ASSIGNMENT - 2

TOPIC - DATA COMMUNICATION

BY

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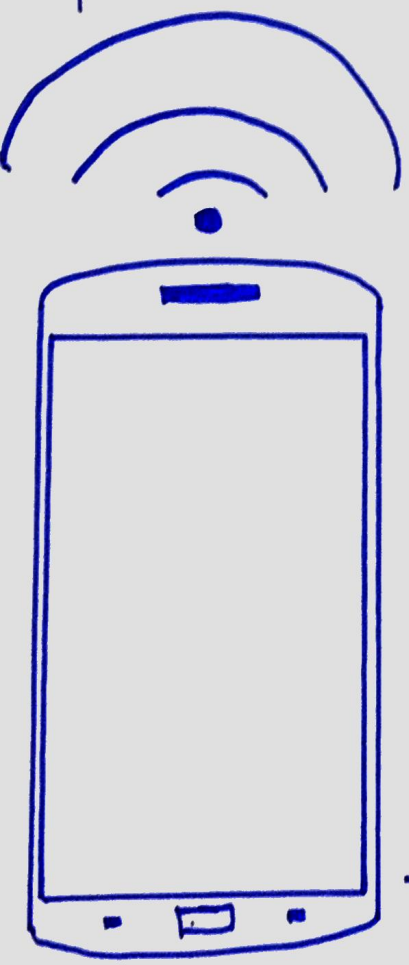
CCA



1) TYPES OF NETWORKS

PAN - PERSONAL AREA NETWORK

The smallest and basic type of network, a PAN is made up of wireless modem, printers and, revolves around one person in one building.

LAN - LOCAL AREA NETWORK

LANs are the most frequently discussed networks, one of the most common one, most orginal and one of the simple types of network.

WLAN - Wireless Local Area Network.

WLANs make use of wireless network technology, such as Wi-Fi

CAN - CAMPUS AREA NETWORK.

It is larger than LANs but smaller than metropolitan area networks. These type of network Seen in universities, large k-12 school or small busiron

MAN - METROPOLITAN AREA NETWORK.

MANs span an entire geographic area. It is larger than LANs but smaller than WANs

2) STP

* STP - shielded Twisted Pair
* It is a twisted pair cable enclosed in foil or mesh shield.
* It is less susceptiable to noise and crosstalk.
* It is necessarily required in groud cable connection
* Installation of cables is difficult comparatively.
* It is moderately expensive and provides high data rates

UTP

* Unshielded Twisted Pair - (UTP).
* It is a cable with wires that are twisted together,
* It is high comparatively
* It is not required in ground cable connection
* It easily installed as cables are smaller, lighter and flexible.
* It is slow comparatively in data rates.
* It is cheaper and doesn't require much maintenance.

3)

BASEBAND TRANSMISSION	BROADBAND TRANSMISSION
① Baseband transmission is a transmission technique that one signal requires the entire bandwidth of channel to send data	① It is a transmission technique that many signals with multiple frequencies transmit data through a signal channel simultaneously
② It is used in digital signals.	② It is used in analog signals
③ It work well with bus topology	③ It is used with a bus as well as tree topology.
④ Signals can be travelled over short distances	④ Signals can be travelled over long distances without being attenuated
⑤ It is a type of digital signalling.	⑤ It a a type of analog signalling.

4) HUB, MODEM, ROUTER AND SWITCH.

* The router and modem are integrated into one device, switch can directly connect to it.
* Traffic from a switch will need to go to modem when it comes out of your network.

* While both modems and switches are very common network devices, they are much less intertwined than modem and router

5) NIC CARD

Yes, that's because MAC addresses are hard-wired into the NIC circuitry not the PC. This also means that PC can have a different MAC address when another one replaced the NIC card.

6) TROBLESHOOTING COMPUTER

A large percentange of a network is made up of hardware. Problems in these areas can range from malfunctioning hard drives, broken NICs and even hardware startups.

