



LESSON PLAN AND TRACKING

Programme : MCA			Session :2022-2024		Year : I	Sem : I
Subject: Advance Data Structre Lab						
Name of the Faculty: Dr. Ashish Kumar Sinha			Commencement Date: 19/09/2022		Date of Closure: 30/12/2022	
Lecture No	Weeks	Topic to be covered	Date	Tracking of Lectures	Signature Faculty	Signature HOD
1	Week-1	1. Program to Find the Number of Elements in an Array 2. Develop and Implement a menu driven program in C for the following Array operations a. Creating Array of N Integer elements. b. Display of Array elements with suitable headings. c. Inserting an element (ELEM) at a given valid position (POS). d. Deleting an element at a given valid position (POS). e. Exit				
2	Week-2	3. Programs for Stack, Queues and Circular Queues using Arrays 4. Program to convert an Infix Expression into Postfix and Postfix Evaluation 5. Program to implement stack using arrays				
3	Week-3	6. Program to implement stack using linked list 7. Program to implement multiple stack in a single array 8. Program to convert infix notation to postfix notation using stacks				

4	Week-4	<p>9. Program to implement queue using arrays</p> <p>10. Program to implement queue using pointers</p> <p>11. Program to reverse elements in a queue</p>				
5	Week-5	<p>12. Program to implement circular queue using arrays</p> <p>13. Program to create add remove & display element from single linked list</p> <p>14. Program to create add remove & display element from double linked list</p> <p>15. Program to count number of nodes in linear linked list</p>				
6	Week-6	<p>16. Program to create add remove & display element from circular linked list</p> <p>17. Programs to implement stack & queues using linked representation</p> <p>18. Program to concatenate two linear linked lists</p> <p>19. Program to accept a singly linked list of integers & sort the list in ascending order.</p>				
7	Week-7	<p>20. Program to reverse linked list</p> <p>21. Program to represent polynomial using linked list</p> <p>22. Program to add two polynomials using linked list</p> <p>23. Program for the creation of binary tree, provide insertion & deletion in c</p> <p>24. Program for pre-order, post-order & in-order traversals of a binary tree using non recursive.</p>				

8	Week-8	<p>25. Program to count no, of leaves of binary tree</p> <p>26. Program for implementation of B-tree (insertion & deletion)</p> <p>27. Program for implementation of multi-way tree in c</p> <p>28. Program for implementation of AVL tree</p> <p>29. Program to implement bubble sort program using arrays</p>				
9	Week-9	<p>30. Program to implement merge sort using arrays</p> <p>31. Program to implement selection sort program using arrays</p> <p>32. Program to implement insertion sort program using arrays</p> <p>33. Program to implement topological sort using arrays</p>				
10	Week-10	<p>34. Program to implement heap sort using arrays</p> <p>35. Program to implement heap sort using pointers</p> <p>36. Program to implement bubble sort program using pointers</p> <p>37. Program to implement linear search using pointers</p>				
11	Week-11	<p>38. Program to implement binary search using pointers</p> <p>39. Program to implement linear search using arrays</p> <p>40. Program to implement binary search using arrays</p>				