STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI

Course Schedule: November 2024 – April 2025

Department	: MATHEMATICS
Name/s of the Faculty	: Dr. CHINTHAMANI. S
Course Title	: Automata
Course Code	: 19MT/GE/AM22
Shift	: I

Week & No. of hours	Units & Topics	Teaching	Text &	Method of
		Methodology	References	Evaluation
Nov 18 – 25, 2024	Unit 1 :	Lecture &	Peter Linz, An	Questioning
(Day Order 1-6)	Introduction to	Problem Solving	Introduction to	
2 Hours	the Theory of		Formal	
	Computation		Languages and	
			Automata, 3rd	
	1.1 Mathematical		Edition. New	
	preliminaries and		Delhi:	
	notations, Sets,		Narosa Publishing	
	Functions and Relations		House, 2005.	
	1.2 Graphs and		Rani Siromoney,	
	Trees, Proof		Formal	
	Techniques		Languages and	
	1.3 Three Basic		Automata.	
	Concepts		Madras: The	
			Christian	
			Literature	
			Society, 1974.	
Nov 26- Dec 3, 2024	Unit 1 :	Lecture & Group	Peter Linz, An	Quiz
(Day Order 1 to 6)	Introduction to	Discussion	Introduction to	
2 Hours	the Theory of		Formal	
	Computation		Languages and	
	1.4.7		Automata, 3rd	
	1.4 Languages,		Edition. New	
	Grammars and		Delhi:	
	Automata		Narosa Publishing	
	1.5 Some		House, 2005.	
	Applications			

Dec 4-11, 2024	Unit 1 : Finite	Lecture & Group	Peter Linz, An	Slip Test
(Day Order 1 to 6)	Automata	Discussion	Introduction to	
2 Hours			Formal	
	1.6 Deterministic		Languages and	
	Finite Accepters		Automata, 3rd	
	1.7 Deterministic		Edition. New	
	Accepters and		Delhi:	
	Transition		Narosa Publishing	
	Graphs		House, 2005.	
Dec 12-19, 2024	Unit 1 : Finite	Lecture & Group	Peter Linz, An	Questioning
(Day Order 1 to 6)	Automata	Discussion	Introduction to	
2 Hours	1.8 Languages		Formal	
	and Dfas,		Languages and	
	Regular		Automata, 3rd	
	Languages		Edition. New	
	1.9		Delhi:	
	Nondeterministic		Narosa Publishing	
	Finite Accepters,		House, 2005.	
	Definition of a NDA			
Dec 20-21, 2024	-			
(Day Order 1 & 2)				
0 Hrs				
Jan 3 – 7, 2025	Unit 1: Finite	Lecture & Group	Peter Linz, An	Slip Test
(Day Order 3 to 6)	Automata 1.10	Discussion	Introduction to	
2 Hours	Why		Formal	
	Nondeterminism?		Languages and	
	Unit 2: Regular		Automata, 3rd	
	Languages and		Edition. New	
	Regular		Delhi:	
	Grammars		Narosa Publishing	
	2.1 Regular		House, 2005.	
	Expressions			
Jan 8 – 17, 2024	Unit 2: Regular	Lecture & Group	Peter Linz, An	III
(Day Order 1 to 6)	Languages and	Discussion	Introduction to	COMPONENT
2 Hours	Regular		Formal	TEST I ASSIGNMENT
	Grammars		Languages and	(10 marks)
	2.2 Languages		Automata, 3rd	PORTION:
	Associated with		Edition. New	UNIT 1
	RE		Delhi:	
	2.3 RE Denote		Narosa Publishing	
	RL, RE for RL		House, 2005.	
Jan 18 - 23, 2025			I (No Tost)	
		U.A. 1est	– I (No Test)	

Jan 24 - 30, 2025 (Day Order 1 to 6) 2 Hours	2.4 RG, Right- and Left-Linear Grammars Context Free Languages 2.5 Context Free Grammar	Lecture & Group Discussion	Peter Linz, An Introduction to Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005.	Discussion
Feb 3-8, 2025 (Day Order 1 to 6) 2 Hours	Context Free Languages 2.6 Left Most and Right Most Derivations	Lecture & Group Discussion	Peter Linz, An Introduction to Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005.	Quiz
Feb 10– 18, 2025 (Day Order 1 to 4) 1 Hour	Context Free Languages 2.6 Left Most and Right Most Derivations	Lecture & Group Discussion	Peter Linz, An Introduction to Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005.	Slip Test
Feb 19- 26, 2025 (Day Order 1-6) 2 Hours	Unit3: Project 3.1 Application of Finite Automata and Formal Language	Lecture & Group Discussion	Peter Linz, An Introduction to Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005.	Questioning
Feb 27- Mar 6, 2025 (Day Order 1 to 6) 2 Hours	Unit3: Project 3.2 Design of Vending Machine 3.3 Document Language Design	Lecture & Group Discussion	Peter Linz, An Introduction to Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005.	III COMPONENT TEST II Quiz Test & Problem Solving Test (15 Marks) Portion: Unit 2
Mar 7 – 11, 2025 (Day Order 1 to 3)	-	Lecture & Group Discussion	Peter Linz, An Introduction to	Slip Test

Mar 29- April 2, 2025 (Day Order 1 to 3)	REVISION			
Mar 21 - 28, 2025 (Day Order 1 to 6) 2 Hours	Unit3: Project 3.4 Cryptography 3.5 DNA Computing	Lecture & Group Discussion	Peter Linz, An Introduction to Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005.	CA TEST: 25 marks Portion : All units
Mar 18 – 20, 2025 (Day 4 to 6) 2 Hours	Unit3: Project 3.2 Design of Vending Machine 3.3 Document Language Design	Lecture & Group Discussion	Peter Linz, An Introduction to Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005.	Questioning
Mar 12 –17, 2025		C.A. Test -	Formal Languages and Automata, 3rd Edition. New Delhi: Narosa Publishing House, 2005. - II (No Test)	