PAGE NO. XTRA EDGE
DATE / /

CCA-102 - Data communications

ASSIGNMENT

Q:-1 what are the different types of networks?

Ans. Types of Network :-

Computer networks refers to the connection of two or more interconnected networks devices like computers, routers and hubs to share network resources & services available.

Types of network :- On the basis of required data exchange, there are different types of computer networks available to choose from & to design the most efficient network channel.

1. LAN - Network :- The local area network (LAN), is designed to connected in a limited distance. The devices are connected using multiple protocols for proper and efficient of data and services. The data ~~from~~ transmit speed in the LAN network, is relatively higher in comparison to the other networks types, MAN & WAN.

Advantages :- 1. Single central control unit, used to store system data.

2. Tranfer of data and information become easier, and sharing network services.

Disadvantages :- 1. Data security is compromised if the LAN Admin decides to steal datta & information.

2. Requires constant that means for continuing data, services & distributing hardware & resources.

2. MAN Network :- The Metropolitan area Network (MAN), is a network type that encompasses network connection of an entire city, or connection of a small area. The area covered is less in

comparison to WAN, & faces moderate network traffic in the channel.
Man covers a large geographical area, and is also used as an Internet service provider (ISP), and the connection medium is generally used wired for efficient data Transfer. MAN applies many networks devices for smooth data services, & is connected through telephone lines. to provide high speed internet services.

Advantages :- Apply fiber optic cable for high speed data transfer.
2. Connection area covers at most an entire city, or some parts of it. It also allows full-Duplex data exchange.

Disadvantages :- Need for good quality hardware and cost of installing is very high.
2. MAN follows a complex data of networks.
3. WAN Network :- The wide area Network (WAN), is designed to connect devices over large distances like, between state or connection between countries. The connection is wireless in most cases and use radio-towers for communication.
WAN uses satellite medium for connecting multiple network towers. The technology needed is high & very expensive to install. The speed of the WAN data transfer is lower than in comparison to LAN and MAN networks. Due to large distance covered, data often faces errors & loss of information.

Advantage :- Connecting multiple network devices and system uses network towers.
WAN networks covers a large distance like,

establishing connection between multiple parts of a country to each other.

Disadvantages :- The probability of errors occurring is very high, due to multiple connected devices. High cost to setup the WAN network very high.

Q:2 Explain the shielded twisted pair (STP) and unshielded twisted pair (UTP).

Ans. Shielded twisted pair (STP) :- 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) :- unshielded twisted pair cable (UTP) has each pair of wires twisted together. Those wires are then wrapped in tubing without any other protection.

Q:3 what is difference between baseband & broadband transmission?

Ans. 1. Baseband :- Baseband means two different things in the networking field.

1. baseband is related to digital signal transmission where the entire bandwidth of a baseband system. In other words, every single signal would require an exclusive use of the shared medium. when I use the medium, no one else could be able to use it. They must wait their turns. Ethernet is an example of the baseband system. 10 to Gigabit Ethernet, they all contain the word "Base". They are baseband.
2. baseband also refers to the original frequency

range of an analog signal before it is modulated to a different frequency range. An audio signal may have a baseband range from 20 to 20,000 hertz. when it is transmitted on a radio frequency (RF), it is modulated to a much higher frequency range.

2. Broadband :- The term "broadband" technically refers to any type of signal transmission technique that carries two or more different types of data in separate channels. Broadband signals can share one medium. It is like a multiple-lane highway. Two or three vehicles can share the highway side by side at the same time. Broadband is also used as a marketing term for internet access. This meaning is only distantly related to its original technical meaning. In popular usage, broadband internet refers to any high-speed internet connection, such as DSL, cellular cable modem, or satellite. while broadband is related to analog signals.

Q.4 what is difference a hub, modem, router and a switch?

Ans. 1. Hub :- Hub is a simple and cheap Networking Broadcast device works under physical layer of OSI Model That connects Bunch of computers together in a network. But, IT does lots of wastage of Bandwidth.

