

# ASSIGNMENT - II

## DATA COMMUNICATIONS.

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## ASSIGNMENT-2 DATA COMMUNICATIONS

1) what are the different types of Networks?

⇒ PAN (personal Area Network)

⇒ LAN (Local Area Network)

⇒ MAN (metropolitan Area Network)

⇒ WAN (wide Area Network)

2) Shielded twisted pair (STP) and unshielded twisted pair cable?

⇒ STP has the individual pairs of wires wrapped in foil, which are then wrapped again for double protection.

⇒ most commonly used twisted pair cable.

3) D/B baseband and broadband transmission?

Baseband transmission	Broadband transmission
Digital transmission	Analog transmission
transmit single signal at a time with very high speed	transmit several simultaneous using different frequency.



4) what is the difference between a hub, modem, router and a switch?

Hubs	unlike switches, hubs broadcast data to all ports, which is inefficient. So hubs are basically a multipoint repeaters.
modem	Stands for "modulating - demodulating". modems are hardware devices that allow a computer or another device, such as router or switch to connect to the internet.
Routers	Responsible for sending data from one network to another. work at layer 3 (Network) of the OSI model, which deals with IP addresses.
Switch	They use the MAC address of a device to send data only to the port destination device is plugged into.

5) when you move the NIC cards from one pc to another pc, does the MAC address gets transferred as well?  
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 replace by another one.



6) when troubleshooting computer network problems, what common hardware-related problems can occur?

PABX, LAN card, WLAN card and WIFI AP if it is wireless, cables, switches, Routers and wireless controllers. most problems are hardware related, a faulty power cable or power supply unit.

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

The best solution is to install anti-virus on all the computers in the network.

8) Define static IP and dynamic IP? Discuss the difference between IPv4 and IPv6?

=> when a device is assigned a static IP address, the address does not change. most devices use dynamic IP addresses, which are assigned by the network when they connect and change over time.

=> the main difference between IPv4 and IPv6 is the address size of IP addresses. the IPv4 is a 32-bit address, whereas IPv6 is a 128-bit hexadecimal address.



9) Discuss TCP/IP model in detail?

TCP/IP stands for Transmission Control Protocol / Internet Protocol and is a suite of communication protocols used to interconnect network devices on the internet.

10) what is a web browser (Browser)? Give some examples of browsers?

A web browser is an application used to access and view websites.

Eg: Microsoft Edge, Google Chrome, Mozilla Firefox.

11) what is a search engine? example?

A search engine is a web-based tool that enables users to locate information on the world wide web.

Eg: Google, Yahoo!, and MSN Search.

12) what is an Internet & WWW? what are the uses of internet in our daily life?

The world wide web (WWW) is a combination of all resources and users on the internet that are using the Hypertext Transfer Protocol (HTTP)

uses:

Email, sharing of files, News, watch movies & songs.

13) What is an Internet Service provider? Give some example of ISP in India.

An Internet Service provider (ISP) is a company such as AT&T, Comcast, or Spectrum that provides Internet access to companies, families and even mobile users.

E.g: Airtel, BSNL.

14) Difference between MAC address, IP address & port address.

⇒ A MAC address is assigned to the network interface card by the manufacturer and is used for communication within the local area network.

⇒ An IP address is used for communication within the local area network and for communication between networks.

⇒ Port addresses are used as part of IP communication to determine which program the communication is to or from.

15) How do we view my Internet browser's history?

on your 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.