Computer Networks Class 12 Important Questions

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1. What do you understand by the term network?

Answer: The interconnection between two or more devices is known as a network. This network can communicate with other devices and share resources. These resources can be files, information, internet access, printers, etc. The term network means group of computer conected each other using communication medium.

2. Mention any two main advantages of using a network of computing devices.

Answer: The two main advantages of computer netowork are –

- **Resource Sharing:** Computer networks can share resources with other computers, like printers and storage. Files can be shared with other computers using the network.

- **Reduce Cost:** This network can reduce cost, for example if i want to share file to any other organization, we can use interet for sharing file insted of going to the organization physically.

3. What are the key differences between LAN, MAN, WAN, and PAN?

Answer: The key differences between LAN, MAN, WAN and PAN are

- **LAN:** LAN stands for Local Area Network, which basically connects computers within small geographical areas like homes, offices, and schools.
- **MAN:** MAN stands for metropolitan area network, connecting computers within a large geographical area like a city or town.
- **WAN:** WAN stands for Wide Area Network. This type of network connects computers within wide geographical areas, like countries or worldwide.
- **PAN:** PAN stands for personal area network. This type of network uses a very small area, like two mobiles connecting with Bluetooth, etc.

4. What do you mean by node in reference to computer networks?

Answer: A node is a point or device within a computer network that can send, receive or transmit data. like server, desktop, laptop, cellular phones.

5. Define the term topology. What are the popular network topologies?

Answer: The arrangement of computer and other peripherals in a network is called topology. The most popular topologies in computer networks are bus, star and tree.

6. What is the significance of a MAC address?

Answer: The MAC address is known as the physical or hardware address of the device. It is unique address associated with a network adapter. This MAC address is given to the network interface card at the time of manufacturing and thus is a permanent address.

7. How is an IP address different from a MAC address? Discuss briefly.

Answer: IP and MAC addresses have the same purpose but in different ways. The IP address are assigned by the network and can be change, but MAC

addresses are unique hardware address which is assigned by the manufacuture comany and cannot be change.

8. What is DNS? What is a DNS server?

Answer: DNS stands for Domain Name System, Every website having a IP address remembring this IP address is very difficult, DNS helps to convert this IP address to human-friendly web address. For example, if you want to open the https://cbseskilleducation.com website, then the IP address of this website is 192.168.xxx.xxx. Instead of using the IP address, you are using a human-friendly web address (https://cbseskilleducation.com) to open a website; this method is easy to remember. DNS server is a computer that convert this IP address to human-friendly web address.

9. Differentiate between circuit switching and packet switching.

Answer: Circuit switching and packet switching are two different techniques used for data transmission. Circuit switching has a fixed route for the communication. The circuit switching is basically used in voice communication. In Packet switching the data is divided into smaller unit called packets.

10. Explain the concept of bandwidth and data transfer rate.

Answer: The bandwidth refers to the maximum amount of data that can be transmitted over a network connection in a given time. Whereas the data transfer rate refers to the actual speed at which data is transmitted between devices.

11. What is the significance of IP addresses in networking?

Answer: An IP address is very important in a computer network. The IP addresses are assigned to each node in a network that uses the Internet Protocol for communication. Thus, if we know a computer's IP address, we can communicate with that computer from anywhere in the world.

12. Compare SMTP and POP3 protocols.

Answer: SMTP and POP3 are both email protocols. SMTP is used for sending mail, while POP3 is used for receiving emails.

13. Explain the role of TELNET in remote server access.

Answer: Telnet is a network protocol that allows you to connect and communicate with a remote computer using the TCP/IP protocol. It is just like a virtual terminal for communication remotely.

14. What is VoIP, and how does it function?

Answer: VoIP stands for Voice Over Internet Protocol; it is a terminology that allows you to make phone calls using the internet. VoIP converts analogue voice to digital data packets and sends them over the internet.