KONGU ENGINEERING COLLEGE, PERUNDURAI-638 052
SCHOOL OF COMMUNICATION AND COMPUTER SCIENCES
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

LECTURE SCHEDULE
ODD SEMESTER (2017-2018)

Name of the Faculty: Dr.R.C.Suganthe **Designation : Professor**
Course Code and Name: 14CST52 & Theory of Computation **Class : III BE [CSE] - 'C'**

S.No	PROPOSED			Topics to be covered	ACTUAL		Remarks
	Date	Day	Period		Date	Period	
	21.06.17	Wed	7	Overview and Introduction			
UNIT I - Automata and Regular Expressions							
1.	23.06.17	Fri	3	Introduction to formal proof			
2.	27.06.17	Tues	4	Finite Automata			
3.	27.06.17	Tues	6	Finite Automata			
4.	28.06.17	Wed	7	Deterministic Finite Automata			
5.	30.06.17	Fri	3	Tutorial-1			
6.	03.07.17	Mon	5	Deterministic Finite Automata			
7.	04.07.17	Tues	4	Tutorial-2			
8.	04.07.17	Tues	6	Non-deterministic Finite Automata			
9.	05.07.17	Wed	7	Non-deterministic Finite Automata			
10.	07.07.17	Fri	3	Finite Automata with Epsilon transitions			
11.	10.07.17	Mon	5	Finite Automata with Epsilon transitions			
12.	11.07.17	Tues	4	Tutorial-3			
	11.07.17	Tues	6	Revision			
	12.07.17	Wed	7	Revision			
UNIT II - Regular Expressions and Languages							
13.	14.07.17	Fri	3	Regular expression			
14.	17.07.17	Mon	5	FA and regular expressions			
15.	18.07.17	Tues	4	FA and regular expressions			
16.	18.07.17	Tues	6	Tutorial-4			
17.	19.07.17	Wed	7	Proving languages not to be regular			
18.	21.07.17	Fri	3	Proving languages not to be regular			
19.	24.07.17	Mon	5	Tutorial-5			
20.	25.07.17	Tues	4	Closure properties of regular languages			
21.	25.07.17	Tues	6	Closure properties of regular languages			
22.	26.07.17	Wed	7	Tutorial-6			
Continuous Assessment test-I(28.07.17 – 31.07.17							
	01.08.17	Tues	4	**Paper Distribution & Discussion**			
23.	01.08.17	Tues	6	Equivalence and minimization of automata			
24.	02.08.17	Wed	7	Equivalence and minimization of automata			
	04.08.17	Fri	3	Revision			
UNIT III - Context Free Grammar and Languages							
25.	07.08.17	Mon	5	Context-Free Grammar			
26.	08.08.17	Tues	4	Context-Free Grammar			
27.	08.08.17	Tues	6	Tutorial-7			
28.	09.08.17	Wed	7	Parse trees			
29.	11.08.17	Fri	3	Ambiguity in grammars and language			
30.	16.08.17	Wed	7	Definition of the pushdown automata			
31.	22.08.17	Tues	4	Tutorial-8			

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32.	22.08.17	Tues	6	Languages of pushdown automata			
33.	23.08.17	Wed	7	Equivalence of pushdown automata and CFG			
34.	28.08.17	Mon	5	Tutorial-9			
35.	29.08.17	Tues	4	Equivalence of pushdown automata and CFG			
36.	29.08.17	Tues	6	Deterministic pushdown automata			
	30.08.17	Wed	7	Revision			
UNIT IV - Context Free Languages and Turing Machines							
37.	01.09.17	Fri	3	Normal forms for CFG			
38.	04.09.17	Mon	5	Chomsky Normal Form			
Continuous Assessment test-II(05.09.17-07.09.17)							
	08.09.17	Fri	3	**Paper Distribution & Discussion**			
39.	11.09.17	Mon	5	Greibach Normal Form			
40.	12.09.17	Tues	4	Greibach Normal Form			
41.	12.09.17	Tues	6	Pumping lemma for CFL			
42.	13.09.17	Wed	7	Tutorial-10			
43.	15.09.17	Fri	3	Pumping lemma for CFL			
44.	18.09.17	Mon	5	Turing machines			
45.	19.09.17	Tues	4	Tutorial-11			
46.	19.09.17	Tues	6	Programming techniques for Turing machines			
47.	20.09.17	Wed	7	Programming techniques for Turing machines			
48.	22.09.17	Fri	3	Tutorial-12			
UNIT V - Undecidability							
49.	25.09.17	Mon	5	A language that is not Recursively Enumerable			
50.	26.09.17	Tues	4	An undecidable problem that is RE			
51.	26.09.17	Tues	6	Tutorial-13			
52.	27.09.17	Wed	7	Undecidable problems about Turing machine			
53.	03.10.17	Tues	4	Post's correspondence problem			
54.	03.10.17	Tues	6	Tutorial-14			
55.	04.10.17	Wed	7	The classes P and NP			
56.	06.10.17	Fri	3	Kruskal's algorithm			
57.	09.10.17	Mon	5	Kruskal's algorithm			
58.	10.10.17	Tues	4	Tutorial-15			
59.	10.10.17	Tues	6	The traveling salesman problem			
60.	11.10.17	Wed	7	The traveling salesman problem			
61.	13.10.17	Fri	3	*Problem Solving			
	20.10.17	Fri	3	Revision			
Continuous Assessment Test - III(21.10.17-24.10.17)							

**Content beyond syllabus*

TEXT BOOKS

1. Hopcroft J.E., Motwani R. and Ullman J.D., —Introduction to Automata Theory, Languages and Computations□, 3rd Edition, Pearson Education, New Delhi, 2008.
2. Martin J.-Introduction to Languages and the Theory of Computation□, 4th Edition, Tata McGraw-Hill,New Delhi, 2010

REFERENCE BOOKS

1. Lewis H.R. and Papadimitriou C.H., —Elements of the Theory of Computation□, 2nd Edition, Pearson Education PHI, New Delhi, 2007.
2. Linz P., —Introduction to Formal Language and Computation□, 4th Edition, Narosa Publishing, 2007.
3. Nasir and Sirmani, —A Text Book on Automata Theory□, Cambridge University Press, 2008.
4. Kamala Krithivasan and Rama R.,-Introduction to Automata Theory, Formal Languages and Computation□,1st Edition, Pearson Education, 2009
5. Kavi Mahesh-Theory of Computation: A Problem-Solving Approach□, International Edition, Wiley India Pvt. Ltd., 2011.

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