2. Switch :- Switch is a multicast networking device works under datalink layer of OSI model That connects Bunch of computers or Devices in a

network.

3. Router :- Router is a networking Device works under network layer of OSI model And use to connect two or more Different networks.

4. Modem :- A modem is what brings the internet into your home or business. Modem stands for modulator & demodulator, It is a network device that is placed between the computer system and telephone line. Modulator convert digital signal to analog signal were as demodulator convert analog to digital signal. It allows us to computer to connect internet.

Q:5 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 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 cards was replace by another one.

Q:6 When troubles hooting computer network problems, what common hardware related problems can occur?

Ans. The network consists of hardware problems can very form a defective network card or hard drive malfunctioning a bad starting materials or in correct configuration. Most common hardware related problems are P.C. Bd, Lan card, wifi, APP, if ~~wireless~~ cables, switches, wireless controloss.

Q:7 In a network that contains two servers & twenty workstations, where is the best place to install an anti

Virus Program?

Ans. That's because individual users can access any workstation and introduce a computer virus when plugging in their removable hard drives or flash drives.

Q8. 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 address, which are assigned by the network when they connect and change over time.

IPV4 :- It has a 32 bit address length. In IPV4 end to end connection integrity is unachievable. The security feature is dependent on application. Checksum field is available.

IPV4 can be converted to IPV6.

IPV6 :- It has a 128 bits address length. In IPV6 end to end connection, integrity is achievable. IPSEC is an in built security feature in the IPV6 Protocol. It is not be converted to IPV4.

Q9 Discuss TCP/IP model in detail.

Ans.

Application layer	Process	→ Specific
Transport layer	STP, TCP, UDP	→ Port addresses
Network layer	IP and other Protocols	→ logical address
Data link layer, physical layer	underlying physical networks	→ Physical addresses

PAGE NO. XTRA EDGE
DATE. / /

Q-10 what is a web Browser? Give some example of browsers?

Ans. A web browser is a software application that is used to access the world wide web (www) as we know by everyone on the internet. It is an interface between us and the information available on the web.

Example:- Mozilla

1. Mozilla Firefox, opera Browser, Safari.

Q:11 what is a Search engine? Give example:

Ans. Also known as a web Search engine and an internet Search engine is a computer program that collects and organizes content from all over the internet.

Example: Google, Ask
Amazon, Duck Duck Go
Yahoo! Naver
Bing Baidu.

Q:12 what is the internet & www? what are the uses of internet in our daily life?

Ans. Internet:- The internet is a globally connected. With the internet its possible to access almost any information, communicate with anyone else in the world and much more.

You can do all of this by connecting a computer to the internet, which is also called going online.

www - The world wide web commonly known as the web, is an information system the internet itself is a global, inter connected network of

computing devices. The world wide web is a subject of these interactions and supports websites and URIS.

Uses of In - Banking
E-commerce
Job & Search
Education
E-mail
Home

Q:13 What is an internet provides? Give some example of ISP in india?

Ans. The term internet service Providers (ISP) refers to a company that provides access to the internet to both personal and bussiness customers. ISP make it possible for their customers to surf the web, shop online, friends all for a Fee.

example :- Technologies
MTNL
BSNL
Aircel
Hathway
Tikona
Idea Cellular
Airtel
Atria convergence
Jio

Q:14 Discuss the difference between MAC address IP address and Port address?

Ans. MAC address :- MAC address stands for media Access control address. MAC address is a six byte hexadecimal address NIC cards manufactures Provides the MAC a.

PAGE NO. Xtra Edge
DATE / /

IP address :- The form IP address is an acronym for internet protocal address. This address is either an eight - byte or a six - byte. IP address primarily operates on the network layer.

0:-15 ms. How do we view my internet browsers history ? If you want to view your search history to delete or manage certain website. You can easily do so by navigations to your browser history setting. The steps may very slightly depending on the platform your using. such as windows and MAC or iPhone & Android. This wifi Hax will teach you how to view your google chrome, Mozila, Firebox, Microsoft edge and Safari history on both desktop and mobile platforms.

* - * - * - *