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Page _____
Date _____
(CA 102 : Data Communication)

(Assignment-2)

Q1 What are the different types of networks?

- Ans 1) PAN (Personal Area Network)
2) LAN (Local Area Network)
3) WAN (Wide Area Network)
4) MAN (Metropolitan Area Network)

Q2 Explain the Shielded twisted Pair (STP) and Unshielded twisted Pair (UTP)

Ans 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. These wires are then wrapped in tubing without any other protection.

Q3 What is the difference b/w baseband and broadband transmission?

- | Baseband Tran | Broadband Tran |
|---|---|
| 1) Digital Signalling | 1) Analog Signalling |
| 2) Frequency division multiplexing is not possible. | 2) Transmission of data is unidirectional. |
| 3) E.g. Ethernet is using baseband for LAN. | 3) E.g. Used to transmit cable TV to premises |

Q4 What is the difference b/w a hub, modem, router and a switch?

Ans A Hub :- A hub transmits data from one device to another in form of binary bits.

Modem :- Modem are used to connect to the internet while hubs are used in Local Area Networks. A modem is used as an interface b/w a digital and analog network.

Router :- A Router transmits data from one network to another in form of packets.

Switch :- A switch transmits data from one device to another in form of frames.

Q5 When you move the NIC cards from one PC to another PC, does the MAC address get transferred as well?

Ans Yes that's because MAC address are hardwired into the NIC circuitry, not the PC. This also means that a PC can have a different MAC address when another one replaces the NIC card.

Q6 When trouble shooting computer network problems, what common hardware-related problems can occur?

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

Q7 In a Network that contains two servers and twenty workstations where is the best place to install an Anti-virus program?

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

Q8 Define Static IP and Dynamic IP? Discuss the difference b/w IPv4 and IPv6?

Ans When a device is assigned a static IP address, the address does not change. Most devices use dynamic IP addresses, which are assigned by the network when they connect and change over time. The main difference b/w IPv4 and IPv6 is the address size of IP address. The IPv4 is a 32 bit address whereas IPv6 is a 128-bit hexadecimal address space and it contains a simple header as compared to IPv4.

Q9 Discuss TCP/IP model in detail?

Ans It stands for Transmission Control Protocol / Internet Protocol. The TCP/IP model is a concise version of the OSI model. It contains four layers unlike the seven layers in the OSI model.

Q10 What is a Web Browser? Give some examples of Browsers?

Ans A Web Browser or simply 'Browser' is an application used to access and view websites. Common Web Browsers include Microsoft Edge, Google Chrome, Apple Safari, Internet Explorer, Opera Mini and Mozilla Firefox.

Q11 What is a search engine? Give Examples?

Ans A search engine is a web-based tool that enables user to locate information on the world wide web. Popular examples of Search Engine are Google, Yahoo and MSN search.

Q12 What is the Internet and WWW? What are the uses of Internet in our daily life?

Ans The World Wide Web or Web for short are the pages you see when you're at a device and you're online. But the internet is the network of connected computers that the web works on as well as what emails and files travel across. Think of the the Internet as the roads that connect towns and cities together. The Internet is very much useful in our daily routine tasks.

E.g; it helps us to see our notifications and emails. Apart from this, people can use the internet for money transfers, bill pay, online shopping, online order, etc.

Q13 What is an Internet Service Provider? Give some examples of ISP in India.

Ans An Internet Service Provider is an organisation that provides services for accessing, using or participating in the Internet. Internet service providers can be organisations in various forms such as commercial, community-owned, non-profit or otherwise privately owned.

The examples of some Internet Service providers are BSNL, TATA tele services, Verizon, Reliance Jio and many more working in India as well as worldwide. Internet Service Providers or ISP are responsible for providing services for using the Internet.

Q14 Discuss the difference b/w MAC addresses, IP addresses and Port Addresses?

Ans MAC Address stands for Media Access Control address. IP Address stands for Internet protocol Address. MAC address ensure that physical address of the computer is unique. IP address is a logical address of the computer and is used to uniquely locate computer connected via a network.

Q15 How do we view many Internet Browser's history?

Ans In the lower-left corner of the Browser window top and hold the back arrow. The page that opens contains your browser's history.