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CCA-102: Data Communications

Assignment

(1) What are the different types of network?

Ans.
- LAN (Local Area Networking)
- WLAN (Wireless local Area Networks)
- WAN (Wide Area Network)
- MAN (Metropolitan Area Network)
- CAN (Campus Area Networks)

2.) Explain the Shielded twisted Pair (STP) and Unshielded twisted Pair (UTP).

STP is also the type of twisted Pair which stands for shielded twisted Pair. In STP grounding cable is required but in UTP grounding cable is not required. In shielded Twisted Pair much more maintenance is needed therefore it is costlier than Unshielded twisted Pair (UTP). UTP is the type of twisted Pair cable. It stands for Unshielded twisted Pair. Both Data and voice are transmitted threght UTP because its frequency range is suitable. In UTP grounding cable is not necessary also in UTP much more maintenance is not needed therefore it is cost-effective.

(3) What is difference between baseband and Broadband transmission

	Baseband transmission	Broadband transmission
(1)	Transmit digital singnals	Transmission analog signals
(2)	To boost signal strength, use repeaters.	To boost signal strength, use amplifiers.

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	Baseband transmission	Broadband transmission
3)	Support TDM based Multiplexing	Support FDM Based Multiplexing
4)	Use coaxial, twisted-Pair and Fiber-optic cables	Use radio waves, coaxial cables and fiber optic cables.
5)	Mainly used in Ethernet LAN Networks	Mainly used in cable and telephone Networks.

4) What is the difference between a hub, Modem, router and a switch?

Ans.

	Modem	Router
(1)	Brings Internet to Your Home	Brings Internet to your devices
2)	Has Public IP address	Assigns local IP addresses
(3)	Uses a WAN Network	Creates a LAN Network.

#	HUb	Switch
(1)	Hubs operate at the Physical layer.	Switches function at the Data link layer.
(2)	Hubs use Broadcast type transmission	Switches use Unicast multicast as well as Broadcast type transmiss
(3)	Hubs do not provide Packet filtering.	Switches provide Packet filterning

(5) When you move the NIC cards from one PC to another PC does the MAC address gets transferred as well?

Ans. When you are moving your NIC card then its obvious that your MAC address will be changed to that computer where you are inserting your NIC card.

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(6) When troubleshooting computer network problems, what common hardware-related problems can occur?.

A. Most common hardware related problems are PaBX, LAN Card, WLAN Gard and Wi-Fi AP If it is wireless, cables, Switches, Routers and Wei wireless Controllers.

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

A. Antivirus Program is a dedicated software that helps in detecting cyber threats such as malware, spyware and Phishing. The best solution is to install anti-virus on all the computers in the network.

8) Define Static IP and Dyamic IP? Discuss the difference between IPV4 and IPV6.

A. Static IP: Static IP address does not get changed with time. Static IP Address is less secured.

Dynamic IP: Dynami IP address can be changed any time. Dynamic address being volatile in nature is less risky.

IPV4	IPV6
IPV4 is composed of 32-bit address lenght and is the fourth version of the Internet Protocal (IP).	IPV6 is composed of 128-bit address length and is the latest updated version of the internet Protocal (IP)

(9) Discuss TCP/IP Model in detail.

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A. TCP/IP Model is a four-layered suite of communication protocols. It was developed by the DoD (Department of Defence) in the 1960s. It is named after the two main protocols that are used in the model namely, TCP and IP. TCP stands for Transmission Control Protocol and IP stands for ~~Control~~ Internet Protocol.

(10) What is a Web Browser (Browser)? Give some example of Browsers?

A. A web Browser is a software application that is used to access the world wide web (WWW) OR as known by everyone on the Internet. It is an interface between us and the information available on the web.
Examples :- Mozilla firefox, Google Chrome, Microsoft Internet Explorer, Apple Safari and Opera.

(11) What is a search engine? Give example.

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

(12) What is the Internet and WWW? What are the uses of Internet in our daily life?

A. The internet helps us with facts and figures, information and knowledge for personal, social and ~~one~~ economic development. There are many uses of the internet.

however, the use of the internet is our daily life depends on individual requirements and goals. Uses of Internet.
(1) Education (2) Business (3) Banking (4) Research (5) Emails (6) Social Media (7) Job Search (8) E-Paper and News (9) File Transfer (10) Home.

(13) What is an Internet service Provider? Give some examples of ISP in India.

A. An Internet service provider (ISP) is a company such as AT and T, verizon, comcast or spectrum that providers Internet access to companies, families and even mobile users. ISP use fiber-optics, st satellite, copper wire, and other forms to provide Internet access to its customers.

Examples: Hathway, BSNL, Tata, teleservices, verizon, Reliance Jio, ACT Fibernet and many more working in India as well as worldwide.

(14) Discuss the difference between MAC address, IP address and port address.

A. The main difference between MAC and IP address is that MAC Address is used to ensure the physical address of the computer. It uniquely identifies the devices on a network. While IP addresses are used to uniquely identifies the connection of the network with that devices takes part in a network.

(15) How do we view my Internet Browser's History?

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A. Browsing history is a list of recently visited web sites. The concern here is more about privacy than general security. If you do not delete your browsing history, then anyone with access to system may be able to see what sites you visited.