Govt Polytechnic Mandkola (Palwal)
Lesson Plan

Name of Faculty : Sube Singh
Discipline : Computer Engg
Semester : 4th
Subject : Data Structures Using C
Lesson Plan Duration : 15 Weeks (From January 2025 to May 2025)

Week	Theory		Practial	
	Lecture Day	Topic (including assignment/test)	Pr Day	Topic
1st	1st	Problem solving concept, top down and bottom up design	1	Inserting elements in array
	2nd	structured programming Concept of data types, variables and constants		
	3rd	Concept of pointer variables and constants, Introduction to data Structure	2	Inserting elements in array
2nd	4th	Array, Linked List, Stack,	3	deleting elements in array
	5th	Queue, Trees, graphs	4	deleting elements in array
	6th	Revision		
3rd	7th	Concept of Arrays,	5	The addition of two matrices using functions
	8th	Single dimensional array		
	9th	Two dimensional array	6	The addition of two matrices using functions
4th	10th	Representation of Two dimensional Array (Base Address, LB, UB)	7	Insertion of elements in linked list
	11th	searching,		
	12th	traversing,	8	Deletion of elements in linked list
5th	13th	Inserting	9	Insertion of elements in doubly linked list
	14th	Inserting		
	15th	deleting	10	Deletion of elements in doubly linked list
6th	16th	Revision	11	Viva-Voce/File Check
	17th	**Test**	12	Push and pop operation in stack
	18th	Introduction to linked list and double linked list Representation of linked lists in Memory		
7th	19th	Comparison between Linked Listand Array Traversing alinked list Searching linked list	13	Conversion from in-Fix to postfix notation
	20th	Insertion, deletion into linked list (At first Node, Specified Position, Last)	14	Conversion from in- fix to postfix notation
	21st	Application of linked lists		

8th	22nd	Doubly linked lists	15	The factorial of a given number using recursion
	23rd	Traversing Doubly linked lists		
	24th	Insertion and deletion into doubly linked lists	16	Fibonacci Series using recursion
9th	25th	Introduction to stacks, Representation of stacks with array and Linked List	17	Insertion and Deletion of elements in queue using pointers
	26th	Implementation of stacks	18	Insertion and Deletion of elements in queue using pointers
	27th	Application of stacks: Polish Notations		
10th	28th	Converting Infix to Post Fix Notation	19	Insertion of elements in circular queue using pointer
	29th	**Test**		
	30th	Evaluation of Post Fix Notation, Tower of Hanoi Recursion: Concept and Comparison between recursion and Iteration	20	Deletion of elements in circular queue using pointers
11th	31st	Introduction to queues, Implementation of queues using array algorithm	21	File Check/Revision/Viva
	32nd	Implementation of queues using Linked List with algorithm		
	33rd	Circular Queues , De-queues	22	Traversing of tree
12th	34th	Concept of Binary Trees, Concept of representation of Binary Tree	23	Heap Sort
	35th	Concept of balanced Binary Tree		
	36th	Traversing Binary Trees (Pre order, Post order and In order)	24	The linear search procedures to search an element in given list
13th	37th	Searching,	25	The binary search procedures to search an element in a given list
	38th	inserting in binary search trees, deleting in binary search trees		
	39th	Linear Search algorithm, Binary Search algorithm	26	The bubble sort techniques
14th	40th	Concept of sorting , Bubble Sort, Insertion Sort	27	The selection sort techniques
	41st	Selection Sort		
	42nd	Merge Sort, Radix Sort	28	The quick sort technique
15th	43rd	Heap Sort	29	The merge sort technique
	44th	Test		
	45th	Revision	30	File Check/Viva voce