

# ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT

## (Autonomous)

Subject: Advanced Coding II

Year & Branch : B.Tech-CSD (III-I)

Faculty: V JYOTSNA DEVI

Academic Year: 2024-25

Contact Hour	Unit No.	Topic	Teaching Methodology	Remarks
1	1	Introduction to singly linked list	Black Board/LCD	
2	1	Doubly Linked List	Black Board/LCD	
3	1	Circular Linked List	Black Board/LCD	
4	1	Introduction to stack and queue	Black Board/LCD	
5	1	Implementation of stack and queue using linked list	Black Board/LCD	
6	1	Problem discussion on stacks and queues	Black Board/LCD	
7	2	Introduction to sorting techniques, bubble sort	Black Board/LCD	
8	2	Selection sort and insertion sort	Black Board/LCD	
9	2	Merge sort, quick sort and count sort	Black Board/LCD	
10	2	Searching techniques with Linear search and Binary search.	Black Board/LCD	
11	2	Introduction to Hashing, different collision resolution techniques	Black Board/LCD	
12	2	Problem discussion on sorting and searching	Black Board/LCD	
13	3	Introduction to different terminology of tree	Black Board/LCD	
14	3	Discussion of different types of trees and tree traversal	Black Board/LCD	
15	3	Discussion of Binary search tree and heap sort	Black Board/LCD	
16	3	Discussion of terminology of Graph	Black Board/LCD	
17	3	Graph traversal DFS and BFS	Black Board/LCD	
18	3	Problems on Trees and graphs	Black Board/LCD	
19	4	Introduction to Greedy Approach	Black Board/LCD	
20	4	Discussion of Fractional Knapsack problem with greedy approach	Black Board/LCD	
21	4	Discussion of Disjkstra's Greedy approach	Black Board/LCD	
22	4	Job scheduling problems	Black Board/LCD	
23	4	Problems Discussion on Greedy approach	Black Board/LCD	
24	4	Problems Discussion on Greedy approach	Black Board/LCD	
25	5	Introduction to String and String operations	Black Board/LCD	
26	5	String matching algorithm naïve	Black Board/LCD	

\*Black Board / LCD / OHP / Other Method

# LESSON PLAN

Contact Hour (Cumulative)	Unit No.	Topic	Teaching(*) Methodology	Remarks
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		approach		
27	5	KMP algorithm	Black Board/LCD	
28	5	Robin Karp Algorithm	Black Board/LCD	
29	5	Problem discussion on string matching algorithms	Black Board/LCD	
30	5	Problem discussion on string matching algorithms	Black Board/LCD	
31	6	Introduction to Dynamic Programming vs greedy approach	Black Board/LCD	
32	6	Top-down DP and Bottom-Up DP	Black Board/LCD	
33	6	Coin change Problem	Black Board/LCD	
34	6	Rod Cutting Problem	Black Board/LCD	
35	6	0/1 knapsack Problem	Black Board/LCD	
36	6	Egg dropping and longest common subsequence problem	Black Board/LCD	

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10/5/24