

B.Tech CSE, SE and CC

Class Test – 1 Syllabus (2022-23)

Semester –4

Subject Name: DSA

Assignment-2

1.	Explain BST with insertion and deletion operation.
2.	Explain pre-order traversal, in-order traversal and post-order traversal with example.
3.	Write a short note on AVL tree with all rotation case with example.
4.	Explain Dijkstra's shortest path algorithm with appropriate example.
5.	What is a graph? Explain various representations of graphs.
6.	Discuss Breadth First Search (BFS) traversal for a graph with an example.
7.	Define the following: Height of tree, General tree, tree, graph, directed graph, undirected graph, mixed graph, edge, vertices, Sibling, Forest, Strictly Binary Tree, Acyclic graph, Leaf node, Complete binary tree
8.	Discuss Depth First Search (DFS) traversal for a Graph with an example.
9.	How are graphs represented inside a computer's memory? Which method do you prefer and why?
10.	Explain merge sort with example.
11.	Explain quick sort with example.
12.	Explain radix sort with example.
13.	Explain selection sort with example.
14.	Explain bubble sort with example.
15.	Define hash collision? Explain collision various resolution techniques.
16.	Explain sequential searching with example and algorithm.
17.	Explain binary searching with example and algorithm.
18.	State and explain collision resolution techniques in hashing.
19.	What is hashing? Explain hash functions technique in detail.