

**ST.ANN'S COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

LECTURE SCHEDULE

SUBJECT: Design and Analysis of Algorithms
FACULTY: A.V.S.Sudhakar Rao
No. of Lectures per Week: 4+1*(Tutorial)

ACADEMIC YEAR: 2017-18
YEAR/SEM /SECTION: III – II 'C'

S.No	Date	UNIT	TOPIC TO BE COVERED
1	20-11-2017	I	Introduction: Algorithm.
2	21-11-2017		Pseudo code for expressing algorithms,
3	22-11-2017		performance Analysis-Space complexity,
4	24-11-2017		Time complexity: Frequency Count
5	25-11-2017		Time complexity: Step Count
6	27-11-2017		Asymptotic Notation- Big oh notation, Omega notation, Theta notation
7	28-11-2017		Little oh notation, Little Omega notaion
8	29-11-2017		probabilistic analysis
9	02-12-2017		Amortized analysis
10	04-12-2017		Tutorial
11	05-12-2017		Slip Test on Unit-1
12	06-12-2017	II	OBT-1, Divide and conquer: General method,
13	08-12-2017		applications-Binary search Problem,
14	11-12-2017		Quick sort Problem, Algorithm
15	12-12-2017		Tutorial
16	13-12-2017		Quick sort Time complexity
17	15-12-2017		Merge sort Problem, Algorithm
18	16-12-2017		Merge sort Time complexity
19	18-12-2017		Tutorial
20	19-12-2017		Slip Test on Unit-2
21	20-12-2017		III
22	22-12-2017	applications-Job sequencing with deadlines,	
23	23-12-2017	knapsack problem	
24	26-12-2017	Tutorial	
25	27-12-2017	knapsack problem	
26	29-12-2017	spanning trees, Minimum cost spanning trees	
27	30-12-2017	Prim's Algorithm	
28	01-01-2018	Kruskal's Algorithm	
29	02-01-2018	Tutorial	
30	03-01-2018	Single source shortest path problem	
31	05-01-2018	Single source shortest path problem.	
32	06-01-2018		Dynamic Programming: General method,
33	08-01-2018		applications-Matrix chain multiplication
34	09-01-2018		Tutorial
35	10-01-2018		Matrix chain multiplication, Algorithm
36	12-01-2018		Optimal binary search trees,
37	17-01-2018		Solving Problems on Previous Question Papers
38	19-01-2018		Solving Problems on Previous Question Papers
39	20-01-2018		Solving Problems on Previous Question Papers

40	22-01-2018		Solving Problems on Previous Question Papers
41	23-01-2018	IV	Tutorial
42	24-01-2018		Optimal binary search trees,
43	27-01-2018		0/1 knapsack problem,
44	29-01-2018		All pairs shortest path problem,
45	30-01-2018		Tutorial
46	31-01-2018		Travelling sales person problem,
47	02-02-2018		Reliability design.
48	03-02-2018		Slip Test on Unit-4
49	05-02-2018	V	OBT-4, Backtracking: General method,
50	06-02-2018		Tutorial
51	07-02-2018		applications-n-queen problem
52	09-02-2018		n-queen problem Algorithm
53	10-02-2018		sum of subsets problem,
54	14-02-2018		sum of subsets problem Algorithm
55	16-02-2018		graph coloring,
56	17-02-2018		Hamiltonian cycles.
57	19-02-2018		Hamiltonian cycles Algorithm
58	20-02-2018		Tutorial
59	21-02-2018		Slip Test on Unit-5
60	23-02-2018	VI	OBT-5, Branch and Bound: General method,
61	24-02-2018		applications - Travelling sales person problem,
62	26-02-2018		Travelling sales person problem
63	27-02-2018		Tutorial
64	28-02-2018		0/1 knapsack problem- LC Branch and Bound solution,
65	03-03-2018		0/1 knapsack problem- LC Branch and Bound solution,
66	05-03-2018		0/1 knapsack problem- FIFO Branch and Bound solution.
67	06-03-2018		Tutorial
68	07-03-2018	0/1 knapsack problem- FIFO Branch and Bound solution	
69	09-03-2018		Revision
70	12-03-2018		Revision
71	13-03-2018		Revision
72	14-03-2018		Revision
73	16-03-2018		Revision
74	17-03-2018		Revision
75	19-03-2018		Revision
76	20-03-2018		Revision
77	21-03-2018		Revision
78	23-03-2018		Revision
79	24-03-2018		Revision

TEXT BOOKS:

1. Fundamentals of Computer Algorithms, Ellis Horowitz, Satraj Sahni and Rajasekharam, Universities Press.
2. Design and Analysis of Algorithms , S Sridhar, Oxford
3. Design and Analysis of Algorithms, Parag Himanshu Dave, Himansu BAlachandra Dave, 2ed, Pearson Education.

REFERENCE BOOKS:

1. Design and Analysis of algorithms, Aho, Ullman and Hopcroft, Pearson education.
2. Introduction to the Design and Analysis of Algorithms, Anany Levitin, PEA
3. Introduction to Algorithms, second edition, T.H.Cormen, C.E.Leiserson, R.L.Rivest and C.Stein, PHI Pvt.Ltd.
4. Algorithm Design, Foundation, Analysis and internet Examples, Michel T Goodrich, Roberto Tamassia, Wiley

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