Lesson Plan

Name of the faculty: : Promila

Discipline: Computer Engineering

Semester: 4TH

Subject: DATA STRUCTURE USING C

Lesson Plan Duration: 15/02/2024 to 14/06/2024

Week	Theory		Practical	
	Lecture Day	Topic (including assignment / test)	Practical Day	Topic
1st	1	**Unit -1** Introduction of data structure Problem solving concept top down andbottom up design ,	1	Write program in C
	2	structured programmingConcept of data types	2	The addition of two matricesusing functions
	3	variables and constants	3	Above practical repeated
2nd	4	Concept of pointer variables andconstants	4	The multiplication of twomatrices
	5	Doubts and assignment	5	Sorting of an array
	6	test	6	Program to traverse array
3rd	7	**Unit -2** Introduction of Arrays	7	Program to add elementIn array
	8	Concept of Arrays	8	Program to delete elementIn array
	9	Storage representation of multi-dimensional arrays.	9	Program to search element in array
4th	10	Operations on arrays with Algorithmssearching	10	Write program in to Find factorial of a number

	11	Traversing, deleting, inserting	11	Fibonacci series without recursion
	12	Doubt & Revision	12	Weekly practical repeated and revised
5th	13	**Unit -3** Introduction of Linked Lists	13	Insertion of elements in linkedlist
	14	Representation of linked lists inMemory	14	deletion of elements in linkedlist
	15	Operations on linked list Insertion	15	Checking of file
6th	16	deletion and traversals	16	Insertion, deletion in doubly linked list
	17	Application of linked lists	17	Insertion, deletion in doubly linked list
	18	Doubly linked lists	18	Practical revised
7th	19	Operations on doubly linked listsInsertion	19	Fibonacci series with recursion
	20	deletion and traversals , doubt &assignment	20	Factorial with recursion
	21	Class test	21	Practical revised
8th	22	**Unit -4** Stacks, Queues and RecursionIntroduction to stacks	22	Push operation in stack
	23	Representation of stacks Implementation of stacks	23	pop operation in stack
	24	Applications of stacks	24	Practical revised and file checking
9th	25	Introduction to queues Implementation of queues	25	Inserting elements in queue
	26	Circular QueuesDe-queues	26	deleting elements in queue
	27	Application of QueuesRecursion n doubt	27	Queue practical repeated

10th	28	Class test	28	Inserting in circular queue
	29	**Unit -5** Introduction of Trees	29	Deletion in circular queue
	30	Concept of Trees	30	Circular queue practical continued
11th	31	Representation of Binary tree inmemory Traversing Binary Trees Pre order	31	Linear search procedure
	32	Post order and In order	32	Binary search procedure
	33	Searching, inserting binary search trees	33	Binary search procedure
12th	34	Deleting binary search trees	34	Program for binary search treeoperation
	35	Introduction to Heap	35	Program for binary search tree operation
	36	Doubt and assignment	36	Checking of previous practical
13th	37	**Unit-6** Introduction of Sorting andSearching	37	The selection sort technique
	38	Introduction to sorting and searching	38	The bubble sort technique
	39	Search algorithm Linear	39	Bubble sort repeated
14th	40	Search algorithm Binary	40	The quick sort technique
	41	Bubble sort,insertion,selection sort	41	The merge sort technique
	42	Merge sort, quick sort	42	Merge sort contd
15th	43	Heaps	43	Test of previous practicals
	44	revision	44	Test of previous practicals
	45	Class test	45	Test