

**St. Ann's
Department**

SUBJECT: Design and Analysis of Al

NAME: D MADHURI

No. of Lectures per week

S. NO	DATE	UNIT
1	18-Nov-19	
2	20-Nov-19	
3	21-Nov-19	
4	21-Nov-19	
5	22-Nov-19	
6	23-Nov-19	
7	25-Nov-19	
8	27-Nov-19	
9	28-Nov-19	
10	28-Nov-19	
11	29-Nov-19	
12	30-Nov-19	
13	2-Dec-19	
14	4-Dec-19	
15	5-Dec-19	I
16	5-Dec-19	
17	6-Dec-19	
18	7-Dec-19	
19	9-Dec-19	
20	11-Dec-19	
21	12-Dec-19	
22	12-Dec-19	
23	13-Dec-19	
24	14-Dec-19	
25	16-Dec-19	
26	18-Dec-19	
27	19-Dec-19	II
28	19-Dec-19	
29	20-Dec-19	
30	21-Dec-19	
31	23-Dec-19	
32	26-Dec-19	
33	26-Dec-19	
34	27-Dec-19	
35	28-Dec-19	
36	30-Dec-19	
37	1-Jan-20	

38	2-Jan-20	
39	2-Jan-20	III
40	3-Jan-20	
41	4-Jan-20	
42	6-Jan-20	
43	8-Jan-20	
44	9-Jan-20	
45	9-Jan-20	
46	10-Jan-20	
47	13-Jan-20	
48	18-Jan-20	
49	20-Jan-20	
50	22-Jan-20	
51	23-Jan-20	
52	23-Jan-20	
53	24-Jan-20	
54	25-Jan-20	
55	27-Jan-20	
56	29-Jan-20	
57	30-Jan-20	
58	30-Jan-20	
59	31-Jan-20	
60	1-Feb-20	
61	3-Feb-20	
62	5-Feb-20	
63	6-Feb-20	
64	6-Feb-20	
65	7-Feb-20	
66	10-Feb-20	IV
67	12-Feb-20	
68	13-Feb-20	
69	13-Feb-20	
70	14-Feb-20	
71	15-Feb-20	
72	17-Feb-20	
73	19-Feb-20	
74	20-Feb-20	
75	20-Feb-20	
76	21-Feb-20	
77	22-Feb-20	V
78	26-Feb-20	
79	27-Feb-20	
80	27-Feb-20	
81	28-Feb-20	
82	29-Feb-20	

83	2-Mar-20	
84	4-Mar-20	
85	5-Mar-20	
86	5-Mar-20	
87	6-Mar-20	
88	7-Mar-20	
89	9-Mar-20	
90	11-Mar-20	
91	12-Mar-20	
92	12-Mar-20	VI
93	13-Mar-20	
94	16-Mar-20	
95	18-Mar-20	
96	19-Mar-20	
97	19-Mar-20	
98	20-Mar-20	
99	21-Mar-20	
100	23-Mar-20	
101	26-Mar-20	
102	26-Mar-20	
103	27-Mar-20	
104	28-Mar-20	
105	30-Mar-20	

TEXT BOOKS:

1. Fundamentals of computer alg
2. Introduction to AlgorithmsThe

REFERENCE BOOKS

1. The Design and Analysis of Comput
2. Algorithm Design, Jon Kleinber

Faculty Member

College of Engineering & Technology: Chirala
 Department of COMPUTER SCIENCE & ENGINEERING
LECTURE SCHEDULE

Algorithms

ACADEMIC YEAR: 2019-20
 YEAR & SEM/SECTION: III-II/B

: 5+1* (Tutorial)

TOPICS
Introduction: What is an Algorithm
Algorithm Specification
Pseudocode Conventions
Recursive Algorithm
Performance Analysis
Space Complexity
Time Complexity
Amortized Complexity
Amortized Complexity
Tutorial
Practical Complexities
Performance Measurement
REVISION (PPT)
SLIP TEST 1
Divide and Conquer: General Method
Tutorial
Defective Chessboard
Binary Search
Finding the Maximum and Minimum
Merge Sort
Quick Sort
Tutorial
Performance Measurement
Randomized Sorting Algorithms
REVISION (PPT)
SLIP TEST 2
The Greedy Method: The General Method
Tutorial
Knapsack Problem
Job Sequencing with Deadlines
Minimum-cost Spanning Trees
Minimum-cost Spanning Trees
Tutorial
Prim's Algorithm
Kruskal's Algorithms
An Optimal Randomized Algorithm
Optimal Merge Patterns

Single Source Shortest Paths
REVISION (PPT)
REVISION
REVISION
REVISION
REVISION
REVISION
REVISION
REVISION
MID EXAM I
MID EXAM I
MID EXAM I
MID EXAM I
MID EXAM I
MID EXAM I
Dynamic Programming: All - Pairs Shortest Paths
All - Pairs Shortest Paths
Single – Source Shortest paths General Weights
Single – Source Shortest paths General Weights
String Edition
Tutorial
String Edition
0/1 Knapsack
0/1 Knapsack
Reliability Design
Examples
Tutorial
REVISION (PPT)
SLIP TEST 4
Backtracking: The General Method
The 8-Queens Problem
Tutorial
The 8-Queens Problem
Sum of Subsets
Graph Coloring
Graph Coloring
Hamiltonian Cycles
Tutorial
REVISION (PPT)
SLIP TEST 5
Branch and Bound: The Method, Least cost (LC) Search
The 15-Puzzle: an Example
Tutorial
Control Abstraction for LC-Search
Bounding

FIFO Branch-and-Bound
LC Branch and Bound
0/1 Knapsack Problem
Tutorial
LC Branch-and Bound Solution
LC Branch-and Bound Solution
FIFO Branch-and-Bound Solution
FIFO Branch-and-Bound Solution
Traveling Salesperson
Tutorial
REVISION
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MID EXAM II
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gorithms E. Horowitz S. Sahni, University Press
 omas H. Cormen, PHI Learning

er Algorithms, Alfred V. Aho, John E. Hopcroft, Jeffrey D. Ullman
 g, Pearson.

HOD