Case Study 1:

Web server is a special computer system running on HTTP through web pages. The web page is a medium to carry data from one computer system to another. The working of the web server starts from the client or user. The client sends their request through the web browser to the web server. Web server takes this request, processes it and then sends back processed data to the client. The server gathers all of our web page information and sends it to the user, which we see on our computer system in the form of a web page. When the client sends a request for processing to the web server, a domain name and IP address are important to the web server. The domain name and IP address are used to identify the user on a large network.

1. Web servers are:

1. IP addresses

2. Computer systems

3. Webpages of a site

4. A medium to carry data from one computer to another

🡪1) Computer Systems

2. What does the webserver need to send back information to the user?

1. Home address

2. Domain name

3. IP address

4. Both b and c

🡪4) both b and c

3. What is the full form of HTTP?

1. Hypertext Transfer Protocol

2. Hypertext Transfer Procedure

3. Hyperlink Transfer Protocol

4. Hyperlink Transfer Procedure

🡪1) Hypertext Transfer Protocol

4. The translates internet domain and host names to IP address

1. Domain name system

2. Routing information protocol

3. Google

4. Network time protocol

🡪1) Domain Name System

5. Computer that requests the resources or data from other computer is called as computer \_\_

1. Server

2. Client

3. None of the above

4. a and b

🡪2) Client

6. DNS stands for:

1. Domain Name Security

2. Domain Number System

3. Document Name System

4. Domain Name System

🡪4) Domain Name System

7. What is the format of IP address?

1. 34 bit

2. 32 bit

3. 16 bit

4. 64 bit

🡪2) 32 bit

Difference Between LAN, MAN, WAN Questions

1. What is the difference in geographical coverage between a LAN and a MAN?

🡪LAN stands for Local Area Network and MAN stands for Metropolitan Area Network. LAN covers small geographical area such as it is used in connecting devices within organization , building, hospital, campus, etc. MAN is used in networks that connects devices within a cities .

1. How does a WAN differ from a MAN in terms of purpose and size?

🡪MAN stands for Metropolitan Area Network and WAN stands for wide area network. MAN covers a larger area such as cities. An organization having multiple branches in multiple cities then they can use MAN. Whereas WAN covers larger area that MAN as WAN is used to connect devices from different countries and all around the globe.

1. What are the differences in ownership between LAN, MAN, and WAN?

🡪LAN is a small geographical area covering network so it is managed by a single organization, college. MAN is a comparatively leather area than LAN then the MAN is managed by many Service providers. WAN is larger area covering network among all . It is managed by many organization, many service providers etc .

1. How do transmission speeds typically compare between LAN, MAN, and WAN?

🡪As the data is transferred over a physical layout of a network in form of bit. An speed is directly dependent on the distance it covered. So due to smaller area covered by LAN , data transmission speed is highest. MAN the distance becomes comparatively larger then speed decrease due to coverage of large and long distance . The speed of WAN is generally lower than MAN due coverage and bits are travelled longer distance.

1. What are the key differences in congestion levels among LAN, MAN, and WAN?

🡪Because LAN covers smaller geographical area then there are less density of devices are connected over a network at a local scope. So the congestion is lower. Whereas on MAN the network traffic increases as no. of devices are connected. So congestion level is relatively higher than LAN. WAN has high number of congestion level because it connects web server all around the globe so this network handles and facilitates the request all corners of the world.

1. How does propagation delay differ between a LAN and a WAN?

🡪Because LAN covers smaller geographical area and hence stream of transmissions of bits occurs faster than MAN because of the coverage and longevity of the distance travelled by bits over a network and hence propagation delay in LAN is lower as compared to MAN.

Difference Between Network Topologies Questions

1. How does physical topology differ from logical topology in networking?

🡪Logical topology - revolves around data transmission speed, less error contained data They are no consideration of possibilities with data transmission . Physical topology is all about of network devices and cables connected over a network. All considerations are considered such as cost, maintenance, attenuation etc.

2. What is the difference in device connectivity between a bus topology and a ring topology?

🡪In Bus topology , A main hub is connected with multiple devices. Single device is connected to hub can send and receive data through hub only. In bus topology if there are 10 devices then 10 cables are required . If in this central hub is deactivated then whole network comes to halt. In ring topology, a device is connected to other devices and its physical appearance is circular . if there are 3 computers then 3 cables are required. In this if a device get defaulted then other devices cant communicate with each other.

3. How does a star topology differ from a mesh topology in terms of fault tolerance?

🡪Star topology - all devices are connected to central hub and if it fails then whole network fails. In Mesh topology data transfer can occurs through alternate path when a device fails.

4. What are the differences between a tree topology and a hybrid topology in

structure and application?

🡪Tree - incorporates star and bus topology and mesh incorporates two or more different topologies in their implementation. This mixture are preferred at larger organization environments.

5. How does a ring topology differ from a mesh topology in terms of redundancy?

🡪Star topology has devices connected within network and then the transmission is unidirectional and then if a single computer fails then whole network stops communicating with each other. Mesh topology allows for robust fault tolerance and it allows other computers to communicate even if single device gets failure in network.