**1. What is a LAN, what characteristics distinguish LANs from other types of networks?**

A LAN is a local area network. They’re geographically limited to their building, they’re fast, they’re private, and it is shared media.

**2. Briefly describe the following LAN contention (access) methods:**

**CSMA/CA**

Listen before sending. A station wishing to transmit, listens to the medium, and transmits only when it is idle. If it is busy, it waits., then repeats step 1. Same thing for collisions.

This means that if 2 devices were to transmit at the same time, the medium will become unusable for the duration of transmission.

**CSMA/CD**

It also listens while transmitting.

**Token Passing**

A station wishing to transmit must wait until it detects a token passing by.

**3. What is the function of the LAN Network Interface Card (NIC)?**

The NIC is the component that allows a device to connect to the network

**4. Why is cabling selection critical in implementing LANs?**

Cabling determines the overall success of the system.

**5. Are there any advantages to using one cable type over another to support a LAN?**

Different cables have different advantages and disadvantages. Category 5 cables, for example, are about 10 times faster than category 3 cables.

**6. Advantage(s) of Intelligent Wire Hubs?**

**7. Describe Broadcast and Multicast addresses?**

These are types of transmissions.

Multicast: A single data packet is copied and sent to a specific subset of nodes on the network. Data is sent to multiple addresses

Broadcast: Single data packet is copied and sent to all nodes of the network. Once the packet is in the network, it makes copies and sends a copy to every node on the network

**8. What are FTP and Telnet?**

FTP – file transfer protocol. Transfer computer files between a client and server on a computer network

Telnet – TCP/IP protocol for accessing remote computers

**9. Distinguish Ethernet DIX V2.0 and 802.3.**

**10. What is the significance of the Ether V2 type field?**