Quiz-1

1. **What is the network?**

   In order to share resources (such printers and CDs), trade files, or enable electronic communications, two or more computers are connected to form a network. A computer network can connect its computers through wires, phone lines, radio waves, satellites, or infrared light beams.

2. **Why is the computer network so important?**

   distributing digital files To share computer hardware To provide communication between computer hardware, To enhance communication efficiency, Data transport expenses should be minimised, High Reliability and Cost-Effective.

3. Explain different types of networks.

    A computer network is mainly of four types:
   LAN- Local Area Network is a group of computers connected to each other in a small area such as building, office.
   PAN- Personal Area Network is a network arranged within an individual person, typically within a range of 10 meters.
   MAN- A metropolitan area network is a network that covers a larger geographic area by interconnecting a different LAN to form a larger network.
   WAN- A Wide Area Network is a network that extends over a large geographical area such as states or countries.

4. Explain LAN

A local area network is a collection of interconnected computers in a constrained space, like an office or building.
A local area network (LAN) is used to connect two or more personal computers using a communication means like coaxial cable or twisted pair.
It is less expensive because hubs, network adapters, and ethernet cables were used in its construction.
In a local area network, data is exchanged at an incredibly quick rate.
Greater security is provided by local area networks.

5. Explain VPN

Virtual private network, or VPN, is a service that aids in maintaining your online privacy. A VPN creates a private tunnel for your data and conversations while you utilise public networks, establishing a secure, encrypted connection between your computer and the internet.

6. What are the advantages of using a VPN?

Secure Your Network
Hide Your Private Information
Prevent Data Throttling
Avoid Bandwidth Throttling
Get Access to Geo-blocked Services
Network Scalability
Reduce Support Costs

7. What is the network topology?

The physical and logical configuration of a network's nodes and links is known as its topology. Devices like switches, routers, and software with switch and router functionality are typically included in nodes. A graph is a common way to represent network topologies.

8. What is bus topology?

> Bus topology, often called line topology, is a type of network topology in which each device is connected to the network by a single coaxial or RJ-45 network wire. The bus, backbone, or trunk is the single cable that serves as the conduit for all data transmission between devices.

9. In your opinion, which topology is best suited when it comes to reliability?

> Mesh topology: Each device in this has a unique point-to-point connection to every other device. Dedicated refers to a link that exclusively transports traffic between the two connected devices. The most trustworthy topology is this one.

10. Define different unique network identifiers.

> A Uniform Resource Identifier (URI) is a unique identifier that makes content addressable on the Internet by uniquely targeting items, such as text, video, images and applications.
> A Uniform Resource Locator (URL) is a particular type of URI that targets Web pages so that when a browser requests them, they can be found and served to users.
> A Universal Unique Identifier (UUID) is a 128-bit number used to uniquely identify some object or entity on the Internet.
> A global unique identifier (GUID) is a number that Microsoft programming generates to create a unique identity for an entity such as a Word document.
> A bank identifier code (BIC) is a unique identifier for a specific financial institution.
> A unique device identifier (UDID) is a 40-character string assigned to certain Apple devices including the iPhone, iPad and iPod Touch.
> A service set identifier (SSID) is a sequence of characters that uniquely names a wireless local area network (WLAN).
> A national provider identifier (NPI) is a unique ten-digit identification number required by HIPAA for all health care providers in the United States.
> A MAC address is a computer's unique hardware number in a local area network (LAN).

11. Describe the OSI Reference Model

> The reference model known as OSI, or Open System Interconnection, explains how data from
> one computer's software programme travels over a physical media to another computer's
> software application. Each of the seven OSI levels carries out a specific network function. In
> 1984, the International Organization for Standardization (ISO) created the OSI model, which is
> currently regarded as an architectural framework for inter-computer interactions. The OSI model
> breaks down the entire process into seven more manageable, smaller tasks. Each layer has a
> certain task assigned to it. Each layer is self-contained, allowing each layer's given work to be
> completed individually.

12. Explain the basic communication model.

> The exchange of messages between a sender and a receiver across a medium is referred to as
> communication. This is the fundamental model of communication. The model takes into
> account the receiver's response or feedback, as well as the context(s) in which communication
> occurs.

13. Describe the TCP/IP Protocol

> TCP/IP stands for Transmission Control Protocol/Internet Protocol and is a suite of
> communication protocols used to interconnect network devices on the internet. TCP/IP is also
> used as a communications protocol in a private computer network (an intranet or extranet).

14. What is HTTP? How is it different from HTTPS?

> HTTP stands for Hyper Text Transfer Protocol. WWW is about communication between web
> clients and servers. Communication between client computers and web servers is done by
> sending HTTP Requests and receiving HTTP Responses.
> HTTPS is HTTP with encryption and verification. The only difference between the two protocols
> is that HTTPS uses TLS (SSL) to encrypt normal HTTP requests and responses, and to digitally
> sign those requests and responses. As a result, HTTPS is far more secure than HTTP.