grammars and Languages	PPT Chalk& Talk				
5		Definition of the Pushdown Automaton	PPT Chalk& Talk				
6		The Languages of a PDA	PPT Chalk& Talk				
7		Equivalence of PDA's and CFG's	PPT Chalk& Talk				
8		Equivalence of PDA's and CFG's	PPT Chalk& Talk				
9		Deterministic Pushdown Automata	PPT Chalk& Talk				
10		Deterministic Pushdown Automata, QP Discussion	PPT Chalk& Talk				

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - AI & ML

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Module - 4							
1.		Normal Forms for Context-Free Grammars,	PPT Chalk& Talk				
2.		Normal Forms for Context-Free Grammars,	PPT Chalk& Talk				
3		Normal Forms for Context-Free Grammars,	PPT Chalk& Talk				
4		The Pumping Lemma for Context-Free Languages,	PPT Chalk& Talk				
5		The Pumping Lemma for Context-Free Languages,	PPT Chalk& Talk				
6		The Pumping Lemma for Context-Free Languages,	PPT Chalk& Talk				
7		The Pumping Lemma for Context-Free Languages,	PPT Chalk& Talk				
8		Closure Properties of Context-Free Languages	PPT Chalk& Talk				

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - AI & ML

9		Closure Properties of Context-Free Languages	PPT Chalk& Talk				
10		Closure Properties of Context-Free Languages	PPT Chalk& Talk				

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Module - 5							
1.		Introduction to Turing Machines	PPT Chalk& Talk				
2.		Introduction to Turing Machines	PPT Chalk& Talk				
3		Problems That Computers Cannot Solve	PPT Chalk& Talk				
4		The Turing Machine	PPT Chalk& Talk				
5		Programming Techniques for Turing Machines	PPT Chalk& Talk				

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING - AI & ML

6		Extensions to the Basic Turing Machine	PPT Chalk& Talk				
7		Undecidability	PPT Chalk& Talk				
8		Problem on Undecidability	PPT Chalk& Talk				
9		A Language That Is Not Recursively Enumerable.	PPT Chalk& Talk				
10		A Language That Is Not Recursively Enumerable.	PPT Chalk& Talk				

	Activity	Planned	Actual	Remarks
1	Theory Classes	50		
3	Tutorials/ Extra classes	-		
4	Internal Assessments			
5	ICT based Teaching (% of usage in Curriculum)	100		
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	