CSE 216: Algorithm Sessional

Labtest – 02

Time : 1 hour

Implement the randomly selected problem: (Inputs must be taken in files)

1. You have a bag which has capacity 10kg. How can you fill this bag by getting maximum profit by using **0/1 knapsack** problem? The weights and values for 6 items is given below:

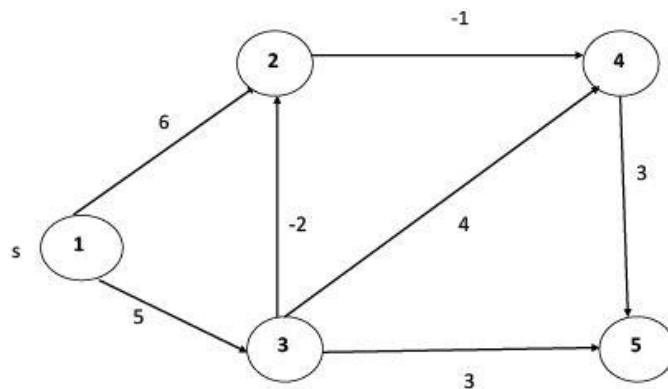   Weights: 1 2 3 8 7 4

   Values: 20 5 10 40 15 25

   Find the maximum profit and which items have been taken?

2. Implement **Floyd-Warshall** algorithm for the following graph:
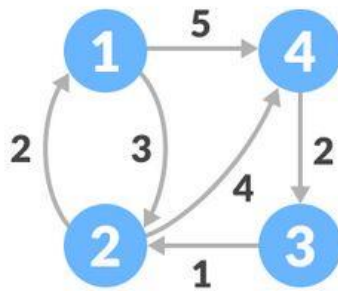
   Find the Sequence table and Distance table for each iteration. Also find the shortest path from 1 to 3.

3. Implement **Bellmanford** algorithm for the following graph:

   Find the Parent table and Predecessor table. Also find the shortest path from 1 to 4.