

CCA-102 : DATA COMMUNICATION

Assignment - 02

Q.1. What are the different types of network?

Ans. Computer network is broadly classified into three types:

(i). Local area network (LAN): LAN is a small and single site network. LAN connects network devices over a relatively short distance. It is a system in which computers are interconnected and geographical area such as home, office, building, school may be within a building or around 1 Km. They also used contain specific connectivity technologies, primarily ethernet and token Ring. Data transfer rate in LAN is of the order 10 to 100 Megabits per second (Mbps). LAN provides a sharing of peripherals in an effective way.

(ii). Metropolitan Area Network (MAN): It is a data network designed for a town or city. It connects an area larger than

a LAN but smaller than a WAN, such as that as a city, with dedication or high performance hardware. Its MAN purpose is to share hardware and software resourced by the various users.

(iii). Wide Area Network (WAN): A WAN is a geographically dispersed collection of LANs. The internet can be considered a WAN as well. If network device called a router connects LANs to a WAN.

Q.2. Explain the shielded twisted pair (STP) and Unshielded Twisted Pair (UTP)

Ans. Shielded Twisted Pair: Shielded Twisted Pair cable encloses the signal-carrying wires in a conducting shield - as a means of reducing the potential of electromagnetic interference. How effective the shielding is depends on the material used for the shield... STP is more expensive than UTP but has the benefit of being able to support higher transmission rates

Over longer distance, STP is used in IBN token ring network.

Unshielded Twisted Pair : Unshielded Twisted Pair is the most common kind of copper telephone wiring. Twisted pair is the ordinary copper wire that connects home and many business computers to the telephone company. Cuts UTP cable is a popular choice for network cable because it meets the European standard for allows data transfer speeds of 100 Mbps.

Q.3. What is difference between baseband and board band transmission?

Ans. Base band is used to describe band with and channels in tell - communication and signal producing base band singed are transmitted without Meetification i.e without any sift in the range for frequency of a signal and are how frequency connected with in the band.

Board-band connection is a high speed Internet connection. It is a wide board

with data transmission with and reliability transport multipal signal and traffic types.

Q.4. What is the different between a hub, Modem, Router and a switch?

Ans. Hub : Hub is like a repeater with multiple ports used to connect the network channels. Its acts as a centralised connection to several computer with the central node or server. It is also known as concentrator but does not amplify the incoming signal.

Modem : Modem is a device that converts digital signal to analog signal (Modulator) at the sender's end and converts backs analog signal to digital signal (demodulator) at the receiver's end, in order to make communication possible via telephone lines. If Modem is always placed between a telephone line and a computer.

Router : Router is a hardware device which is designed to make

take incoming packets. Analyse the packets, merging the packets. To another network interface dropping the packets directing packets to the appropriate locations etc.

Switch: It is a small hardware device that joins multiple computers together within one LAN. Switches work on the data link layer of the OSI model. It helps to reduce overall network traffic. Switches are sometimes called multifport bridges.

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

Ans. Yes, that's because MAC address are hard-wired 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.

Q.6. When trouble shooting computer network problems, What common hardware-related problems can occur?

Ans. A large percentage of network is made up of hardware problems in these area can range from malfunctioning hard drives, broken NICs and own hardware startup.

Q.7. In a network that contains two servers and twenty workstation where is the best place to install an anti-virus program?

Ans. A good firewall. This can stop intrusions, malware unauthorized access etc. before they reach the workstations.

Antivirus software on the servers and at the endpoint workstations should be centrally managed to keep and users updated constantly and to minimize users meddling with the setting. good-antivirus will also protect email clients.

Educated and aware users who: do not casually install download programs; don't click on unknown links; don't fall for phishing emails etc. Establish a strong password policy

for all users.

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

Ans. Static address does not change any times it means if a static IP address is provided then it can't be changed or modified, which dynamic IP address changes any time.

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 1960. It is named after the two main protocols that are used in the model namely TCP and IP.

- (i). Network Interface layer
- (ii). Application layer
- (iii). Transport layer
- (iv). Internet protocol layer

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

Ans. While working on Internet you need a most important software called web Browser. A web browser or simply browser is a Special Software that enables the users to read (view web pages and jump from one web page to another. It is the software that is needed to find, retrieve, view and send information over the internet.

Browsers are of two types:

- (1). Text-Based Web Browsers: Are the Text-Based Web Browsers are the web browsers that support text only i.e. these browsers do not support graphics. e.g. Lynx is a text browsers.
- (2). Graphical-Based Web Browsers: Provided a Graphical user Interface (GUI) where there users can jump from one web page to the other by clicking on the hyper link on a web page e.g. Chrome, Mosaic, Internet Explorer are some of the graphical browser.

The process of using browser to view information on the internet is known as browsing or surfing.

Popular Graphical Web browsing Software:

Some popular web Browsing Software are given below -

- (i). Netscape Navigation
- (ii). Safari
- (iii). Google Chrome
- (iv). Lynx
- (v). Internet Explorer (IE)
- (vi). Mozilla firefox
- (vii). Opera

Q. 11. What is a Search engine ? Give example.

Ans. A Search engine is a program, which is used to find information on the Internet. The Search results are generally presented in a list.

This link is known as a cut list. If you want some special information and do not know on which website it is available, then you can search it on the

internet through the search engine. For a successful search you have to type some words closely related to your target website, these words are called search words.

Popular Search engines

Some of most popular search engines are given below:

- (i). Google
- (ii). AltaVista
- (iii). Yahoo
- (iv). Dogpile
- (v). Lycos
- (vi). Hot Bot
- (vii) Web crawler

Q.12. What is the Internet and WWW? What are the use of internet in our daily life?

Ans. International and network are those two terms that are combined to make a single term internet. It is a network of networks that connect millions of computers together globally forming a

networks in which any computer can communicate with any other computer as long as they both are connected to the Internet. It uses the TCP/IP (Transmission control protocol / Internet Protocol) to serve billions of users worldwide. So, TCP/IP can be called as backbone of Internet.

The Internet is a large ocean of information of resources and services such as interlinked hypertext documents of world wide web (WWW), online chatting, online shopping, online banking, file transfer and sharing, online education and so on.

- (a). World wide web (WWW)
- (b). Web site
- (c). Web page
- (d). Web server
- (e). Web Browser
- (f). Web Address/URL

Q.13. What is an internet and WWW. What are the uses of daily in our life?

Ans. The internet is a handy platform to upload, download and share data. The internet also provides a good source of entertainment with the internet, we can connect with

people all over the world. The internet is also excellent place to do business, for all it helps you reach global users.

Q.14. Discuss the different between MAC address IP address and Port address?

Ans. MAC Address: A media control address is a unique identifier network address in communication within a network segment.

IP Address: A internet protocol address is a numerical assigned to each device connected to a computer network that uses the internet for communication.

Port Address: Port address is the number of the addressing information used to identify the senders and received of message in computer networking. Different port numbers are used to determine what protocol incoming traffic should be directed to.

Q. 15. How do we view my internet browsers history?

Ans. View your browsing history and delete specific sites. In internet explorer select the favorite button select the history tab and choose how you want to view your history by selecting filter from menu. To delete specific sites right click a site from any of these lists and then select delete.