

LESSON PLAN

NAME OF FACULTY: MRS. SUMAN CHAUDHARY

DISCIPLINE: COMPUTER ENGINEERING

SEMESTER: 4TH

SUBJECT: DATA STRUCTURES USING C

LESSON PLAN DURATION: 16 WEEKS

WORK LOAD (LECTURE/ PRACTICAL): LECTURES-3, PRACTICALS -6

WEEK	THEORY		PRACTICAL	
1st	LECTURE DAY	TOPIC	PRACTICAL DAY/PERIOD	TOPIC
	1	Unit 1 Fundamental Notations Problem Solving concept top down and bottom up design	1-3	The addition of two matrices using functions
	2	structured programming Concept of data types	1-3	
	3	variables and constants		
2nd	1	Concept of pointer variables and constants		
	2	Unit 2 ARRAYS Concept of Arrays	1-3	Sorting an array
	3	Storage representation of multi-dimensional arrays.	1-3	
3rd	1	Storage representation of multi-dimensional arrays.		
	2	Operations on arrays with Algorithms- searching	1-3	The multiplication of two matrices
	3	Operations on arrays with Algorithms- traversing	1-3	
4th	3	Operations on arrays with Algorithms- inserting	1-3	
	1	Operations on arrays with Algorithms- deleting	1-3	Revision of Practicals
	2	TEST		
5 th	1	Unit 3 LINKED LISTS Introduction to linked list		
	2	lists in Memory	1-3	
	3	Representation of linked Operations on linked list-Insertion	1-3	Insertion and deletion of elements in linked list
6 th	1	deletion and traversals		
	2	Application of linked lists	1-3	
	3	Doubly linked lists Operations on doubly linked lists- Insertion	1-3	Insertion and deletion of elements in doubly linked list
7th	1	deletion and traversals		
	2	Unit 4 STACKS, QUEUES AND RECURSION Introduction to stacks	1-3	
	3	Representation of stacks	1-3	Push and pop operation in stack

8th	1	Implementation of stacks		
	2	Applications of stacks	1-3	
	3	Introduction to queues	1-3	Inserting and deleting elements in queue
9th	1	Implementation of queues		
	2	Circular Queues	1-3	Inserting and deleting elements in circular queue
	3	De-queues	1-3	
10th	1	Application of Queues	1-3	
	2	Recursion	1-3	The Factorial of a given number with recursion and without recursion
	3	TEST		
11 th	1	Unit 5 TREES Concept of Trees	1-3	Fibonacci series with recursion and without recursion
	2	Representation of Binary tree in memory		
	3	Traversing Binary Trees - Pre order	1-3	
12th	1	Post order and In order	1-3	Program for binary search tree operation
	2	Searching and inserting binary search trees	1-3	
	3	Deleting binary search trees		
13th	1	Introduction to Heap		
	2	Unit 6 SORTING AND SEARCHING Introduction to sorting	1-3	The linear search procedures to search an element in a given list
	3	Introduction to searching	1-3	
14th	1	Search algorithm - Linear		
	2	Search algorithm - Binary	1-3	The binary search procedures to search an element in a given list
	3	Sorting algorithms -Bubble Sort	1-3	The bubble sort technique
15th	1	Sorting algorithms - Insertion Sort		
	2	Quick Sort	1-3	The quick sort technique
	3	Selection Sort	1-3	The selection sort technique
16th	1	Merge Sort and Heap Sort	1-3	The merge sort technique
	2	REVISION	1-3	Revision of practicals
	3	REVISION		

