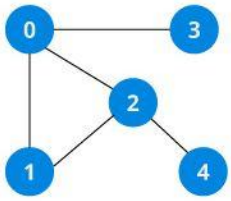
CSE 216: Algorithm Sessional

Labtest – 01

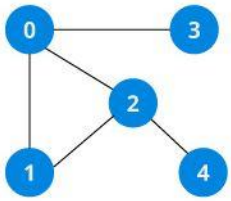
Time : 1 hour

Implement the randomly selected problem:

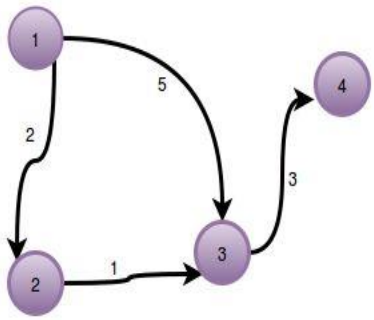
1. Implement **BFS algorithm** in the following graph. Input must be taken from file and also show the output in a file. (Use 0 as the source node)



2. Implement **DFS algorithm** in the following graph. Input must be taken from file and also show the output in a file. (Use 0 as the source node)



3. Implement **Dijkstra algorithm** in the following graph. Input must be taken from file and also show the output in a file. (Use 1 as the source node)



4. Find the minimum and maximum value from the following list of numbers using **Max-Min Algorithm**. Input list: 1 5 9 4 2 7 4 -8

5. You have a bag which has capacity of 15kg. How can you fill up this bag by getting maximum profit by using **Fractional knapsack problem**. Implement from the following input items whose profit and weight has been given. Also show the percent of each item that has been taken from the bag.

Item No.	Weight	Profit
1	12	4
2	1	2
3	2	2
4	1	1
5	4	10

6. Find the **longest common subsequence** from the two input strings: AAABC & ABBBC. Also find the length of the LCS.