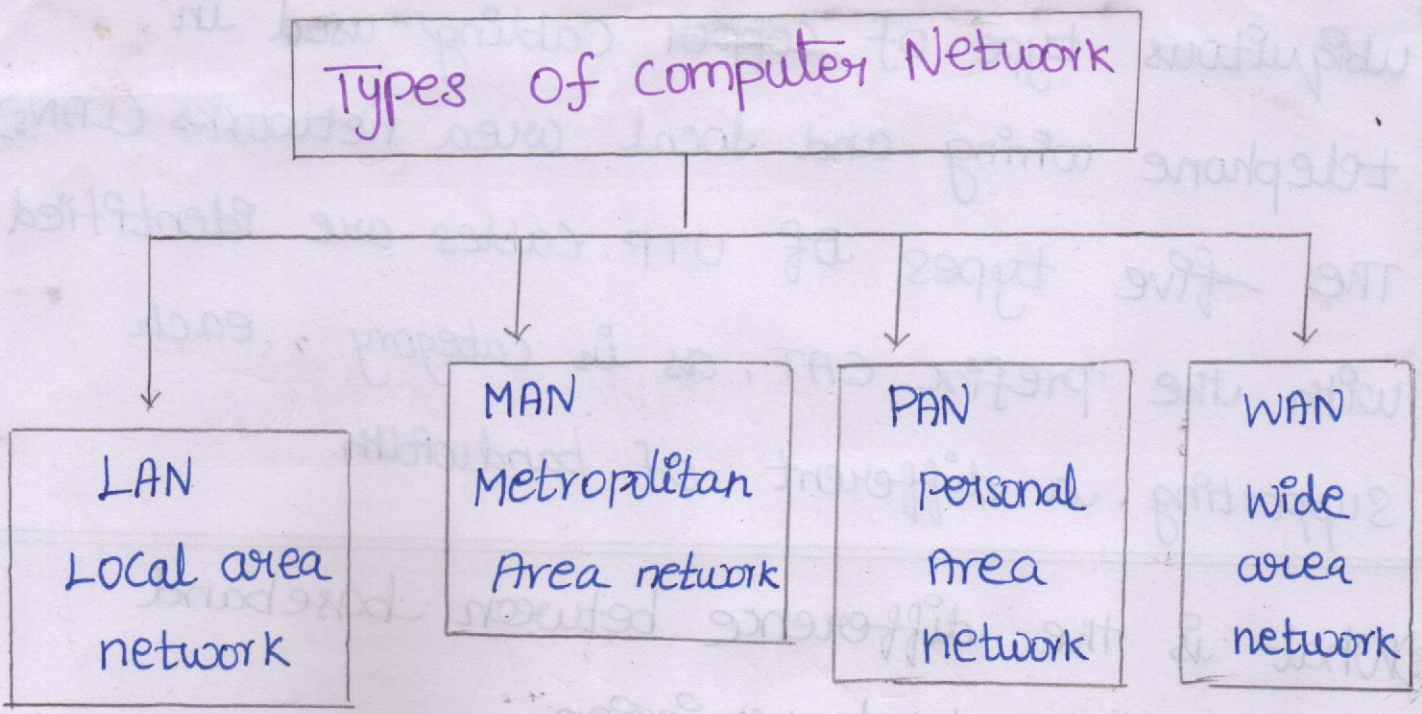
CCA - 102 :

DATA COMMUNICATIONS

ASSIGNMENT

1) What are the different types of networks?



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

STP :-

* Spanning Tree Protocol (STP) is a layer 2 network protocol used to prevent looping within a network topology. STP was created to avoid the problems that arise when computers exchange data on a local area network (LAN) that contains redundant paths.

UTP :-

* Unshielded twisted pair is a ubiquitous type of copper cabling used in telephone wiring and local area networks (LANs). The five types of UTP cables are identified with the prefix CAT, as in category, each supporting a different of bandwidth.

3) What is the difference between baseband and broadband transmission.

* The prior difference between baseband transmission and broadband transmission is that in the baseband transmission the whole bandwidth of the cable is utilized by a signal of single. Conversely, in the broadband transmission, multiple signals are sent on multiple frequencies simultaneously using a single channel.

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

HUB :-

* It is the broadcast device
* It connects devices in the same network.
* only one device can send data at a time.
* Does not store any device information.

Switches :-

* Requires inter VLAN routing
* Multicast data packets requiring complex configuration.
* operate at layer two (Data link layer) of the OSI model
* Maintains MAC address in a lookup table.
* Can be used in the wired network only.

Router :-

* Connects devices from different networks
* Multiple devices can send data at the same time
* Uses IP address to transfer data

Modem :-

* A modem is used to connect to the internet. A router acts as a gateway to the computer network and is placed between a modem and a switch.

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

b) When troubleshooting computer network problems, what common hardware-related problems can occur?

* Some network problems 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.

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

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

8. Define static Ip and Dynamic Ip? Discuss the difference between IPV4 and IPV6.

* When a device is assigned a static Ip address, the address does not change. Most devices use assigned by dynamic Ip addresses, which are assigned by the network when they connect and change over time.

The IPV4 and IP V6 is the address size of Ip addresses. The IPV4 is a 32-bit address, IPV6 is a 128-bit hexadecimal address.

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9. Discuss TCP/IP model in detail.

* TCP/IP allows computers on the same network to identify and communicate with each other. TCP/IP is a two-layer protocol, with the transport layer (TCP) responsible for reliable end-to-end communication and the internet layer (IP) accountable for routing packets from the host to the host.

10. What is a web browser ? Give some examples of browser.

* A web browser is a type of software that allows you to find and view websites on the internet. Even if you didn't know it, you're using a web browser right now to read this Page! There are many different web browsers, but some of the most common ones include google chrome, safari and Mozilla firefor.

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11. What is search engine ? Give example

* 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 & WWW? What are the uses of Internet in our daily life?

* The internet is very much useful in our daily routine tasks. for example, it helps us to see our notifications and emails. Apart from this, People can use the internet for money transfer, shopping order online food, etc.

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13. What is an internet sevice provider? Give some example of ISP in India.

* An internet service provider (ISP) is a company such as AT&T, Verizon, Comcast, or Spectrum that provides internet acces to companies, families, and even mobile users. ISPs use fiber-optics, satellite, copper wire, and other forms to provide internet access to its customers.

14. Discuss the difference between MAC address Ip address and port address.

* A MAC address is responsible for local identification and an IP address for global identification. A MAC address consists of 12 hexadecimal digits, usually grouped into six pairs separated by hyphens.

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15. How do we view my internet browser's history?

1. On your computer, open chrome
2. In the address bar, enter @ history.
3. press tab or space. You can also click search history. in the suggestions.
4. Enter keywords for the page you previously visited.
5. Select the Page from the list.