



**GANAPATI INSTITUTE OF ENGINEERING AND TECHNOLOGY (POLYTECHNIC)**  
Mathasahi, Jagatpur, Cuttack - 754200

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**  
**LESSON PLAN**

<b>Discipline: Computer Science &amp; Engineering</b>	<b>Semester: 3<sup>rd</sup></b>	<b>Name of the Faculty:</b> S R PATTNAIK Sr. Lect in CSE
<b>Subject: Data Structure using C</b>	<b>No. of Days/week: 03</b>	<b>StartDate: 01.07.2026</b> <b>EndDate: 05.11.2026</b>

<b>Week</b>	<b>Class Day</b>	<b>Theory Topics</b>
1st	1st	Basic terminology of Data Structure
	2nd	Classification of Data Structure
	3rd	Classification of Data Structure (contd.)
2nd	1st	Operations on data structure, Time complexity, Space complexity
	2nd	Asymptotic Notation
	3rd	Asymptotic Notation (contd.)
3rd	1st	Algorithm Analysis
	2nd	Revision of UNIT-1 + Assignment Question
	3rd	Introduction to stacks, Array Implementation of stack, operation on stack
4th	1st	Operation on stack (contd)
	2nd	Infix to postfix conversion
	3rd	Examples of infix to postfix conversion
5th	1st	Evaluation of postfix expression
	2nd	Introduction to queue, Array representation of queue, operation on queue
	3rd	Operation on a queue (contd)
6th	1st	Circular queue operations on Circular queue
	2nd	Deque, operations on Dequeue
	3rd	Round robin algorithm + Assignment of unit-2
7th	1st	Linked list, Representation of linked list in memory (array), Traversing a linked list
	2nd	Insertion, deletion of nodes in linked list
	3rd	Dynamic representation of linked list, Traversing, Insertion at beginning, Insertion at end
8th	1st	Insertion of node at specific position, Deletion at first end, deletion at last position

	2nd	Delete a node at particular location of a single linked list
	3rd	Merging of two single linked list ,(Revision of linked list till taught)
9th	1st	Searching an element in a single linked list, Sorting the node values in single linked list
	2nd	Reversing a single linked list
	3rd	Circular linked list, Doubly linked list (brief idea)
10th	1st	Linked list representation of stack (Create an empty stack, insert an item, remove an item, display)
	2nd	Linked list representation of queue
	3rd	Revision of linked list (unit 3)
11th	1st	Assignment question + Revision
	2nd	Introduction to Tree, Application of trees, tree terminology
	3rd	Concepts of Binary tree, Strictly binary tree, full binary tree, complete binary tree
12th	1st	Linked Representation of binary tree
	2nd	Sequential Representation of binary tree
	3rd	Traversal of binary(preorder,inorder, postorder)
13th	1st	Traversal of tree(contd with examples), Binary Search Tree
	2nd	Insertion in binary search tree
	3rd	Deletion in BST
14th	1st	Graph terminology
	2nd	Representation of graph(Set, Matrix representation)
	3rd	Linked representation of graph
15th	1st	Traversing a graph (DFS)
	2nd	Traversing a graph (BFS)
	3rd	Revision (unit 4)

Sign of faculty

Sr. Lecturer  
Dept. of Computer Science  
Sign of Sr. Lect.  
S.P. 22.6.26

Sign of Principal  
22/6/26