ASSIGNMENT - 2

[CCA-102: DATA COMMUNICATIONS]

Student Name - Shubham

Que1 - What are the different types of network?

Ans The types of the Computer network are

1. LAN - local area Network
2. WAN - Wide area Network
3. MAN - Metropolitan area Network
4. PAN - Personal area Network

Que2 - Explain the sheilded twist pair (STP) and unsheilded twist pair UTP?

Ans - Sheilded twist pair (STP) - It has the indivisual pairs of wire wrapped in foil, which are then wrapped again for double protection

Unsheilded twist pair (UTP) - It has each pair of wire twisted together. Those wire are then wrapped in tubing without any other protection

Que3 - What is difference between baseband and broadband transmition

Ans -

BASEBAND Transmission	BROADBAND Transmission
⊙ Digital Signalling	⊙ Analog Signalling
⊙ frequency division multiplexing is not possible	⊙ Transmission of data is unidirectional
⊙ Baseband is bi-directional transmission	⊙ Signal travelling distance is long
⊙ Short distance Signal travelling	⊙ frequency division multiplexing possible
⊙ eg - Ethernet is using base-	⊙ eg - used to transmit Cable tv to Premises

Que4- What is a difference between a hub, modem, router and switch

Ans —

Modem — It stands for modulating-demodulation. modem are hardware devices that allow computer or another device, such as router or switch, to connect to internet. Simply send traffic from point A to point B without further manipulation.

Routers — Are responsible for sending data from one network to another. work at layer (3) Network of the OSI model, which deals with IP addressing.

Switches — They use the mac address of a device to send data only to the Port the destination device is plugged into. work at layer 2 data link of OSI model. which deals with MAC address

Hub — Unlike switches, hubs broadcast data to all ports which is inefficient, so hubs are basically a multiport repeaters

Que 5 — When you move the NIC cards from one PC to another PC does the mac address get transferred as well?

Ans — When we move the NIC cards from one PC to another PC the mac address get transferred as well because MAC address are hard wired into the NIC circuitry not the — PC.

Que 6- When trouble shotting computer network Problem what common hardware related problem occur?

Ans - A large Percentage of a Network is made up of hardware: Problem in these area can range from malfun ctioning hard devices broken NIC and even

Que 7- In a network that Contains two servers and 20 workstations, where is best place to install an antivirus Program

Ans - Putting antivirus software on an internet border device, wether the device is an email server or firewall, is the next best option.

Que 8- Define Static IP and Dynamic IP ? Discuss the difference between IPV4 and IPV6

Ans — Static IP :- An Internet Protocol address is an unique number assigned to each Computer on internet. A Computer on the Internet Can have a static IP address, which means it stays over the time.

Dynamic IP :- A dynamic IP address is an IP address that an ISP lets you use temporarily. If a dynamic address is not in use, it Can be automatically assigned to a diffrent device.

IPv 4	IPv 6
⊙ It stands for internet Protocol version 4	⊙ It stands for internet Protocol version 6
⊙ IPv 4 has 32 bit address length	⊙ IPV6 has 128-bit address length
⊙ It Can generate 4.29×10^9 address space	⊙ It Can generate 3.4×10^{38} address space
⊙ Address representation of IPV4 is an decimal	⊙ Address representation of IPv 6 is hexadecimal
⊙ IPV4 has header of 20-60 bytes	⊙ IPV6 has header of 40 bytes fixed

Que 9 - Discuss TCP/IP model in detail

Ans - TCP/IP is a four layered Suite of Communication Protocol. It was developed by the DOD (Department of defence) in 1960. It is named after the two mains Protocol that are used in the model namely, TCP and IP

The four layers in the TCP/IP Protocol Suite are

- Host-to network layer - It is the lowest layer that is Concerned with the Physical transmission of data
- Internet layer - It defines Protocol for logical transmission of data over the network
- Transport layer - It is responsible for error free end to end delivery of data
- Application layer - This is topmost layer and defines the interface of host programs with the transport layer service This layer include all high level Protocols like Telnet, DNS, HTTP, FTP etc.

Que 10 - What is web browser? Give some eg of browsers.

Ans - A web browser is application Software for accessing the world wide web. When the user follow URL of a web page from particular website, the web browser retreives the necessary Content from the website web server, then display the Page on the users device.

The examples of web browsers are

- Google chrome
- Firefox
- Internet explorer
- Safari
- Opera
- Chromium.

Que 11- What is Search engine? Give example

Ans- A search engine is a web-based tool that enables users to locate information on the world wide web. Popular examples of search engine are Google, Yahoo and MSN engine

Que 12- What is the Internet and WWW? What are the uses of Internet in our daily life.

Ans - Internet is a global network of networks. Internet stands for international network. Internet is mean of Connecting of Computer to any other Computer anywhere in the world.

WWW stands for world wide web. world wide web which is a Collection of information which is access by the internet.

Uses of the Internet in our daily life is :-

- Uses of internet in Education
- Internet use to speed up daily task.
- Use of Internet for daily shopping.
- Internet for research and development.
- Business Promotion and innovation.
- Communication

Que 13- What is internet service Provider? Give Some example of ISP in India

Ans- A Company that Provides Subscribers with access to Internet is known as internet service Provider. The eg of ISP in India are :-

- Jio
- Airtel
- VI
- BSNL
- Reliance.

Que14- Discuss the difference between MAC address, IP address and Port address.

Ans –

MAC Address	IP address	Port address
⊙ Media access Control address	⊙ Internet Protocol address	⊙ Port are represented by 16-bit numbers
⊙ It has 48 bits (6 byte) hexadecimal address	⊙ It has 32 bit and 128 bits address	⊙ The Port no. from 0-1023 are restricted because they are reserved for the use of well known protocols like HTTP and FTP
⊙ ARP Protocol can retrieve MAC address of a device	⊙ RARP Protocol can retrieve IP address of a device	

Que15- How do we view my Internet browser history?

Ans – In any browser window, use the keyboard shortcut Ctrl+H or the navigation to the URL chrome/history or click the menu button, which is locate near the top right side of the browser window and chose history and then history again.