Assignment 2: Data Communication

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Q1. What are the different types of networks?

Answer: The different types of network are:

1.Personal Area Network(PAN)

2.Local Area Network (LAN)

3.Wireless Local Area Network (WLAN)

4.Campus Area Network (CAN)

5.Metropolitan Area Network (MAN)

6.Wide Area Network (WAN)

7.Storage Area Network (SAN)

8.System Area Network (SAN)

9.Pasive Optical Local Area Network (POLAN)

10. Enterprise Private

 Network (EPN)

11. Virtual Private Network (VPN)

Q2. Explain the Shielded twisted pair (STP) and Unshielded twisted pair (UTP).

Answer: Shielded twisted pair is a type of wiring two conductors of a single circuit are twisted together for the purposes of improving electromagnetic compatibility.

        Unshielded twisted pair are widely used in the computer and telecommunications industry as Ethernet cables and telephone wires. In an UTP cable, conductors which form a single circuit are twisted around each other in order to cancel out electromagnetic interference(EMI) from external sources.

Q3. What is the difference between baseband and broadband transmission?

Answer: Baseband refers to a single-channel digital system and that single channel is used to communicate with devices on a network.

Broadband, is the wide bandwidth data transmission which generates an analogy carries frequency, which carries multiple digital signals or multiple channels.

Q4. What is the difference between a hub, modem, router, and a switch?

Answer: 1. Hub: Hub is just a connector and connects the wires coming forms different slides. There is no signal processing or regeneration.

2. Switch: Switch is a point to point communication device. It operators at the data link layer of OST model. It uses switching table top find out the correct destination.

3. Router: Router is a network router directs the data packets along networks. A router has a minimum of two networks, usually LANs or WANs or a LANs or its ISP.

4 Modem: A modem is short for a modulator-demodulator.

code and Its function is to facilitate the transmission of data, by converting an analogue signal to decoding digital information.

Q5. When you move the NIC cards from one PC to another PC, does the MAC address gets transferred as well?

Answer: Yes, that is because MAC addresses are hardwires into the NIC circuitry, not the PC. This also means that a PC can have a different MAC address when another one replaced the NIC card.

Q6. When troubleshooting computer network problems, what common hardware-related problems can occur?

Answer: A large percentage of a network is made up of hardware. Problem is these areas can range from malfunctioning hard drives, broken NICs and even hardware startups.

Q7. In a network that contains two servers and twenty workstations, where is the best place to install an Anti-virus program?

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

Q8. Define static IP and Dynamic IP? Discuss the difference between IPV4 and IPV6.

Answer: Static IP: A computer on the Internet can have a static IP address, which means it stays the same overtime, or a dynamic IP address, which means the address can change over time.

Dynamic IP: A Dynamic IP is a temporary address for devices connected to a network that continually changes over time.

Difference between IPV4 and IPV6:

IPV4 and IPV6 are internet protocol version 4 and internet protocol version 6. IP version 6 is the new version of Internet Protocol, which is way better than IP version 4 in terms of complexity and efficiency.

Q9. Discuss TCP\IP model in detail.

Answer: TCP\IP Reference Model is a four-layered suite of communication protocols. It was developed by the DoD (Development of Defense) in the 1960s. It is named after the two main protocols that are used in the model namely, TCP and IP. TCP stand for Transmission Control Protocol and IP stand for Internet protocols.

Q10. What is Web Browser? Give some example of browsers.

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

Some example of browsers includes Microsoft Edge, Internet Explorer, Google Chrome, Mozilla Firefox and Apple Safari.

Q11. What is search engine? Give example.

Answer: A search engine is a web based tool that enables users to locate information on the World Wide Web(WWW).

Example: Google, Yahoo and MSN Search.

Q12. What is the Internet and WWW? What are the uses of internet in our daily life?

Answer: Internet is a vast network that connects computers all over the world. Through the Internet, people can share information and communicate from anywhere with an Internet connection.

World Wide Web (WWW) is an interconnected system of public webpages accessible through the Internet.

Uses of Internet in our daily life: The Internet is very much useful in our daily routine task. For example, it helps us to see our notification and emails. A part from this, people can use the internet for money transfer, shopping, order online food, etc.

Q13. What is Internet Service Provider? Give some example of ISP in India.

Answer: An Internet Service Provider is an organization that provides services for accessing using or participating in the Internet.

Examples of ISP in India are: Airtel, BSNL etc.

1Q4. Discuss the difference between MAC address, IP address and Port address.

Answer: A MAC address is assigned to the network interface card by the manufacture and is used for communication within the local area network. It is globally unique address.

An IP address is used for communication within the local area network and for communication between internet. It is uniquely Identifies the connection of the network with that device takes part in a network.

Port address of the service within the system. A port number uniquely Identifies a network based application on a computer.

Q15. How do we view my Internet browser's history?

Answer: In the lower-left corner of the browser window, tap and hold the back arrow. The page that opens contains your browser history.