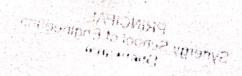


SYNERGY SCHOOL OF ENGINEERING, DHENKANAL

Lesson Plan

ECOSON I MIN				
Discipline:	Semester:3rd	Name of the Faculty:		
Computer Science	Winter/2025	Asmita Pranayani		
and Engineering	Sessions: 2025-26			
Subject: Algorithms	No. Of	Start Date: 14 07 25		
Code No:	Days/Week:03	End Date: 5 25		
CSEPC 209				

Week	Class	Theory Topics
1st	1st	Definition of algorithm
	2nd	Criteria o f algorithms – Input/output, finiteness, definiteness, effectiveness,
	3rd	writing an algorithm with pseudo code, algorithms and programs
2nd	1st	Algorithmic Complexity: Concept of algorithmic complexity
	2nd	space complexity, Big-O notation,
	3rd	Time complexity, worst case, average case and best-c as e analysis,
3rd	1st	Big-O notation, Finding the complexity of an algorithm
	2nd	Recursive algorithms: Concept of iteration and recursion,
	3rd	Examples of recursive algorithms – Fibonacci series, factorial.
4th	1st	Tower-of-Hanoi problem.
112111	2nd	Complexities of recursive algorithms, conversion of recursive algorithm to iterative algorithm.



	3rd	Algorithm Paradigms: Greedy,
5th	1st	
otti	2nd	Divide and Conquer. Branch and Bound.
	3rd	
	3rd	Dynamic Programming and
6th	1.4	Backtracking.
oui	1st	Sorting: The sorting
	2-4	problem.
	2nd	Bubble sort,
7th	3rd	Selection sort
	1st	Insertion sort,
	2nd	Merge sort,
0.1)	3rd	Quick sort,
8th	1st	Heap sort,
	-2nd	Radix sort. Searching:
		Symbol Tables,
	3rd	Binary Search Trees,
9th	1st	Balanced Search Trees.
	2nd	Hashing, Hash Tables.
	3rd	Graphs: Definition of a
	· 1	directed and undirected
	i - 12	graph.
10th	1st	Paths
	2nd	Cycles, spanning trees
	3rd	Directed Acyclic Graphs.
11th	1st	Topological Sorting.
	- 1	Minimum Spanning Tree
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	2nd	Shortest Path algorithms:
		Dijkstra's algorithm
	3rd	Flow-based algorithms.
12th	1st	Practice problems
	2nd	Previous year question
		paper discussion
7,7 5,7 7 9 8 3	3rd	Mock viva preparation
13th	1st	Doubt clearing session
	2nd	Monthly Class Test-01
	3rd	Previous year question
		paper discussion
14th	1st	Doubt clearing session
A 1011	2nd	Mock viva preparation
Tage of the Property of	3rd	Doubt clearing session
15th	1st	Monthly Class Test-02
1501	2nd	Doubt clearing session
	3rd	Quiz Test

PRINCIPAL Synergy School of Engineering

Verified By:

HOD Comp. Science & Engg. Dept. SSE, Dhenkanal

