CCA - 102 : Data Communication

(Assignment)

Q1. What are the different types of network?

Ans. Two basic network types are local-area network (LANS) and wide area network (WANS) LANs · Connect computers and peripheral devices in a limited physical area such as a bussines office, Laboratory or College Compus by means of links.

Types of network :-

- Personal Area Network
- Local Area Network
- Wide Area Network
- System Area Network

Q2. Explain the Shieldedtwisted 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 wraped in taping without any other protection.

Q3. What is difference between baseband and broadband transmission ?

Ans. Baseband :-

Baseband transmission is a data transmission technique in which one signal needs the whole bandwidth of the channel to

transfer the data.

2. Baseband transission signals travel over shorter distances because attenuation is most noticeable at highest frequencies, which causes a signal to travel short distances without losing power.

3. The baseband transmission utilizes digital signalling for signal transmission. In contrast, broadband transmission utilizes analog signalling for transmitting analog signals.

- Broadband Transmission :-

1. In contrast, broadband transmission is a transmission tecnology which many signals with different frequencies send data across a ~~signals~~ singal chance at the same Time.

2. In contrast, broadband transmission does not utilize any digital encoding but it utilize the PSK encoding

3. In contrast, the signals in broad band transmission may Larger distances travel across.

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

Ans. → Hub :-

Hub is the network connecting devices, They help in connect various devices. Hub works at the physical layer and transmits the signal to the port.

→ Modem :- Modems are hardware devices that allow a computer or another device, such as a router or switch, to connect to the

internet, They convert or "modulate an analog signal from a telephone or cable wire to digital data that a Computer can recognize.

→ Routers :-

Router are responsible for sending data from one network to another. Typically, routers today will perform the functionality of both a router and a switch that is the router we have multiple ethernet parts that device can plug into.

→ Switches :-

They use the MAC address of a device to send data only to the part the destination device is plugged into work at Layer 2 (Data link) of the OSI model, which which deals with MAC address

Q5 When you move the NIC cards from one PC to another PC, does the MAC address gets transferred as well?

Ans. Yes, that's because MAC addresses are hardwired into the NIC circuitry, not the PC. This also means that a PC can have a different MAC address when the NIC card was replace by another one

Q6 When troubleshooting Computer network problems, what common hardware-related problems can occur?

Ans. Most common hardware related problems are PaBX, LAN Card, WLAN Card and Wi-Fi AP if it is wireless, Cables, Switches, Routers and wireless controllers. Most

problems are hardware related, a faulty power cable or power supply unit.

Q7 In a network that contains two servers and twenty workstations, where is the best place to install an Anti-Virus program?

Ans. The best solution is to install anti-virus on all the computer in the network. To be more secure install in all the 3 servers, if you want to.

Q-8 Define static IP and Dynamic IP? Discuss the difference between IPV4 and IPV6.

Ans. When a device is assigned a static IP address, the address does not change most devices use dynamic IP addresses, which are assigned by the network when they connect and change over time.

IPV4, Internet protocol version 4 is the standard protocol used most frequently today. IPV6 devices have a fixed IP address or obtain one using a DHCPV6 server.

Q-9 Discuss TCP/IP model in detail.

Ans. TCP/IP Reference Model is a four-layered suite of communication protocols. It was developed by the DoD (Department of Defence) in the 1960s. It is named after the two main protocols that are used in the model, namely, TCP and IP. TCP stands for "Transmission control Protocol" and IP stands for "Internet Protocol".

Q10 What is a web 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.

Q11 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.

Q12. 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.

Q13. 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.

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

Ans. The physical address -- which is also called a media access control or MAC, address -- identifies a device to other devices on the same local network. The internet address -- or IP address -- identifies the device globally. A Network packet needs both addresses to get to its destination.

Q-15. How do we view my internet browser's history?

Ans. 1. on your Android phone or tablet, open the Chrome app chrome.

2. At the top right, tap more and then history If your address bar is at the Bottom, swipe up on the address bar.

3. To visit a site tap the entry. To open the site in a new tab, touch and hold the entry. At the top right tab more.