

CCA-102: Data Communications

ASSIGNMENT

1. What are the different types of networks?

A computer network is mainly of four types:

- LAN(Local Area **Network**)
- PAN(Personal Area **Network**)
- MAN(Metropolitan Area **Network**)
- WAN(Wide Area **Network**)

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

The basic difference between UTP and STP is UTP (Unshielded twisted pair) is a cable with wires that are twisted together to reduce noise and crosstalk. On the contrary, STP (Shielded twisted pair) is a twisted pair cable confined in foil or mesh shield that guards the cable against electromagnetic interference

3. What is difference between baseband and broadband transmission?

Whereas **baseband** uses digital signaling, **broadband** uses analog **signals in the** form of optical or electromagnetic waves over multiple **transmission** frequencies. **For signals** to be both sent and received, the **transmission** media must be split into two channels

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

Hubs are "dumb" devices that pass on anything received on one connection to all other connections. **Switches** are semi-intelligent devices that learn which devices are on which connection. **Routers** are essentially small computers that perform a variety of intelligent tasks.

5. 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?

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?

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

Static ip address does not change any time, it means if a **static ip** address **is** provided then it can't be changed or modified. While **dynamic ip** address change any time.

9. Discuss TCP/IP model in detail

- 1) Application Layer
- 2) Transport Layer
- 3) Internet Layer
- 4) Network Interface.

Application layer interacts with an application program, which is the highest level of OSI **model**. Internet layer is a second layer of the **TCP/IP model**. It is also known as a network layer.

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

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

11. What is a search engine? Give example.

Currently, the most popular **and** well-known **search engine** is Google. Other popular **search engines** include AOL, Ask.com, Baidu, Bing, DuckDuckGo, **and** Yahoo.

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

The **Internet** innovated **our daily life**. ... Positive **use** of the **Internet** makes **our lives** easy and simple. The **Internet** provides us useful data, information, and knowledge for personal, social, and economic development and it is up to us to utilize **our** time on the world wide **web** in a productive manner.

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

The examples for some internet service providers are **Hathway**, **BSNL**, Tata teleservices, Verizon, Reliance 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

The main **difference between MAC** and **IP address** is that, **MAC Address** is used to ensure the physical **address of** computer. It uniquely identifies the devices **on a** network. While **IP address** are used to uniquely identifies the connection **of** network with that device take part **in a** network.

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

In any Chrome window, use **the** keyboard shortcut Ctrl+H, or navigate **to the** URL chrome://**history** . Or, click **the** Menu button, which is located near **the** top-right side of **the browser** window, and choose **History**, then **History** again