DATA COMMUNICATION – ASSIGNMENT – 2

1. What are the different types of networks?

TYPES OF INTERNET

- PAN (personal area network)
- LAN (local area network)
- MAN (metropolitan area network)
- WAN (wide area network)

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

SHIELEDED TWISTED PAIR (STD)

Shielded twisted pair cabling acts as a conducting shield by covering the four pairs of signal – carrying wires as a means to reduce electromagnetic interference there are a variety of different types of **STD** cables such as a foil twisted pair and a shielded foil twisted pair

UTP STANDS FOR UNSHIELDED TWISTED PAIR CABLE

UTP cable is a 100 ohm copper cable that consists of 2 to 1800 unshielded twisted pairs surrounded by an by an outer jacket have no metallic shield this makes the cable small in diameter but unprotected against electrical interference.

3.What is difference between baseband and broadband transmission?

DIFFERENCE BETWEEN BASEBAND AND BROADBAND TRANSMISSION

Baseband transmission is a data transmission technique in which one signal needs the whole bandwidth of the channel to transfer the data in contrast broadband transmission is a transmission technology in which many signals with different frequencies send data across a single channel at the same time.

4. What is the difference between a hub modem router and a switch?

DIFFERENCE BETWEEN A HUB MODEM ROUTER AND A SWITCH

A Hub is a basic device and simply works as a broadcaster when it comes to data transmission it transmits data in the form of electrical signals a **Router** sends data in the form of a packet and uses the **IP** address for data transmission hub is operated on physical layer of OSI model while switch is operated on data link layer of **OSI** model hub is a broadcast type transmission while **Switch** is a unicast multicast and broadcast type transmission. ***M*odem** is a computer hardware device that converts data from a digital format into a format suitable for an analog transmission.

5. When you move the NIC cards from one PC to another PC does the MAC address gates transferred as well?

Yes that's becaus**e -** addresses are hard wired into the NIC circuitry not the not the pc this also means that a pc can have a different mac address when the NIC card was replace by another one.

6. When troubleshooting computer network problems what common hardware related problems can occur?

Most common hardware related problems are PaBX LAN card WLAN card and Wi – fi AP if it is wireless cables switches router and wireless controllers most problems are hardware related a faulty power cable or power supply unit sometimes RAM needs to be upgraded or VGA cable properly connected.

7. In a network that contains two servers the twenty workstations where is the best place to install an anti -virus program?

It is not possible to run antivirus programs simultaneously on a single computer even though users may be tempted to try to implement what they might regard as dual protection there are good reasons why trying to operate two different antivirus products will normally cause difficulties.

8.Define static IP and Dynamic IP? Discuss the difference between IPV4 and IPV6.

DIFFERENCE BETWEEN STATIC AND DYNAMIC IP ADDRESS

DHCP (DYNAMIC HOST CONFIGURATION PROTOCOL) is used to generate dynamic IP address static IP address does not get changed with time dynamic IP address can be changed any time static IP address can be changed any time static IP address is less secured.

IPV4:

IPv4 stands for Internet Protocol version 4. It is the underlying technology that makes it possible for us to connect our devices to the web. Whenever a device accesses the Internet, it is assigned a unique, numerical IP address such as 99.48.

IPV6:

IPv6 is the newest version of internet protocol formulated by the Internet Engineering Task Force (IETF), which helps identify and local endpoint systems on a computer network and route online traffic while addressing the problem of IPv4 address depletion due to prolonged internet use worldwide

9.Discuss TCP/IP model in detail.

The TCP/IP model is a four layer model that divides network communications into four distinct categories or layers the model is often referred to as the TCP/IP stack the four important layers are the application layer the transport layer the network layer and the link layer. TCP/IP allows computers on the same network to identify and communicate with each other. TCP/IP is a two-layer protocol, with the transport layer (TCP) responsible for reliable end-to-end communication and the

Internet layer (IP) accountable for routing packets from the host to the host. The TCP/IP model defines how devices should transmit data between them and enables communication over networks and large distances. The model represents how data is exchanged and organized over networks.

10.What is a web browser? Give some example of browsers.

A web browser is a type of software that allows you to find and view websites on the internet even if you didn't know it youre using a web browser right now to read this page there are many different web browsers but some of the most common ones include **google chrome** safari and **Mozilla firefox**.

11.What is the search engine ? give example?

A search engine is a software program that helps people find the information they are looking for online using keyword or phrases search engines are able to return results quickly even with millions of websites online by scanning the internet continuously and indexing every page they find.

- Google
- Bing
- Yahoo
- Yandex
- Baidu
- Ask.com.
- Naver

12.What is the internet & WWW? What are uses of internet in our daily life?

The Internet is a global network of billions of computers and other electronic devices. With the Internet, it's possible to access almost any information, communicate with anyone else in the world, and do much more. You can do all of this by connecting a computer to the Internet, which is also called going online.

- Online booking & orders
- Cashing transaction
- Education
- Online banking & trading
- Research
- Electronic mail
- Job search
- Social networking

13. What is an internet service provider? Give some example of ISP in India.

An Internet service provider is an organization that provides services for accessing, using, managing, or participating in the Internet. ISPs can be organized in various forms, such as commercial, community-owned, non-profit, or otherwise privately owned.

An internet service provider (ISP) is a company such as AT & T Verizon Comcast or spectrum that provides internet access to company's families and even mobile users.

- AIRTEL
- BSNL
- JIO
- ACT
- VODAFONE
- RELIANCE
- HATHWAY
- YOU BROADBAND

14.Discuss the difference between MAC address IP address and port address.

MAC_ADDRESS:

A MAC (**Media Access Control) address, sometimes referred to as a hardware or physical address, is a unique, 12-character** alphanumeric attribute that is used to identify individual electronic devices on a network. An example of a MAC address is: 00-B0-D0-63-C2-26.

IP ADDRESS

An Internet Protocol (IP) address is a unique numerical identifier for every device or network that connects to the internet. Typically assigned by an internet service provider (ISP), an IP address is an online device address used for communicating across the internet.

PORT ADDRESS

The IP address: We use this to uniquely identify the machines that run the processes over the internet. The port address (port number): We use this to identify the processes uniquely on a machine. This number can range from 0–65535.

15.How do we view my internet browser's history?

- On the computer open chrome
- In the address bar enter @ history
- Press tab or space you can also click search history in the suggestions
- Enter keywords for the page you previously visited
- Select the page from the list.