



## Department of Computer Science & Engineering (Data- Science)

### Lesson Plan & Work-done Diary for AY: 2024-25, EVEN Semester

Course with Code: Analysis & Design of Algorithms Lab (BCSL404)			Faculty: Mrs. Madhu Nagaraj			Semester & Section:4 'A'	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
1.		C Program to find Minimum Cost Spanning Tree of a given connected undirected graph using Kruskal's algorithm.	Chalk & Talk PPT			Chalk & Talk PPT	
2.		C Program to find Minimum Cost Spanning Tree of a given connected undirected graph using Prim's algorithm.	Chalk & Talk PPT			Chalk & Talk PPT	
3.		a. Design and implement C Program to solve All-Pairs Shortest Paths problem using Floyd's algorithm. b. Design and implement C Program to find the transitive closure using Warshal's algorithm.	Chalk & Talk PPT			Chalk & Talk PPT	
4.		C Program to find shortest paths from a given vertex in a weighted connected graph to other vertices using Dijkstra's algorithm.	Chalk & Talk PPT			Chalk & Talk PPT	
5.		C Program to obtain the Topological ordering of vertices in a given digraph.	Chalk & Talk PPT			Chalk & Talk PPT	
6.		C Program to solve 0/1 Knapsack problem using Dynamic Programming method.	Chalk & Talk PPT			Chalk & Talk PPT	
7.		C Program to solve discrete Knapsack and continuous Knapsack problems using greedy approximation method.	Chalk & Talk PPT			Chalk & Talk PPT	



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8.		1 <sup>st</sup> Lab IA					
9.		C Program to find a subset of a given set $S = \{s_1, s_2, \dots, s_n\}$ of $n$ positive integers whose sum is equal to a given positive integer $d$ .	Chalk & Talk PPT			Chalk & Talk PPT	
10.		C Program to sort a given set of $n$ integer elements using Selection sort method and compute its time complexity.	Chalk & Talk PPT			Chalk & Talk PPT	
11.		C Program to sort a given set of $n$ integer elements using Quick Sort method and compute its time complexity..	Chalk & Talk PPT			Chalk & Talk PPT	
12.		C Program to sort a given set of $n$ integer elements using Merge Sort method and compute its time complexity	Chalk & Talk PPT			Chalk & Talk PPT	
13.		C Program for N Queen's problem using Backtracking.	Chalk & Talk PPT			Chalk & Talk PPT	
14.		2 <sup>nd</sup> LAB IA					



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	Activi ty	Planned	Actual	Remark s
1	No of Labs	12		
2	Assignments/ Quizzes/ Self-study	-		
3	Tutorials/ Extra classes	-		
4	Internal Assessments	2		
5	ICT based Teaching (% of usage in Curriculum)	100%		
<b>Planning</b>		<b>Execution</b>		
Faculty Signature:		Faculty Signature:		
HoD Signature:		HoD Signature:		