



# VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN

[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]



## DEPARTMENT OF INFORMATION TECHNOLOGY

Course Code / Name : U15CS305 / DATA STRUCTURES

Class (Year / Programme / Department / Section): II/B.Tech/IT

### LESSON PLAN

UNIT -1 (LINEAR DATA STRUCTURES)				
Session No	Topic	Duration in Minutes	Teaching Aid	Book Referred
1	Introduction	45	BB	R2
2	Abstract Data Types	45	BB	R2
3	The list ADT	45	BB	R2
4	The Stack ADT	45	BB	R2
5	The Queue ADT	45	BB	R2
6	Stack	45	BB	R2
7	Queue	45	BB	R2
8	The list ADT	45	BB	R2
9	Abstract Data Types	45	BB	R2
UNIT -2 (TREES)				
1	Preliminaries	45	BB	R2
2	Binary Trees	45	BB	R2
3	The Search Tree ADT	45	BB	R2
4	Binary Search Trees	45	BB	R2
5	AVL Trees	45	BB	R2
6	Splay Trees	45	BB	R2
7	Tree Traversals	45	BB	R2
8	B-Trees	45	BB	R2
9	AVL Trees	45	BB	R2
UNIT -3 (HASHING AND PRIORITY QUEUES)				
1	Model implementations	45	BB	R1
2	Simple implementations	45	BB	R1
3	Binary Heap	45	BB	R1
4	Applications of Priority Queues	45	BB	R1
5	d-Heaps	45	BB	R1
6	Leftist heaps	45	BB	R1
7	Skew heaps	45	BB	R1
8	Applications of Priority Queues	45	BB	R3
9	Simple implementations	45	BB	R3
UNIT -4 (GRAPH ALGORITHMS)				
1	Definitions	45	BB	R1
2	Topological Sort	45	BB	R1

3	Shortest Path Algorithms	45	BB	R1
4	Network Flow Problems	45	BB	R1
5	Minimum Spanning Tree	45	BB	R1
6	Topological Sort	45	BB	R1
7	Network Flow Problems	45	BB	R1
8	Minimum Spanning Tree	45	BB	R1
9	Shortest Path Algorithms	45	BB	R1
<b>UNIT -5 (SORTING AND SEARCHING)</b>				
1	Sorting	45	BB	R1
2	Preliminaries	45	BB	R1
3	Insertion sort	45	BB	R1
4	A Lower Bound for Simple Sorting Algorithms	45	BB	R1
5	Shell sort	45	BB	R1
6	Heap sort,	45	BB	R1
7	Merge sort	45	BB	R1
8	Quick sort	45	BB	R1
9	Binary Search.	45	BB	R1