

CCA-102 : DATA COMMUNICATION

ASSIGNMENT-2

Ques 1 What are the different types of network?

Ans Computer network is broadly classified into three types :-

(1) Local area network (LAN) :-

LAN is a small and single site network. A LAN connects network devices over a relatively short distance. It is a system in which computers are interconnected and the geographical area such as home, office, buildings school may be within a building or around 1 km. They also use certain specific connectivity technologies, primarily Ethernet and Token Ring. Data transmission rate in LAN is of the order 10 to 100 Megabit 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 ~~at~~ city. It connects an area larger than a LAN, but smaller than a WAN such that as a city, with dedicated or high performance ~~hard~~ hardware its main purpose is to share hard ware and ~~soft~~ software resources by the various users.

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

These kinds of network use telephone lines communication media. In IP networking the router maintains both a LAN address and a WAN address.

Ques Explain the shielded twisted pair (STP) and unshielded twisted pair (UTP)

Ans Shielded twisted pair :- Shielded twisted pair cable encases the signal-carrying wires encases the signal in a conducting shield as a mean 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 distances. STP is used in IBM token ring networks.

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. Cat 5 UTP cable is a popular choice for network cable because it meets the European standard for allowing data transfer speeds of 100 Mbps.

Ques³ What is difference between baseband and broadband transmission?

Ans Base Band is used to describe band

Browsers are of two types :-

- (i) Text - Based web Browsers :- are the web browsers that support text only i.e. these browsers do not support graphics - eg Lynx is a text browser.
- (ii) Graphical - Based web Browsers :- Provided a Graphical user Interface (GUI) where these users can jump from one web page to the other by clicking on the hyperlink on web page e.g. chrome, Mozilla, Internet Explorer are some of the graphical browsers.

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 softwares are given below

- | | |
|------------------------|-----------------------------|
| (i) Netscape Navigator | (ii) Internet Explorer (IE) |
| (iii) Safari | (iv) Mozilla Firefox |
| (v) Google Chrome | (vi) Opera |
| (vii) Lynx | |

Ques¹) What is a search engine ? Give example

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 list is known as hit list. If you want some special information and do not know on which website it is available then you can use search engine. For a successful search you have to type some words closely related to your target websites. These words are called search words.

popular search engines.

Some of the most popular search engines are given below :

- | | |
|-------------------|--------------|
| (i) Google | (ii) Yahoo |
| (iii) AltaVista | (iv) Dogpile |
| (v) Hot Bot | (vi) Lycos |
| (vii) web Crawler | |

Ques²) What is the Internet and WWW?
What are the uses of internet in our daily life?

Ans) International and network are these

two terms that were combined to make a single term Internet. It is a "network of networks" that connect millions of computers together globally forming a network in which any computer can communicate with any other computer as long as they use the TCP/IP (Transmission Control Protocol) billions of users world wide. So TCP/IP can be called as backbone of Internet.

The Internet is a huge 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 gathering online education and so on.

- (a) world wide web (WWW)
- (b) website
- (c) web page
- (d) web server
- (e) web browser
- (f) web Address / URL

Ques 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. It acts as a centralised connective to several computers with the central node or server. It is also known as concentration 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 back (analog signal to digital signal) (demodulator) at the receiver's end in order to make communication possible via telephone lines. A Modem is always placed between a telephone line and a computer.

Router :- Router is a hardware device that which is designed to take incoming packet, analyse the packet, moving the packet to another network interface, dropping the packets, direct 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 multipoint bridges.

Ques 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 intrusion malware, unauthorized access etc. before they reach the workstations.

Antivirus software on the servers and at the endpoint workstation. This software should be centrally managed to keep and users updated constantly and to minimize user meddling with the settings. Good antivirus will also protect email clients.

Educated and aware users who do not casually install downloaded programs. Don't click on unknown links. Don't fall for phishing emails etc. Establish a strong password policy for all users.

Ques² Define Static IP and Dynamic IP?
Discuss the difference Between IPv4 and IPv6.

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

Ques⁵ 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 addresses 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 replaced by another one.

Ques⁶ When troubleshooting computer network problems, what common hardware-related problems can occur?

Ans A large percentage of a network is made up of hardware. problems in these areas can range from minor

multifunctioning hard drives, broken NTs and even hardware startup.

Ques⁹ 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

Ques¹³ What is an internet and WWW? What are the uses of internet in our daily life?

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 an excellent place to do business for

it helps you reach global users.

Ques¹⁴ Discuss The difference Between MAC address IP address and Port address?

Ans. MAC address ÷ A media control address is a unique identifier network address in communications with in a network segment.

IP address ÷ An Internet protocol address is a numerical assigned to each device connected to a computer network that uses the Internet protocol for communication.

Port address ÷ Port address is the number of the addressing information used to identify the sender and receiver of message in computer network. Different port numbers are used to determine what protocol incoming traffic should be directed to.

Ques¹⁵ How do we view my Internet Browser history.

Ans. View your Browsing history and delete specific In Internet Explorer select

the favorite button. Select the History tab and chose how you want to view your history by selecting filter from menu. To delete specific Duties right click a site from any of these lists and then select Delete.