

Department of Computer Engineering & IoT

LESSON PLAN

Department:		Semester	Name Of The Faculty:-
Computer Engineering And IoT		3 rd	Er.Manoj Kumar Garada
Scheduled Session:- Winter- 2026 (5.08.2026 to 13.11.2026)			
SUBJECT Data Structures and Algorithms Subject Code:- CEIPC205 TH:3			
No. Of Days /Week Class Alloted 03/Week		No. Of Weeks:14	
Month	Week	No. Of Period Available	Theory Topics To Be Covered
AUGUST	1	03	UNIT –I Introduction to Data Structures: Basic Terminology, Classification of Data Structure, Operations on Data Structure, Asymptotic and worst-case analysis of algorithms.
	2	03	UNIT-II Linear Data Structures: Stacks-Introduction to Stacks, Array Representation of Stacks, Operations on a Stack, Applications of Stacks Infix-to-Postfix Transformation, evaluating Postfix Expressions.
	3	03	Queues: Introduction to Queues, Array Representation of Queues, Operations on a Queue, Types of Queues-DeQueue, Circular Queue, Applications of Queues-Round Robin Algorithm
	4	03	UNIT-III Linked Lists: Singly Linked List, Representation in Memory, Operations on a Single Linked List, Circular Linked Lists
SEPTEMBER	1	03	Doubly Linked Lists, Linked List Representation and Operations of Stack,
	2	03	Linked List Representation and Operations of Queue.
	3	03	UNIT-IV Non-Linear Data Structures: Trees-Basic Terminologies, Definition and Concepts of Binary Trees,
	4	03	, Representations of a Binary Tree using Arrays and Linked Lists, Operations on a Binary Tree-Insertion, Deletion, Traversals, Types of Binary Trees. GRAPHS: Graph Terminologies, Representation of Graphs- Set, Linked, Matrix, Graph Traversals
OCTOBER	1	03	UNIT –V Algorithm Paradigms: Greedy, Divide and Conquer, Branch and Bound, Dynamic Programming and Backtracking.
	2	03	UNIT- VI Sorting: The sorting problem. Bubble sort, Selection sort, Insertion sort, Merge sort, Quicksort, Searching: Symbol Tables, Binary Search Trees,
	3	03	Balanced Search Trees. Hash Tables Process and domain model specifications, Information model specification, Service specification for IoT .
	4	03	Symbol Tables, Binary Search Trees, Balanced Search Trees. Hash Tables Paths, Cycles, spanning trees, UNIT-VI I Graphs: Definition of a directed and undirected graph
NOVEMBER	1	02	Paths, Cycles, spanning trees, Directed Acyclic Graphs. Topological Sorting. Minimum Spanning Tree algorithms, Shortest Path algorithms: Dijkstra's algorithm. Flow-based algorithms

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(HOD Comp. Engg. & IOT)