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

SUBJECT: Design and Analysis of Algorithms **ACADEMIC YEAR: 2017-18**
FACULTY: P.Venkata Narayana **YEAR/SEM /SECTION: III – II ' B '**
No. of Lectures per Week: 4+1*(Tutorial)

S.No	Date	UNIT	TOPIC TO BE COVERED
1	20-11-17	I	Introduction: Algorithm
2	21-11-17		Psuedo code for expressing algorithms
3	22-11-17		performance Analysis-Space complexity
4	24-11-17		Time complexity: Frequency Count
5	25-11-17		Time complexity: Step Count
6	27-11-17		Asymptotic Notation- Big oh notation, Omega notation, Theta notation
7	28-11-17		Little oh notation, Little Omega Notation
8	29-11-17		probabilistic analysis
9	02-12-17		Amortized analysis
10	04-12-17		Slip Test on Unit -1
11	05-12-17	II	**Divide and conquer:** General method
12	06-12-17		Tutorial
13	08-12-17		applications-Binary search Problem
14	11-12-17		Quick sort Problem, Algorithm
15	12-12-17		Quick sort Time complexity
16	13-12-17		Tutorial
17	15-12-17		Merge sort Problem, Algorithm
18	16-12-17		Merge sort Time complexity
19	18-12-17		Slip Test on Unit-2
20	19-12-17	III	**Greedy method:** General method
21	20-12-17		Tutorial
22	22-12-17		applications-Job sequencing with deadlines
23	23-12-17		knapsack problem
24	26-12-17		spanning trees
25	27-12-17		Tutorial
26	29-12-17		Minimum cost spanning trees
27	30-12-17		Prim's Algorithm
28	01-01-18		Kruskal's Algorithm
29	02-01-18		Single source shortest path problem
30	03-01-18		Tutorial
31	05-01-18		Single source shortest path problem.
32	06-01-18	IV	**Dynamic Programming:** General method
33	08-01-18		applications-Matrix chain multiplication
34	09-01-18		Matrix chain multiplication Algorithm
35	10-01-18		Tutorial
36	12-01-18		Optimal binary search trees
37	17-01-18	**MID1**	Revision

38	19-01-18		Revision
39	20-01-18		Revision
40	22-01-18		Revision
41	23-01-18		Revision
42	24-01-18		Optimal binary search trees
43	27-01-18		0/1 knapsack problem

44	29-01-18		All pairs shortest path problem
45	30-01-18		Travelling sales person problem
46	31-01-18	**IV**	Tutorial
47	02-02-18		Reliability design
48	03-02-18		Slip Test on Unit-4
49	05-02-18		**Backtracking:** General method
50	06-02-18		applications-n-queen problem
51	07-02-18		Tutorial
52	09-02-18		n-queen problem Algorithm
53	10-02-18		sum of subsets problem
54	14-02-18		Tutorial
55	16-02-18	**V**	sum of subsets problem Algorithm
56	17-02-18		graph coloring
57	19-02-18		Hamiltonian cycles
58	20-02-18		Hamiltonian cycles Algorithm
59	21-02-18		Tutorial
60	23-02-18		Slip Test on Unit-5
61	24-02-18		**Branch and Bound:** General method
62	26-02-18		applications - Travelling sales person problem
63	27-02-18		Travelling sales person problem
64	28-02-18	**VI**	Tutorial
65	03-03-18		Travelling sales person problem
66	05-03-18		0/1 knapsack problem- LC Branch and Bound solution
67	06-03-18		0/1 knapsack problem- LC Branch and Bound solution
68	07-03-18		0/1 knapsack problem- FIFO Branch and Bound solution
69	09-03-18		Revision
70	12-03-18		Revision
71	13-03-18		Revision
72	14-03-18	**REVISION**	Revision
73	16-03-18		Revision
74	17-03-18		Revision
75	19-03-18		Revision
76	20-03-18		Revision
77	21-03-18	**MID2**	Revision
78	23-03-18		Revision
79	24-03-18		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

FACULTY **HOD**