

CCA-102 : DATA COMMUNICATION

(ii)

ASSIGNMENT - 2

Ques. 1 What are the different types of Network?

Computer network is broadly classified in to three types:-

(i) 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 such as home, office building or around 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 sharing of peripheral in an effective way.

Ans

(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 a city with dedicated or high performance hardware. Its main purpose is to share hardware and software resources 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. 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 network the router maintains both a LAN address and a WAN address.

Ques.2 Explain the shielded twisted pair [STP] and unshielded twisted pair [UTP]

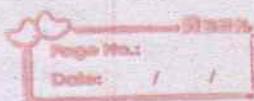
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Ans. Shielded twisted pair :-

Shielded twisted pair cable incurs Due. 3 the signal - carrying varie
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 distances. STP is
used in TBN token ring network.

Unshielded twisted pair :- unshielded
twisted pair

is the most common kind of
copper telephone wiring. Twisted
pair ~~is~~ 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
speed of 100 Mbps. Due. 1



Ques. 3 What is difference between baseband and broadband transmission?

Base Band is used to describe band width and channel in telecommunication and single processing. Base band signal are transmitted without modification 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 support multiple signal and traffic types.

Ques. 10) What is a Web browser (Browser)?

Give some example of browsers.

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

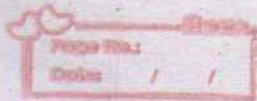
that support text only i.e. these text-based browsers do not support graphic. e.g. Lynx is a ~~text~~ browser.

Ans.

(ii) Graphical-Based Web Browsers :- Provided a Graphical User Interface (GUI) where here user can jump from one web page to the other by clicking on the hyperlink on a web page e.g. Chrome, Mosaic, 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 Software are given below

Netscap Navigator

Internet Explorer

Safari

Mozilla fireflox

Google Chrome

opera

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 result 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~~ 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 the most popular search engines are given below.

- | | |
|----------------|------------|
| 1- Google | 2- yahoo |
| 3- Altavista | 4- Dogpile |
| 5- Hot Bot | 6- Zycos |
| 7- 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 network" that connect millions of computers together 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. 4. 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 channel. It acts as a centralised connection to several computer with the central node as 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 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 take incoming packets analysis the packets moving the packets to another network interface dropping the packets directing packets to the appropriate location etc.

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

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

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

Antivirus software on the servers and at the endpoint workstation. This software should be centrally managed to keep and user updates 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 servers.

Q- Define Static IP and Dynamic IP? Discuss the difference between IPv4 and IPv6?

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

Ans-

Ques- 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 in to 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.

(i)
(ii)
(iii)
(iv)

Ques-

Q- When troubleshooting computer network problems what common hardware related problem can occur?

Ans- A large percentage of a network is made up of hardware problems in there area can range

from malfunctioning hard drives broken NICs and over hardware Startup.

Ques - 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

Ques. 13 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 excellent place to do business for

It helps you reach global users.

Ans.

Ques. 4 Discuss the difference between MAC address, IP address and Port address?

Ans. MAC address :- A media access control address is a unique identifier network address in communication 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 abbreviation information used to identify the sender and receiver of message in computer networking. Different port numbers are used to determine what protocol incoming traffic should be directed to.

Ques. 5 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 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 them select delete.