



Design and Analysis of Algorithm (CS 412)

Instructor: Dr. Ayesha Enayet

Date: _____

CS 6th

SIS ID: _____

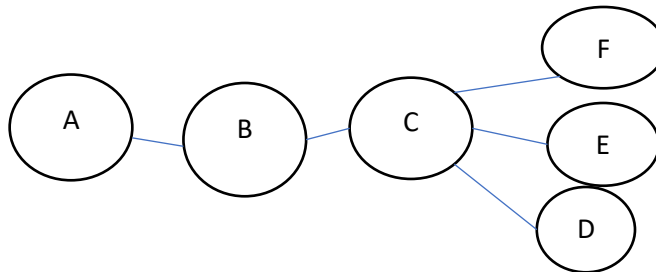
Name: _____

Instructions: Attempt all the questions. You are not allowed to use device(s) during the class. Use a Blue or black pen.

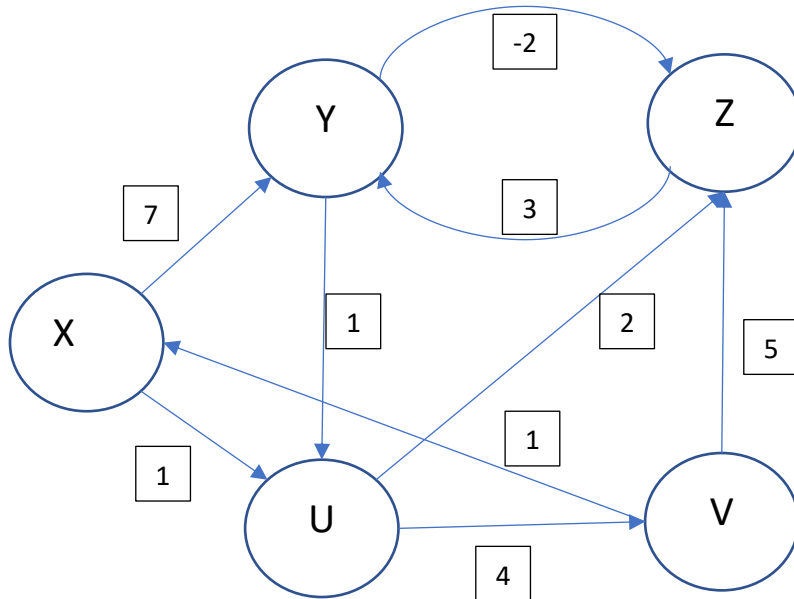
A. Mark all the problems that can be solved using Single source shortest path algorithms, specifically Bellman-ford. [1.5]

- ☐ Single source shortest path
- ☐ Single-destination shortest-paths problem
- ☐ Single-pair shortest-path problem
- ☐ All-pairs shortest-paths problem
- ☐ None of the above

A. Map the following graph to a bipartite graph and find Max-bipartite matching. [1.5]



- B. Given the following graph, $G=\{V, E\}$, use Bellman-Ford to find the shortest distance of every node $u \in V$ from the vertex Z . [2]



iteration	z	Y	z	u	v
1					
2					
3					
4					