

**List of Lab Experiments**

**Subject-Analysis Design & Algorithm (CS-404)**

**Semester-IV<sup>th</sup>**

**INDEX**

| SN | Name of Experiments   | Submission Date | Student Sign | Faculty Sign | Remark |
|----|---|-----------------|--------------|--------------|--------|
| 1  | Write a program for Iterative and Recursive Binary Search.            |                 |              |              |        |
| 2  | Write a program for Merge Sort.                                       |                 |              |              |        |
| 3  | Write a program for Quick Sort.                                       |                 |              |              |        |
| 4  | Write a program for Strassen's Matrix Multiplication.                 |                 |              |              |        |
| 5  | Write a program for optimal merge patterns.                           |                 |              |              |        |
| 6  | Write a program for Huffman coding.                                   |                 |              |              |        |
| 7  | Write a program for minimum spanning trees using Kruskal's algorithm. |                 |              |              |        |
| 8  | Write a program for minimum spanning trees using Prim's algorithm.    |                 |              |              |        |
| 9  | Write a program for single sources shortest path algorithm.           |                 |              |              |        |
| 10 | Write a program for Floye-Warshal algorithm.                          |                 |              |              |        |
| 11 | Write a program for travelling salesman problem.                      |                 |              |              |        |
| 12 | Write a program for Hamiltonian cycle problem                         |                 |              |              |        |

**List of Demo Lab Experiments**  
**Subject-Analysis Design & Algorithm (CS-404)**  
**Semester-IV<sup>th</sup>**  
**INDEX**

| SN | Name of Experiments  | Submission Date | Student Sign | Faculty Sign | Remark |
|----|--|-----------------|--------------|--------------|--------|
| 1  | Write a program linear Search  |                 |              |              |        |
| 2  | Write a program for Sort a given set of elements using heap  |                 |              |              |        |
| 3  | Write a program for Quick Sort.  |                 |              |              |        |
| 4  | Write a program for Matrix Multiplication.   |                 |              |              |        |
| 5  | Write a program Sort a given set of elements using selection sort  |                 |              |              |        |
| 6  | Implement 0/1 knapsack using dynamic programming   |                 |              |              |        |
| 7  | Write a program for minimum spanning trees using Kruskal's algorithm.  |                 |              |              |        |
| 8  | Print all the nodes reachable from a given starting node in a digraph using BFS method.  |                 |              |              |        |
| 9  | Write a program for recursive binary Search and determine the time required to search an element   |                 |              |              |        |
| 10 | Sort a given set of elements using merge sort method and determine the time required to sort the elements. Repeat the experiment for different values of n |                 |              |              |        |