CCA-102: Data Communications

1. What are the different types of networks?

They are 11 types of networks.

1. Local Area Network [LAN]
2. Personal Area Network [PAN]
3. Wireless Area Network [WAN]
4. Campus Area Network [CAN]
5. Metropolitan Area Network [MAN]
6. Wide Area Network [WAN]
7. Stroage Area Network [SAN]
8. Passive Optical Local Area Network [POLAN]
9. Enterprise Private Network [EPN]
10. Virtual Paivate Network [VPN]
11. System Area Network [SAN]

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2. Explain the shielded twisted pair (STP) and unshielded twisted pair (UTP)

STP	UTP
Shielded Twisted Pair (STP) has the individual pairs of wires wrapped in foil, which are then wrapped again for double protection.	Unshielded Twisted Pair (UTP) has each pair of wires twisted together. Those wires are then wrapped in tubing without any other protection.

3. What is difference between baseband and broadband transmission.

Baseband Transmission	Broadband Transmission.
It is a data transmission technique in which one signal needs the whole bandwidth of the channel to transfer the data.	It is a ~~data~~ transmission technology in which many signals with different frequencies send data across a single channel at same time

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

Hub belongs to layer 1 of an OSI model that means it is a physical layer device.
Switch belongs to layer 2 of an OSI model that means it is a data link layer device.
Router belongs to layer 3 of an OSI model that means it is a network layer device.

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

Yes, if we move the NIC cards from one PC to another PC, then the MAC address also gets transferred, because the MAC address is

hard wired into the NIC circuit, not the PC. This also known as PC can have a different MAC address when another one replaces the NIC cards.

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

Some network probles can arise from faulty hardware, such as routers, switches, firewalls, and even from unexpected usage patterns, like network bandwidth spikes, changes in app configuration, or security breaches.

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

Antivirus should be on each computer, if you implement server and node base anti virus that will be best for controlling. There are no special problems just because you are two server and 20 computer.

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

Static IP address is provided by the Internet Service Provider and remains fixed till the system is connected to the network. Dynamic IP address is provided by the DHCP, Generally a company gets a single static IP address and then generates the dynamic IP address for its computers within the organization network.

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9. Discuss TCP/IP model in details.

There are four layers of the TCP/IP model: network access, internet, transport and application. Used together, these layers are a suite of protocols. The TCP/IP model passes data through these layers in a particular order when a user sends information and then again in reverse order when the data is received.

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10. What is a Web Browser? Give some example of browsers.

A web browser is a type of software that allows you to find and view websites on the Internet. There are many different web browsers, but some of the most common ones include Google chrome and Mozilla Firefox.

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11. What is a search engine? Give example.

A search engine is a web-based tool that enables users to locate information on the World Wide Web.

Ex- Google, Yahoo!.

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

The internet helps us with facts and figures information and knowledge for personal, social and economic development. There are many uses of the internet, however, the use of the internet in our daily life depends on individual requirements and goals.

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

An Internet Service Provider is an Organization that Provides Services for accessing using, managing or Participating in the Internet.

Ex- BSNL, Jio, Reliance

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

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 device takes Part in a network.
