

CCA - 102: Data Communications

ASSIGNMENT

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1.) What are the different types of networks?

Ans \Rightarrow There are ~~are~~ mainly three types of network -

(i) LAN (Local Area Network)

(ii) MAN (Metropolitan Area Network)

(iii) WAN (Wide Area

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

Ans \Rightarrow Shielded twisted pair (STP) unshielded twisted pair (UTP) are two types of twisted pair cables used to transmit data in network. STP cables have an additional shielding layer compared to UTP cables, which provides better protection against electromagnetic interference (EMI) and crosstalk.

3.) What is difference between baseband and broadband transmission?

Ans \Rightarrow Baseband transmits a single digital signal over a single channel, while broadband transmits multiple analog signals over multiple channels simultaneously.

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

⇒ Hubs operate at the physical layer switches operate at the data link layer, routers operate at the network layer, and modems operate at the physical layer when converting digital signals to analog signals for transmission over communication channels.

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

⇒ Yes, when you move a Network Interface Card (NIC) from one computer to another, the MAC address associated with that NIC is also transferred. The MAC address is a unique identifier physically embedded in the NIC hardware by the manufacturer and remains tied to the card itself. Therefore, moving the NIC means moving its unique MAC address to the new computer.

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

⇒ Common hardware-related network problems include faulty failing or malfunctioning routers, switches, and modems, as well as issues with cables, network interface cards (NICs), and power supplies.

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

Ans \Rightarrow The best place to install antivirus software in a network with two servers and twenty workstations is on all of the computers, including both servers and workstations.

8.) Define Static IP and Dynamic IP? Discuss ~~and~~ the difference between IPv4 and IPv6

Ans \Rightarrow A static IP address is a fixed, unchanging IP address assigned to a device, while a dynamic IP address can change each time the device connects to a network. IPv4 and IPv6 are two versions of the Internet Protocol (IP) with IPv4 using 32-bit addresses and IPv6 using 128-bit addresses.

9.) Discuss TCP /IP model in detail.

Ans \Rightarrow The TCP /IP model, also known as the Internet Protocol Suite, is a communication model that defines how data is passed from one device to another over the Internet. It is a four-layered model, consisting of the application, transport, Internet, and network access layers.

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

Ans \Rightarrow A web browser is a software application that allows users to access and view web pages, websites, and other resources on the internet. Common examples of web browsers include Google Chrome, Mozilla Firefox, Microsoft Edge, and Apple Safari.

11.) What is a search engine? Give example.

Ans \Rightarrow A search engine is a software system that helps users find information on the internet by scanning, indexing, and retrieving content that matches specific search terms. Popular examples include Google, Bing, and Yahoo.

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

Ans \Rightarrow The Internet is a global network connecting devices and computers worldwide, allowing for communication and data sharing. The World Wide Web (WWW or Web) is a system of interconnected documents and other resources accessed through the Internet, using hyperlinks. In daily life, the internet facilitates communication, access to information, online shopping, entertainment, financial transactions, and remote work, among other things.

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

Ans ⇒ An Internet Service Provider (ISP) is a company that provides individuals and organizations with access to the internet and related services. ISPs typically offer internet access, but may also provide services like domain name registration, web hosting, and email.

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

Ans → To view your Internet browser history, you'll need to go to your browser's History menu. In most browsers, you can find this under a menu option such as "History" or "Browsing Data".