



**ALLIANCE
UNIVERSITY**

Private University established in Karnataka State by Act No.34 of year 2010.
Recognized by the University Grants Commission (UGC), New Delhi

Alliance College of Engineering and Design

Bachelor of Technology [Batch: 2022-26]

Semester –IV

Mid Semester Examinations, April - 2024

Subject Code & Title: 4 CS 1006 Data Structures and Algorithms Lab

Date: 18.04.2024

Time: 2 Hrs.

Max. Marks: 50

| Exp. No | Experiments |
|----------------|--|
| 1 | a) Write a program to sort an array of integers in ascending order using Bubble sort b) Write a program to implement Hash table using C++ |
| 2 | a) Write a program to sort an array of integers in ascending order using Insertion sort. b) Implement the Binary Tree. Produce its pre-order, in-order and post-order Traversals. |
| 3 | a) Write a program to sort an array of integers in ascending order using Quick sort b) Implement AVL tree using C++ classes also insert a node in AVL tree |
| 4 | a) Write a program to sort an array of integers in ascending order using Merge sort b) Implement DFS using C++ |
| 5 | a) Implement AVL tree using C++ classes also delete a node in AVL tree b) Implement BFS using C++ |