CCA-102: Data Communications
ASSIGNMENT

❖ 1.What are the different types of networks?

Ans: LAN and WAN are different types of networks.

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

Ans: Shielded twisted pair (STP) and Unshielded twisted pair (UTP) are two types of cables that are used to transmit data and voice. UTP has each pair of wires twisted together and wrapped in tubing without any other protection. STP has individual pairs of wires wrapped in foil, which are then wrapped again for double protection. STP reduces electromagnetic interference (EMI) & has higher data transmission capacity than UTP.

❖ 3. What is difference between baseband and broadband transmission?

Ans: Baseband transmission is a data transmission. To send or receive one signal it covers whole bandwidth but broadband transmission 've multiple frequencies to receive or send multiple data or files.

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

Ans:

HUB	MODEM	ROUTER	SWITCH
Hubs are used to connect local network.	Modem is used to connect communication channels.	Routers are used to connect different network, also local network.	Switch used to connect multiple networks.

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

Ans: Yes. Because MAC addresses are hard wired into NIC circuitry, not the PC. It means PC have different MAC address when the NIC card was replace by another one. MAC address is a physical address.

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

Ans: Problems can occur like LAN Card, WLAN Card and Wi-Fi AP if it is wireless, Cables, Switches, Routers and Wireless Controllers.

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

Ans: The two servers. Because servers are more vulnerable attacks than workstation.

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

Ans: Dynamic IP address are assigned by the network when they connect and change over time. Dynamic IP address allocated by router and subject to change while static IP address configured and never change. Static IP addresses are used for servers, routers & switches.

IPV4	IPV6
The address space is 32 bits.	The address space is 128 bits.
The length of header is 20 bytes.	The length of header is 40.
Internet Protocol Security (IPS) with respect to network security optional.	Internet Protocol Security (IPS) with respect to network is mandatory.

❖ 9. Discuss TCP/IP model in detail.

Ans: TCP/IP model is a suite communication protocols that are used to describe how data actually communicated between one device or another within computer network. It contains four layers of OSI model like; Application layer, Transport layer, Internet layer, Network access layer.

❖ 10. What is a Web Browser (Browser)? Give some examples of browsers.

Ans: A web browser, or simply browser, is an application used to access and view websites. Ex; Microsoft edge, Internet explorer, google chrome, Mozilla Firefox, Apple safari.

❖ 11. What is a search engine? Give example.

Ans: A search is engine is software program that provides information according to user query. Google is the main search engine of the whole world.

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

Ans: The Internet is a global network of websites and online services that enables people to access information, communicate, collaborate, transact, educate, and entertain themselves. Almost all internet users go online to conduct their ordinary day-to-day activities, such as shopping, banking, learning, working & socializing.

❖ **13. What is an Internet Service Provider? Give some examples of ISP in India.**

Ans: **An internet Service Provider (ISP) is a company that provides internet access to businesses and consumers. ISPs may also provide other services such as email services, domain registration, web hosting, & virtual private services (VPS). Ex; Reliance Jio, Airtel, Tata Docomo, Idea, Vodafone & BSNL.**

❖ **14. Discuss the difference between MAC address, IP address and Port address.**

Ans:

MAC address	IP address	PORT address
MAC address is physical address.	**IP address is internet network address.**	**Through Port address we send or receive all data.**
It is used at data link layer of OSI model.	**It is used at network layer of OSI model.**	**It is used at transport layer of OSI model.**

❖ **15. How do we view my Internet browser's history?**

Ans: **1. Open a web browser such as, Microsoft Edge, Google Chrome, Mozilla, or any web browser.**

2.Click the menu icon. The appearance of this menu icon is different between browser.

3.Click history.

4. Review browsing history. Click a folder in the History menu to view history from a certain date, or you can right-click a folder (or item) and click Delete to remove it from history.