National University of Computer and Emerging Sciences, Lahore Campus
Quiz ……5 [BS(CS): Section A] Fall 2024

Computer Networks (Code: CS3001)   **Quiz Date: December 3, 2024**

Total Marks: 16   **Duration: 20 -Minutes**

Name -- Roll #-------------------------------- Section --------

Instructions: Answer all the questions on this sheet. You can make use of rough sheet (not to be attached).

Q1: Consider the network shown below:

(a) Apply the Bellman-Ford algorithm to find the set of shortest paths from all nodes to destination node 2.
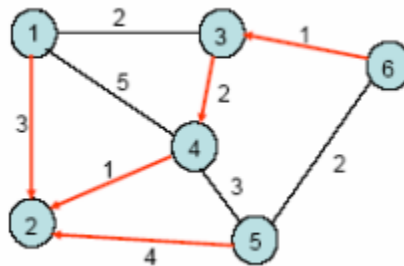
(b) Apply the same algorithm to find the set of shortest paths from all nodes to destination node 2 after the link between node 2 and 4 goes down.

In both cases, you are simply required to provide the shortest path vector from all nodes to destination node as X = { d(1), d(3), d(4), d(5), d(6)} and graph of set of paths to destination 2.   **(8+8 =16) [CLO 4]**
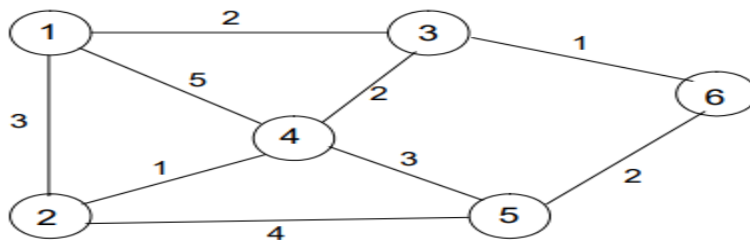
Solution:

(a) X = { d(1), d(3), d(4), d(5), d(6)} = {3, 3, 1, 4, 4} The set of paths to destination 2 are shown below:

(b) X = { d(1), d(3), d(4), d(5), d(6)} = {3, 5, 7, 4, 6}