

# CCA-102: Data Communications

## ASSIGNMENT

1. What are the different types of networks?

Ans: There are mainly 3 types of network: WAN , LAN and MAN. A computer network is set of various computers which are connected for sharing and transferring purposes.

2. Explain the Shielded twisted pair (STP) and Unshielded twisted pair(UTP)

Ans: Shielded twisted pair cable (STP) has the individual pairs of wires wrapped in foil, which are then wrapped again for double protection. Unshielded twisted pair cable (UTP) has each pair of wires twisted together. Those wires are then wrapped in tubing without any other protection.

3. What is difference between baseband and broadband transmission?

Ans: Baseband refers to a single-channel digital system and that single channel is used to communicate with devices on a network. Broadband, on the other hand, is wide bandwidth data transmission which generates an analog carrier frequency, which carries multiple digital signals or multiple channels.

4. What is the difference between a hub, modem, router and a switch?

Ans: A switch transmits data from one device to another in form of frames while a router transmits data from one network to another in form of packets. A hub transmits data from one device to another in form of binary bits.

5. When you move the NIC cards from one PC to another PC, does the MAC address gets transferred as well?

Ans: When you move the NIC cards from one PC to another PC, does the MAC address gets transferred as well? Yes, that's because MAC addresses are hard-wired into the NIC circuitry, not the PC. This also means that a PC can have a different MAC address when another one replaced the NIC card.

6. When troubleshooting computer network problems, what common hardware-related problems can occur?

Ans: When troubleshooting computer network problems, what common hardware-related problems can occur? A large percentage of a network is made up of hardware. Problems in these areas can range from **malfunctioning hard drives, broken NICs, and even hardware startups.**

7. In a network that contains two servers and twenty workstations, where is the best place to install an Anti-virus program?

Ans: In a network that contains two servers and twenty workstations, where is the best place to install an Anti-virus program? The best solution is to install anti-virus on all the computers in the network.

8. Define Static IP and Dynamic IP? Discuss the difference between IPV4 and IPV6.

Ans: Static IP Address and Dynamic IP Address, both are used to identify a computer on a network or on internet. Static IP address is provided by Internet Service Provider and remains fixed till the system is connected to the network. Dynamic IP address is provided by DHCP, generally a company gets a single static IP address and then generates the dynamic IP address for its computers within the organization's network.

9. Discuss TCP/IP model in detail.

Ans: There are four layers of the TCP/IP model: network access, internet, transport, and application. Used together, these layers are a suite of protocols. The TCP/IP model passes data through these layers in a particular order when a user sends information, and then again in reverse order when the data is received.

10. What is a Web Browser (Browser)? Give some example of browsers.

Ans: "A web browser, or simply 'browser,' is **an application used to access and view websites**. Common web browsers include Microsoft Edge, Internet Explorer, Google Chrome, Mozilla Firefox, and Apple Safari.

11. What is a search engine? Give example.

Ans: A search engine is a web-based tool that enables users to locate information on the World Wide Web. Popular examples of search engines are Google, Yahoo!, and MSN Search.

12. What is the Internet & WWW? What are the uses of internet in our daily life?

Ans: The Internet is very much useful in our daily routine tasks. For example, it helps us to see our notifications and emails. Apart from this, people can use the internet for money transfers, shopping order online food, etc.

13. What is an Internet Service Provider? Give some example of ISP in India.

Ans: The examples of some internet service providers are Hathway, BSNL, Tata teleservices, Verizon, Reliance Jio, ACT Fibernet and many more working in India as well as worldwide. Internet service providers or ISPs are responsible for providing services for using the Internet.

14. Discuss the difference between MAC address, IP address and Port address.

Ans: The IP Address and Port Number are two terms used in networking. The difference between IP Address and Port Number is that the IP is a numerical label that helps to identify a specific device in the network while the Port Number is a numerical value assigned to a process in the device.

15. How do we view my Internet browser's history?

Ans: Open the Google Chrome Internet browser. In the upper-right corner of the screen, tap the icon. In the drop-down menu that appears, select History and shown in the image. The page that opens contains your device's history.