MALLA REDDY UNIVERSITY

## School of Engineering

## Department of Computer Science & Engineering

**Branch: B.Tech, CSE** **Subject: Computer Networks**

**Year: II-I, A.Y 2023-24** **Subject Code: MR22-1CS0145**

### Assignment-3

### UNIT-3 Network LAYER

1. Explain about IPv6? Compare IPv4and IPv6.
2. Explain the Distance Vector routing algorithm. Analyze its limitations comparing with other routing algorithms.
3. Compare Classful Addressing and Classless Addressing.
4. Explain the working of Link-state Routing in detail. Consider the network shown in Fig 1. Compute the shortest path from C to all other nodes using Link-State algorithm. Also update the forwarding table of node C.

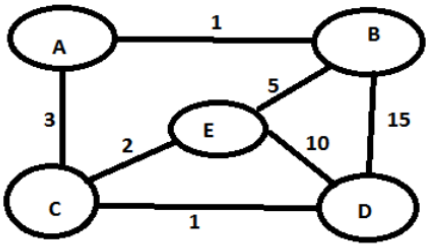


Fig. 1

5. Why subnetting is necessary? With suitable example, develop the concept of subnetting in class B network.
6. Discuss about the concept of internetworking in detail.
7. Explain Internet Protocol with the neat block diagram of IPv4 header format.
8. Discuss briefly about:
   a) Load Shedding and jitter control methods in congestion control in datagram subnets.
   b) ARP protocol
   c) ICMP protocol