

Lesson Plan

Name Of Faculty : **Hitesh Kumar**
 Discipline : **Computer Engg.**
 Semester : **IVth**
 Subject : **Data Structure Using C**
 Lesson Plan Duration : **15/02/24 to 14/06/24**

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment / Test)	Practical Day	Topic
1	1	Problem solving concept top down and bottom up design, structured programming	1	The addition /Subtraction of two matrices using functions
	2	Problem solving concept top down and bottom up design, structured programming	2	The addition/ subtraction of two matrices using functions
	3	Concept of data types, variables and constants		
2	4	Concept of pointer variables and constants	3	The multiplication of two matrices
	5	Concept of pointer variables and constants	4	The multiplication of two matrices
	6	Concept of Arrays		
3	7	Storage representation of multi-dimensional arrays.	5	Push and pop operation in stack
	8	Operations on arrays with Algorithms (searching, traversing, inserting, deleting)	6	Push and pop operation in stack
	9	Operations on arrays with Algorithms (searching, traversing, inserting, deleting)		
4	10	Introduction to linked list	7	Inserting and deleting elements in queue
	11	Representation of linked lists in Memory	8	Inserting and deleting elements in queue
	12	Revision on Array and Students problems Redressed		
5	13	Sessional I	9	Inserting and deleting elements in circular queue
	14	Operations on linked list (Insertion, deletion and traversals)	10	Inserting and deleting elements in circular queue
	15	Operations on linked list (Insertion, deletion and traversals)		
6	16	Operations on linked list (Insertion, deletion and traversals)	11	Insertion and deletion of elements in linked list
	17	Operations on linked list (Insertion, deletion and traversals)	12	Insertion and deletion of elements in linked list
	18	Application of linked lists		
7	19	Doubly linked lists	13	Insertion and deletion of elements in doubly linked list
	20	Operations on doubly linked lists (Insertion, deletion and traversals)	14	Insertion and deletion of elements in doubly linked list
	21	Operations on doubly linked lists (Insertion, deletion and traversals)		

8	22	Revision on Linked List and Students problems Redressed	15	The Factorial of a given number with recursion and without recursion
	23	Introduction to stacks	16	The Factorial of a given number with recursion and without recursion
	24	Representation of stacks		
9	25	Implementation of stacks	17	Fibonacci series with recursion and without recursion
	26	Applications of stacks	18	Fibonacci series with recursion and without recursion
	27	Application of linked lists		
10	28	Introduction to queues	19	Program for binary search tree operation
	29	Implementation of queues	20	Program for binary search tree operation
	30	Circular Queues, De-queues		
11	31	Application of Queues	21	The selection sort technique
	32	Recursion	22	The selection sort technique
	33	Revision on Stacks and Queues and Students problems Redressed		
12	34	Sessional II	23	The bubble sort technique
	35	Concept of Trees	24	The bubble sort technique
	36	Representation of Binary tree in memory		
13	37	Traversing Binary Trees (Pre order, Post order and In order)	25	The quick sort technique
	38	Traversing Binary Trees (Pre order, Post order and In order)	26	The quick sort technique
	39	Searching, inserting and deleting binary search trees		
14	40	Searching, inserting and deleting binary search trees	27	The merge sort technique
	41	Introduction to Heap	28	The merge sort technique
	42	Introduction to sorting and searching		
15	43	Search algorithm (Linear and Binary)	29	The binary search procedures to search an element in a given list
	44	Sorting algorithms (Bubble Sort)	30	The binary search procedures to search an element in a given list
	45	Insertion Sort, Quick Sort,		
16	46	Selection Sort, Merge Sort, Heap Sort	31	The linear search procedures to search an element in a given list
	47	Revision on Tree and Sorting Techniques and Students problems Redressed	32	The linear search procedures to search an element in a given list
	48	Sessional III		