Computer Networking Quiz-1 Answers

1. Networking in the context of computer systems refers to the practice of connecting multiple computers and devices to share data, resources, and communication capabilities.

2. Networking is important in modern computing because it enables resource sharing (like printers and files), facilitates communication (email, messaging), supports remote access, and enhances data management and collaboration.

3. (B) Sharing of data and resources between computers

4. A network is a group of interconnected computers, while the internet is a global collection of interconnected networks.

5. The internet is a collection of networks that are interconnected using standardized communication protocols.

6. Common uses of the internet in networking:

- Email communication

- Web browsing and accessing online services

- File sharing and data transfer

7. Three network topologies:

- Star: All devices connect to a central hub or switch.

- Ring: Devices are connected in a circular fashion.

- Mesh: Devices are interconnected, with multiple paths between them.

8. (B) Star

9. Advantages of mesh topology:

- High reliability and redundancy

- Failure of one node doesn’t affect the entire network

Disadvantages:

- Expensive due to the large number of cables and ports required

- Complex installation and maintenance

10. Network types:

* LAN (Local Area Network): Covers a small geographic area like a home or office.
* MAN (Metropolitan Area Network): Covers a city or a large campus.
* WAN (Wide Area Network): Covers large geographic areas, such as countries or continents.
* PAN (personal area network): Covers small area network which means small distance like Bluetooth connection with our phone

11. LAN is most commonly used in schools and small offices because it is cost-effective, easy to set up, and allows high-speed communication within a limited area.

12. (D) WAN

13. Four common networking devices:

- Router: Connects different networks and directs data packets.

- Switch: Connects devices within a network and manages data flow.

- Hub: Connects devices in a network but does not manage traffic.

- Modem: Converts digital signals to analog for transmission over phone lines.

14. A switch intelligently forwards data to the specific device it is intended for, while a hub simply broadcasts data to all devices in the network.

15. True