



C.V. RAMAN POLYTECHNIC BBSR

LESSON PLAN

Discipline: Diploma Branch: CSE	Semester: 3rd	Name of the Teaching Faculty: Sambhu Prasad Panda
Subject: Data structure (CSEPC 205/TH3)	No. of Days/per week class allotted: 45days/ 3 class per week	Semester From Date: 14/07/2025 To Date: 15/11/2025 No. of Weeks:15
Week	Class Day	Theory
1 st	1 st	Course introduction, syllabus overview, assessment methods
	2 nd	Basic Terminology: data, data structure, element, key, index
	3 rd	Classification of Data Structures
2 nd	1 st	Operations on Data Structures
	2 nd	Asymptotic analysis — definitions & notations
	3 rd	Worst, best, average case analysis
3 rd	1 st	Linear Data Structures: Stacks — Introduction
	2 nd	Array Representation of Stacks
	3 rd	Operations on Stacks (Push, Pop, Peek, isEmpty, isFull)
4 th	1 st	Applications of Stacks — Infix to Postfix
	2 nd	Evaluating Postfix expressions
	3 rd	Tutorial & practice on Stacks
5 th	1 st	Queues — Introduction
	2 nd	Array Representation of Queues
	3 rd	Operations on Queues (Enqueue, Dequeue, Front, Rear)
6 th	1 st	Types of Queues — DeQueue
	2 nd	Circular Queue
	3 rd	Applications of Queues — Round Robin algorithm

7 th	1 st	Linked Lists — Introduction & Singly Linked List
	2 nd	Representation in Memory
	3 rd	Operations on Singly Linked List
8 th	1 st	Circular Linked List
	2 nd	Doubly Linked List
	3 rd	Tutorial on Linked Lists
9 th	1 st	Stack using Linked List
	2 nd	Queue using Linked List
	3 rd	Review & exercises on Linear Data Structures
10 th	1 st	Non-Linear Data Structures: Trees — Terminologies
	2 nd	Binary Tree — Definitions & Concepts
	3 rd	Representation of Binary Tree: Array & Linked List
11 th	1 st	Operations on Binary Tree: Insertion
	2 nd	Deletion in Binary Trees
	3 rd	Binary Tree Traversals — Preorder
12 th	1 st	Traversals — Inorder
	2 nd	Traversals — Postorder
	3 rd	Types of Binary Trees
13 th	1 st	Graphs — Terminologies
	2 nd	Representation of Graphs: Set, Linked
	3 rd	Representation of Graphs: Matrix
14 th	1 st	Graph Traversals — BFS
	2 nd	Graph Traversals — DFS
	3 rd	Practice on Trees & Graphs
15 th	1 st	Review of key topics (Linear + Non-Linear)
	2 nd	Quiz test
	3 rd	Discussion of previous year questions



Signature of Faculty



Signature of HOD (CSE)