

PNS SCHOOL OF ENGG. & TECH., MARSHAGHAI

DEPARTMENT OF COMPUTER SCIENCE ENGINEERING LESSON PLAN

BRANCH :	SEMESTER :	NAME OF THE TEACHING FACULTY :
CSE	3RD	MR. BISWARANJAN SWAIN
SUBJECT :	NO. OF DAYS PER WEEK CLASS ALLOTTED :	SEMESTER FROM DATE:
DATA STRUCTURE	05	01.08.2023 TO 30.11.2023
WEEK	CLASSDAY	THEORY TOPICS
1 ST	1 st	1.INTRODUCTION Explain Data, Information, data types
	2 nd	Define data structure & Explain different operations, Abstract Data types
	3 rd	Algorithm and its complexity
	4 th	Time and space trade off
	5 th	2. STRING PROCESSING Basics of string and storing strings, character data types
2 ND	1 st	String operations
	2 nd	3. ARRAYS Introduction about array, linear array
	3 rd	Array representation in memory, traversing array
	4 th	Insertion and deletion elements, multidimensional array
	5 th	Two dimensional array in memory(row major and column major order)
3 RD	1 st	Sparse matrix and TEST
	2 nd	Pointer
	3 rd	4. STACKS & QUEUES Fundamental idea about stacks , Push and Pop operation
	4 th	Polish notation
	5 th	Conversion between postfix, prefix and infix
4 TH	1 st	Application of stack, Arithmetic expression
	2 nd	Application of Stack, Recursion
	3 rd	Queue, circular queue
	4 th	Priority queue
	5 th	5. LINKED LIST Introduction about linked list
5 TH	1 st	Representation of linked list in memory
	2 nd	Traversing a linked list
	3 rd	Searching a linked list
	4 th	Insertion into a linked list
	5 th	Deletion from a linked list
6 TH	1 st	Header linked list
	2 nd	Garbage collection
	3 rd	Doubt clear

6 TH	4 th	6. TREE Basic terminology of Tree
	5 th	Types of trees
7 TH	1 st	Binary tree
	2 nd	In order traversal in a binary tree
	3 rd	Pre order and post order traversal in a binary tree
	4 th	Binary Search tree, searching
	5 th	Insertion in BST
8 TH	1 st	Deletion in BST
	2 nd	Test
	3 rd	7. GRAPHS Graph terminology
	4 th	Graph terminology
	5 th	Graph representation, types of graph
9 TH	1 st	Adjacency matrix
	2 nd	Path matrix
	3 rd	Doubt clear
	4 th	8. SORTING, SEARCHING & MERGING Basics of searching, sorting, merging
	5 th	Bubble sort
10 TH	1 st	Quick sort
	2 nd	Repeat of sorting
	3 rd	Merging
	4 th	Linear searching
	5 th	Binary searching
11 TH	1 st	Doubt of searching methods
	2 nd	9. FILE ORGANIZATION File organisation and its types, Sequential file organisation
	3 rd	Relative file organisation, File access method
	4 th	Indexed Sequential file organisation
	5 th	Introduction to hashing
12 TH	1 st	Hash function
	2 nd	Collision resolution
	3 rd	Open addressing
	4 th	Quadratic probing double hashing
	5 th	Doubt clear

Biswaraj Swain

SIGNATURE OF H.O.D

Biswaraj Swain

SIGNATURE OF LECTURER