

Poonam

Topic... Data Communication

Date...

Assignment

102

Data Communication

Ques 1) What are the different types of networks?

Ans 1: Personal Area network (PAN)

2) 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 SAN)

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

Ans 2:1

SHIELDED TWISTED PAIR

Shielded twisted pair (STP) has the individual pairs of wires wrapped in foil which are then wrapped again for double protection.

UNSHIELDED TWISTED PAIR

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- Unshielded twisted pair cable (UTP) has en-pair of wires twisted together. These are then wrapped in tubing without any other protection.

Ques 3) What is difference between baseband and broadband transmissions?

Ans 3) 1) Broadband $\Rightarrow$ System use modulation technique to reduce the effect of noise in the environment. Broadband unidirectional transmission using combination of Phase and amplitude modulation.

2) Baseband $\Rightarrow$ is a digital signal is transmitted on the medium using one of the signal codes like NRZ, RZ Manchester bi-phase - M Code etc. is called baseband transmission.

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S. No	BASEBAND Transmission	BROADBAND Transmission
1.)	In baseband transmission the type of signalling used is digital.	In broadband transmission the type of signalling used is analog.
2.)	Baseband transmission is bidirectional in nature.	Broadband transmission is unidirectional in nature.
3.)	Signals can only travel over short distance.	Signal can be travelled over long distance without being attenuated.
4.)	It works well with bus topology.	It is used with a star as tree topology.

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

Ans 4.) 1) HUB $\Rightarrow$ Unlike switches, hub broadcast data to all ports, which is inefficient so hubs are basically a multipoint repeaters.

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2. MODEM $\Rightarrow$ Stands for modulating demodulating. These are hardware devices that allow a computer or another device, such as a router or switch, to connect to the internet. They convert or "modulate" an analog signal from a telephone or cable. digital data (1s and 0s) that a computer can recognize.

3. ROUTER $\Rightarrow$ They use the MAC address of a device to send data only to the port the destination device is plugged into wire at layer 2 (data link) of the OSI model which deals with MAC addresses.

4. SWITCHES $\Rightarrow$ Are responsible for sending data from one network another.

Typically routers today will perform the functionality of both a router and switch.

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that will have multiple ethernet ports
that devices can plug into,

- Ques 5:1 When you move the NIC card from one PC to another PC does the MAC address gets transferred as well?
Ans: MAC addresses are burned into the NIC card and transfer with the network adapter.

Having said that, I can't think of an even sent modem as that won't

let you change it to whatever you want in the configuration of the device. I've changed MAC addresses of computers many times over the years, usually to fix stupid crap like assigning a software license to a particular MAC address worthless because you can easily change it. If I want to move it to a new server I'm just gonna change it rather than deal with the trying to correct any more.

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Ques 9 Discuss TCP/IP model in detail?

Ans Introduction to the TCP/IP Model: The TCP/IP model is a part of the Internet Protocol Suite. This model acts as a communication protocol for computer networking and connects hosts on the Internet. It is a concise version of the OSI model and comprises four layers in its structure.

Ques 10 What is a web browser (browser)? Give some example of browser?

Ans A web browser or browser for short is a computer software application that enables a person to locate, retrieve, and display content such as web pages, images, video, as well as other files on the world wide web. Browser work behind every web page (URL), allowing the browser to identify the resource and locate the web server.

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Ques 8 (1) Define Static IP and Dynamic IP
Discuss the difference between IPv4
and IPv6.

STATIC IP ADDRESS

Workstation

WEB
SERVER

Ques 9 (2)

DYNAMIC IP ADDRESS

Workstation

DHCP
Server

Web
server

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Ques 6: When troubleshooting Computer network Problems what common hardware - related Problems can occur?

Ans: A large percentage of a network is made up of hardware. Problem in these areas can range from malfunctioning hard drives broken NICs and even hardware startups.

Ques 7: In a network that contains two servers and twenty workstations, where is the best place to install an anti-virus Program.

Ans: An Anti-virus Program must be installed on all servers and workstations to ensure protection. That's because individual users can access any workstation and introduce a computer virus. When plugging in their removable hard drive or flash drive.

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Example of Browsers → Internet explores
Google chrome, Mozilla
Firefox, Safari etc.

Ques 11.1

What is a search engine? Give examples.

Ans 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.

Ques 11.2

What is the internet & www? What are the uses of internet in our daily life?

Ans There are many uses of the Internet, however the uses of the internet in our daily life depends on individual requirements and goals.

- Uses of the Internet in Education.
- Internet the research & development.
- Digital transactions.
- Money management.