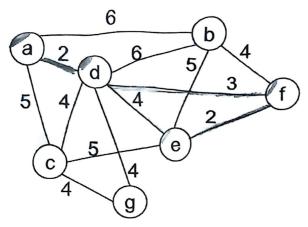
United International University (UIU) Dept. of Computer Science & Engineering & Data Science

Class Tool Trimostor: Spring 25

Course Codo: CSE 2217, Course Title: Data Structure and Algorithms #
Total Marks: 20 Duration: 40 minutes

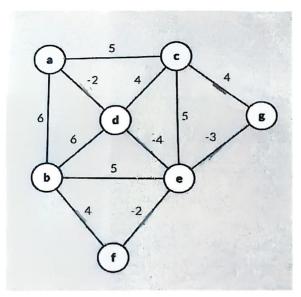
1.



Using Prim's algorithm, find the Minimum Spanning Tree (MST) for the given graph. Show the details of your calculation. Finally, draw the resulting MST.

8

2.



- a. Use the Bellman-Ford algorithm to find the shortest path from the source node *a* to all the other nodes. Determine if the graph contains any negative cycle. 8+2
- b. Can we apply MST algorithms (Prim, Kruskal) on the above graph to find the minimum spanning subgraph? Why or why not?2