CDAC Mumbai
PG-DAC Aug25 Batch (Kharghar)
ADS Lab Exam
Module 3: Algorithms and Data Structures

Time : 2hrs   Marks: 30

Note:

1. **Read all questions carefully.**
2. **Attempt all questions.**

Question 1: [8 marks]

Write a menu-driven program in Java to perform the following operations on a Binary Search Tree (BST):

1. Insert a node into the BST.
2. Search for a node in the BST.
3. Display the BST in Preorder Traversal

Question 2: [10 marks]

Write a Java program in Java to perform sorting of an array using the Merge Sort algorithm**.**

Question 3: [12 marks]

Write a menu-driven program in Java to perform the following operations on a singly linked list:

1. Insert a node at the end of the linked list.
2. Delete a node by its value (delete the first occurrence).
3. Display all elements of the linked list.
4. Display the middle element of the linked list.
5. Exit the program.

-------------------------------All the best ! --