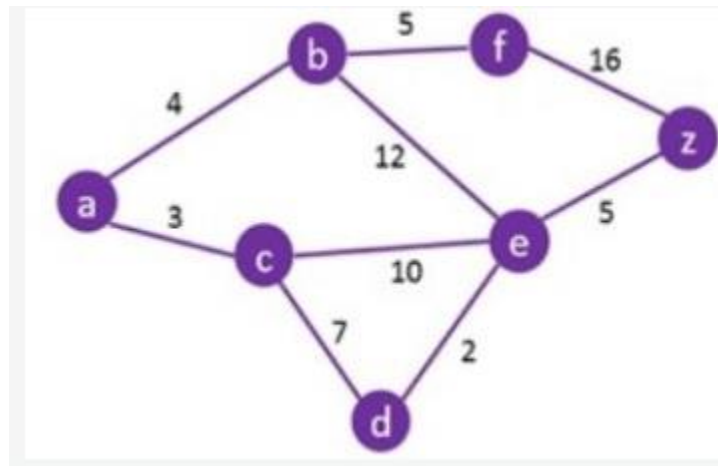**Academic year: 2024-25**
Home Assignment-III
B. Tech. (ECE,CSE,IOT,CSIT), 2023 Batch
II/IV, 2nd Semester

23EC2210R: NETWORK PROTOCOLS & SECURITY

1. Illustrate the operation of DHCP with a neat diagram.
2. Provide a detailed explanation of the three-way handshake process used in TCP for connection establishment, and accompany it with a neat sketch to illustrate the sequence of events? Also justify why the window size is required for both the parties in the process?
3. Construct the steps involved in the Link-state routing algorithm
4. Classify different congestion control techniques and analyze Leaky bucket and Token bucket traffic shaping techniques.
5. Consider the network shown in the picture below. Compute the shortest path from source node "a" to all other nodes using Dijkstra's routing algorithm

6. Illustrate the guidelines for creating and implementing the Access Control List.
7. Discover the function of the User datagram protocol in the transport layer.
8. Illustrate the function of Routing Information Protocol (RIP) in network layer.
9. Discover the function of the Address resolution protocol (ARP).