CCA-102: Data Communications

ASSIGNMENT

1.

- Personal Area Network (PAN) ...
- Local Area Network (LAN) ...
- Wireless Local Area Network (WLAN) ...
- Campus Area Network (CAN) ...
- Metropolitan Area Network (MAN) ...
- Wide Area Network (WAN) ...
- Storage-Area Network (SAN) ...
- System-Area Network (also known as SAN)

2. STP and UTP Cables
   Shielded twisted pair cable (STP) has the individual pairs of wires wrapped in foil, which are then wrapped again for double protection. Unshielded twisted pair cable (UTP) **has each pair of wires twisted together**. Those wires are then wrapped in tubing without any other protection.
3. The major difference between broadband transmission and baseband transmission is that **the baseband transmission uses the complete bandwidth for transmitting the signals and occupy the whole cable** while in broadband transmission, at the same time, multiple signals can be transmitted using multiple frequencies using only .
4. A hub works on the physical layer (Layer 1) of OSI model while Switch works on the data link layer (Layer 2). ... A switch can join **multiple computers** within one LAN, and a hub just connects multiple Ethernet devices together as a single segment. Switch is smarter than hub to determine the target of the forwarding data.
5. 74) 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 are hard-wired 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.
6. 88) When troubleshooting computer network problems, what common hardware-related problems can occur? **A large percentage of a network is made up of hardware**. Problems in these areas can range from malfunctioning hard drives, broken NICs, and even hardware startups
7. In a network that contains two servers 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. Static IP addresses

An Internet Protocol (IP) address is a unique number assigned to each computer on a network. Just as a street address determines where a letter should be delivered, an IP address identifies computers on the Internet. If your computer is hosting a web server, its IP address is what identifies it to the rest of the Internet.

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

When you sign up for Google Fiber for small business, you can choose to have no static IPs (that is, dynamic IPs for all your devices), one static IP, or multiple static IPs. The number of static IPs available is shown on the screen when you sign up for service. If you sign up for static IPs, we will assign addresses to you when your service is installed and activated.

If you sign up for multiple static IPs with your Fiber service, you **must** use your own router.

You can see examples of network configurations that use static IPs.

9. ***TCP/IP*** Reference ***Model*** is a four-layered suite of communication protocols. It was developed by the DoD (Department of Defence) in the 1960s.
10. "A web browser, or simply 'browser,' is an application used to access and view websites. Common web browsers include **Microsoft Edge, Internet Explorer, Google Chrome, Mozilla Firefox**, and Apple Safari.
11. 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. Today, the internet has become unavoidable in our daily life. Appropriate use of the internet makes our life easy, fast and simple. The internet **helps us with facts and figures, information and knowledge for personal, social and economic development**.
13. The examples of some internet service providers are **Hathway, BSNL, Tata teleservices, Verizon, Reliance Jio, ACT Fibernet** and many more working in India as well as worldwide. Internet service providers or ISPs are responsible for providing services for using the Internet.
14. The main difference between MAC and IP address is that, **MAC Address is used to ensure the physical address of computer**. It uniquely identifies the devices on a network. While IP address are used to uniquely identifies the connection of network with that device take part in a network.
15. **Android phone or tablet running Google Chrome**
    - Open the Google Chrome Internet browser.
    - In the upper-right corner of the screen tap the. icon.
    - In the drop-down menu that appears, select history and shown in the image.
    - The following page contains your device's history.