**Basic Networking Interview Questions with answer:**

**What is difference between packet switch and circuit switch network?**

To make a baseband network practical for many computers to share, the data transmitted by each system is broken up into separate units called packets. When your computer transmits data it might be broken up into many packets, and the computer transmits each packet separately. When all of the packets constituting a particular transmission reach their destination, the receiving computer reassembles them back into original data. This is the basis for a packet-switching network.

Circuit-switching means that the two systems wanting to communicate establish a circuit before they transmit any information. That circuit remains open throughout the life of the exchange, and is only broken when the two systems are finished communicating. Circuit switching is more common in environments like the public switched telephone network (PSTN), in which the connection between your telephone and that of the person you're calling remains open for the entire duration of the call.

**What is difference between Half-Duplex and Full-Duplex Communications?**

In half-duplex communication data travels in only one direction at a time.

In full-duplex mode two systems that can communicate in both directions simultaneously are operating.

**Which is the most popular international cable standard?**

TIA/EIA-568-B

Describe UTP cable

UTP cable comes in a variety of different grades, called "categories" by the Electronics Industry Association (EIA) and the Telecommunications Industry Association (TIA), the combination being referred to as EIA/TIA.

 Cat 1 :- Used for voice-grade telephone networks only; not for data transmissions

 Cat 2 :- Used for voice-grade telephone networks

 Cat 3 :-Used for voice-grade telephone networks, 10 Mbps Ethernet, 4 Mbps Token Ring,

 Cat 4 :-Used for 16 Mbps Token Ring networks

 Cat 5 :-Used for 100BaseTX Fast Ethernet, SONet, and OC-3 ATM

 Cat 5e:- Used for Gigabit (1000 Mbps) Ethernet protocols

**What is TIA/EIA?**

A cooperative trade association responsible for the "Commercial Building Telecommunication Cabling Standard," also known as EIA/TIA 568, which specifies how network cables should be installed in a commercial site.

**What is attenuation ?**

The progressive weakening of a signal as it travels over a cable or other medium. The longer the distance a signal travels, the weaker the signal gets, until it becomes unreadable by the receiving system

**What is Crosstalk ?**

A type of signal interference caused by signals transmitted on one pair of wires bleeding over into the other pairs. Crosstalk can cause network signals to degrade, eventually rendering them unviable.

**Where would you use cross and straight cable?**

A straight-through cable is used for DTE-to-DCE connections.

 1. A hub to a router, PC, or file server

 2.A switch to a router, PC, or file server

Crossover cables should by used when you connect a DTE to another DTE or a DCE to another DCE.

 1. A hub to another hub

 2. A switch to another switch

 3. A hub to a switch

 4. A PC, router, or file server to another PC, router, or file server

Describe different types of connector used in LAN

RJ-11 ( Registered Jack-11) a four- or six-wire connector primarily used to connect telephone equipment.

RJ-45 (Registered Jack-45) connector is an eight-wire connector that is commonly used to connect computers to a local area network (LAN), particularly Ethernet LANs.

AUI( Attachment Unit Interface.) is the part of the Ethernet standard that specifies how a Thicknet cable is to be connected to an Ethernet card. AUI specifies a coaxial cable connected to a transceiver that plugs into a 15-pin socket on the network interface card (NIC).

BNC stand for British Naval Connector (or Bayonet Nut Connector or Bayonet Neill Concelman)a type of connector used with coaxial cables such as RG-58.BNC connectors are used on both Thicknet and Thinnet.

**What is protocol?**

A set of standards sets of standards that define all operations within a network. There are various protocols that operate at various levels of the OSI network model such as transport protocols include TCP.

**Who develop the OSI modal?**

The International Organization for Standardization (ISO) developed the Open Systems Interconnection (OSI) Reference Model to describe how information is transferred from one machine to another.

**What is Micro segmentation?**

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**What is Micro segmentation?**

Micro segmentation is a term used with switches when each networking device has its own dedicated port on a switch.

**What are the advantages of OSI modal?**

 Defines the process for connecting two layers, promoting interoperability between vendors.

 Separates a complex function into simpler components.

 Allows vendors to compartmentalize their design efforts to fit a modular design, which eases implementations and simplifies troubleshooting

**What are the port number / socket number and Connection Multiplexing?**

Transport layer assigns a unique set of numbers for each connection. These numbers are called port or socket numbers TCP, and UDP, provide a multiplexing function for a device: This allows multiple applications to simultaneously send and receive data.

Lan Card Test Sheet

Also know as Ethernet Card, or NIC Network interface card.

In device manage Reason In LAN card properties

Yellow sign Driver not installed Will not show

Red Cross Disable Show with disable status

No Ethernet option Physical not installed Will not show

At Command Prompt

C:/> ipconfig

Possible out put

 IP address of computer Everything is fine

 Windows ip Configuration Either media is disconnected or LAN disable

C:/> ping <Remote computer ip>

Used to check the physical connectivity

Possible out put

 Reply From ..... Host is up and operational

 Request time out Either firewall is on remote desktop or network plug is loose

 Destination net unreachable There is no route to reach to the remote network