

CCA-102: DATA COMMUNICATIONASSIGNMENT-2

Ques-1 What are the different types of networks?

Ans Computer network is broadly classified into three types:-

(i) Local area network (LAN) :- LAN is a small and single site network. A LAN connects network like 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 used certain 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 than as a city, with dedicated or high performance hardware. Its main purpose is to share hard ware and software resources by the various users.

Wide Area Network (WAN)  $\div$  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 LANs to a WAN.

These kinds of networks use telephone lines, satellite links, and other long range communication technologies to connect (as communication media). In IP networking, the router maintains both a LAN address and a WAN address.

Ques-2 Explain the shielded twisted pair (STP) and unshielded twisted pair (UTP)

Ans Shielded twisted pair  $\div$  Shielded twisted pair cable

encases the signal-carrying wires in a conducting shield as a means of reducing the potential of electromagnetic interference. More 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 100Mbps.

Ques -3 What is difference between baseband and ~~broad~~ broadband transmission?

Ans Base Band is used to describe band with and channels in tele-communication and signal processing. Base band signal are transmitted without Modulation. i.e without any shift in the range for



frequency of a signal and are how frequency connected with in the band.

Broad band connection is a high speed Internet connection. It is a wide band with data transmission with an ability transport multiple signal and traffic types.

Ques-10) What is a Web browser (BB Browser)?  
Give some example of browsers.

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:-

(i) 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 browser.

(ii) Graphical-Based Web Browsers : Provided a graphical user interface (GUI) where user can jump from one web page to the other by clicking on the hyperlink on a 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             |                             |

Ques-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 hit 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 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 |              |

Ques-12) What is the Internet and WWW?  
What are the uses 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 network 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 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 difference 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 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 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 which is designed to make take incoming packets, analyse the packets, moving the packets to another network interface, dropping the packets directing packets to the appropriate LAN 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 multiport bridges.

Ques-7) In a network that contains two servers and twenty workstations, 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. 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.

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



Ans Static address doesn't 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.

Ques-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 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.

Ques-6 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 malfunctioning hard drives, broken NICs and even hardware startup.



Ques-9 Discuss ~~the~~ 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 Defense) in the 1960s. 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

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

Ans The internet is a handy platform to upload, download and share data. The Internet also provides a great 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.

Ques-14 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 within 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 senders and received of message in computer networking. Different port numbers are used to determine what protocol incoming traffic should be directed to.

Ques-15 How do we view my Internet browsers history?

Ans View your browsing history and delete ~~set~~ specific sites. In Internet Explorer select the favourite button. Select the history tab, and choose how you want to view your history by selecting filter from menu. To delete specific



Dates. right click a site from any of these  
lists and then select date.