Q.1: What is Network?

Ans: A network consists of two or more computers that are linked in order to share resources, exchange files or allow electronic communications.

Q.2: Explain type of network- LAN, MAN, WAN?

Ans: LAN-> Local Are Network is a collection of devices connected togethe in one physical location, such as bulding, office or home.

MAN-> Metropolitan Area Network is a computer network that connects computers within a metropolitan area, which could be a large city, multiple cities and towns,etc...

WAN-> Wide Area Network is the technology that connects offices, data centers and cloud storage together.

Q.3: What is Internet?

Ans: It is a global system of interconnected computers, using a standardized internet Protocol suite for communication and sharing information.

Q.4: Define Network Topologies.

Ans: It is the physical and logical arrangement of nodes and connections in a network.

Q5: Define list of cables in use of network- Twisted pair, fiber optics.

Ans: Fiber optics:- Fiber optics is the technology used by internet services such as Verizon Fios home internet to transmit information as pulses of light through strands of fiber made of glass or plastic over long distances.

Twisted pair:- a cable consisting of two wires twisted round each other, used especially for telephone or computer applications.

Q.6: Straight cable standard sequence 568 A and 568 B

Ans: 568 A:- It defines the transmission requirements for commercial building telecommunication wiring.

568 B:-

Q.7: What is fiber optics module and fiber connector

Ans: Fiber optics module:- Fiber optic modules are fiber cable adaptive housings that contain a light source for transmitting data via fiber optic cable for receiving fiber optic data.

Fiber connector:- Optical fiber connectors are used to join

optical fibers where a connect/disconnect capability is required.

Q.8: Explain Switch.

Ans: A switch is a networking hardware that connects devices on a computer network by using packet switching to receive and forward data to the destination device.

Q.9: Explain Router.

Ans: The router is a physical or virtual internetworking device that is designed to analyze, receive and forward it.

Q.10: Explain MODEM.

Ans: A Modem is a hardware device that connects a computer or router to a broadband network

Q.11: Explain DHCP Dynamic host configuration protocol Explain Domain Naming Services What is Protocol?

Ans: Dynamic Host Configuration Protocol is a client/server protocol that automatically provides an internet protocol host with its IP address and other related configuration information such as the subnet mask and default gateway.

Domain Naming Services is the application service that translates the IP address into a more recognized and memorable name.

Protocol is a set of rules and guidelines for communicating data.
Rules are defined for each step and process during communication between two or more computers.

Q.12: What is unicast multicast and broadcast?

Ans: Unicast:- Unicast is the term used to describe communication where a piece of information is sent from one point to another point.

Multicast:- Multicast is the term used to describe communication where a piece of information is sent from one or more points to a set of other points.

Broadcast:- Broadcast is the term used to describe communication where a piece of information is sent from one point to all other points.

Q.13: What is OSI model?

Ans: OSI stands for Open System Interconnection is a reference model that describes how information from a software application in one computer moves through a physical medium to the software application in another computer.

OSI consists of 7 Layers,they are:

7. Application
6. Presentation
5. Session
4. Transport
3. Network
2. Data Link
1. Physical

Q.14: What is port number?

Ans: Port numbe identifies a soecific process to which an internet or other network message is to be forwarded when it arrives at server.

Q.15: Difference between TCP V/S UDP communications What is session development?

Ans: TCP(Transmission Control Protocol):- Requires an established connection to transmit data.

-> It can guarantee delivery of data to the destination router.

-> Data is read as a byte stream, messages are transmitted to segment boundaries.

-> It is slower than UDP.

-> Does not support Broadcasting.

UDP(User Datagram Protocol):- Connectionless protocol with no requirements for opening, maintaining a connection.

-> Cannot guarantee delivery of data to the destination.

-> UDP packets with defined boundaries, sent individually and checked integrity on arrival.

-> It is faster than TCP.

-> It supports Broadcasting.

Session Development: It is a temporary and interactive information interchange between two or more devices communicating over a network.

Q.16. What is flow control?

Ans: It is a technique that observes the proper flow of data from a sender to receiver.

Flow control is a basically a technique that gives permission to 2 of stations that are working and processing at different speeds to just communicate with one another.

Flow Control is classified into 2 categories:-

1. Feedback-based Flow Control

In this control, sender somply transmits data or information or frame to receiver, then receiver transmits data back to sender

and also allowssender to transmit more amount of data or tell sender about how receiver is processing or doing.

2. Rate-based Flow Control

In this control, When sender sends or transfer data at faster speed to receiver and receiver is not being able to receive data at the speed, then mechanism known as built-in mechanism in protocol will just limit or restricts overall rate at which data or information is being transferred or transmitted by sender without feedback or acknowledgement from receiver.

Q.17: What is the difference between TCP IP model and OSI model?

Ans: TCP IP:- Full form is Transmission Control Protocol/Internet Protocol.

-> It does not provide quality services.

-> It does not mention the services, interfaces, and protocols.

-> It is easier than OSI

-> The smallest size of TCP/IP header is 20 bytes.

OSI:- Full form is Open System Interconnection.

-> It provides quality services.

-> It represents defined administration, interfaces and conventions.

-> It is harder than TCP/IP.

-> The smallest size of OSI header is 5 bytes.

Q.18: What is ARP broadcast?

Ans: ARP stands for Address Resolution Protocol.

It is used to resolve IP addresses into MAC addresses, meaning the IP address is already known but the Mac is not.

The reason why ARP is in need because computers need to know both the IP address and the MAC address of a destination before they can start network communication.

The ARP request uses a unicast address for thesource and a broadcast address for the destination.

Q.19: What is MAC address?

Ans: MAC stands for Media Access Control.

It is a hardware identifier that uniquely identifies each device on a network.

The primary use of a MAC address is to ensure the physical address of a given device.

Q.20: What is ip address? Difference between ipv4 addrss and ipv6 address Assign multiple IPv4 in single network adapter in pc what are network vulnerabilities?

Ans: -> IP stands for Internet Protocol

IP address is a unique address that identifies a device on the internet or a local network.
IP address is a logical address of a device or computer.

-> IPv4: It has 32 bit address length

It supports manual and DHCP address configuration.

In IPv4 end to end, connection integrity is unachievable.

Address representation of IPv4 is in decimal.

Encryption and Authentication facility is not provided.

-> IPv6: It has 128 bit address length.

It supports Auto and renumbering address configuration.

In IPv6 end to end, connection integrity is Achievable.

Address Representation of IPv6 is hexadecimal.

In IPv6 Encryption and Authentication are provided.

Network vulnerabilities are weaknesses or flaws within the system's software, hardware or organizational processes.

It means a flaw in a security system that has the potential to be leveraged by a threat agent in order to compromise a secure network.

Q.21: What is a firewall to use for?

Ans: Firewalls provide protection against outside cyber attackers by shielding your computer or network from malicious or unnecessary network traffic.

If there is no firewalls, that means everyone can h=gain access to their network, and they will have no way of monitoring potential threats and untrustworthy traffic.

Q.22: Wireless router configure for internet connection and wireless security what is wireless access point? And what is wireless extender?

Ans:

-> Wireless Access Point

A WAP is a hardware networking device that allows connecting the devices with the wired network.

WAP is used to create the WLAN, it is commonly used in large offices and buildings which have expanded businesses.

-> A wireless extender expands your home wifi network to give you better coverage and improved connectivity.