7) AN ANI-VIRUS PROGRAM

An anti virus program must be installed on all servers and workstations to ensure protection.

8) STATIC IP

A static IP address is simply an address that doesn't change. It is assigned by ISP - Internet Service Providers.

DYNAMIC IP

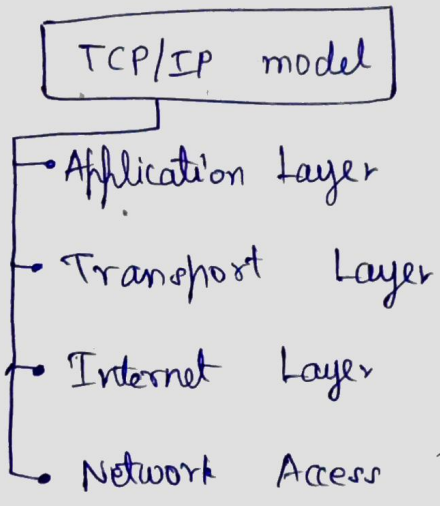
A dynamic IP address is an IP address than an ISP lets you use temporarily. It is assigned using either DHCP or PPPoE.

IPV4	IPV6
① IPV4 is deployed in 1981.	① IPV6 is deployed in 1981.
② 32-bit IP address	② 128-bit IP address.
③ Numeric dot-decimal notation.	③ Alphanumeric hexadecimal notation.
④ DHCP or manual configuration	④ Supports. autoconfiguration
⑤ 4.3 billion addresses addresses must be reused and masked.	⑤ 7.9×10^{28} addresses every device can have a unique address

a) TCP / IP MODEL

TCP/IP model is a four-layered suite of communication protocols. TCP stands for Transmission Control Protocol and IP stands for Internet Protocol. 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

The TCP/IP model is a concise version of the OSI model.



b) WEB BROWSER

Web browser is a application software for accessing the World Wide Web. It requests a web page from particular website.

EXAMPLE

Microsoft Internet Explorer, Google chrome, Mozilla FireFox, and Apple Safari

11) SEARCH ENGINE

A search engine is a software program that helps people find the information they are looking for online using keywords or phrases

EXAMPLE

Google, Yahoo, Bing, Baidu and DuckDuckGo

12) INTERNET

Internet is a vast network that connects computers all over the world

WWW

The WWW - World Wide Web commonly known as the Web, is an information system where documents and other web resources are identified by URL Uniform Resource locator.

USES OF INTERNET

① Digital transactions

② Money Management.

③ Internet for Research and Development.

④ Internet Use to speed up Daily Tasks

⑤ Use of Internet for shopping.

13) INTERNET SERVICE PROVIDER

An Internet service provider is an organization that provides many different services for accessing, using participating in Internet

EXAMPLE OF ISP INDIA

Jio, Airtel, Vi, BSNC, Verizon and Spectrum

15) BROWSER:

① At the top right, tap more ⋮ > History

- If your address bar is at the bottom, swipe up on the address bar. Tap history ⏲

② To visit a site, tap the entry

- To open the site in a new tab, touch and hold entry. At the top right, tap More ⋮ > Open in new tab.

- To copy the site, touch and hold the entry. At the top right, tap more :
  > copy link.

14)

MAC ADDRESS	IP ADDRESS	PORT ADDRESS
① It's layer of two address	① Its layer of three address	① Port address is discribed as numbers
② It can't be changed.	② It can be changed at any time	② Port number can be most 16 bits.
③ Sometimes, it is called as physical address	③ Sometimes, it is called as logical address.	③ It is identifies at application on a user computer.
④ Hardcoded into the device at manufacturing	④ Assigned to device through software configuration	④ Port number is facilitated by the Os.
⑤ It is media access control Address.	⑤ It is Internet Protocol Address.	⑤ All TCP ports can be viewed by applying the command "netstart".