Network Essentials Chapter 10 Review

Name : _____

1. In the OSI model, layer 5 is Session, Layer 6 is Presentation, Layer 7 is Application.

2. In the TCP/IP, the equivalent is one layer, the Application Layer.

3. The Session Layer creates and maintains dialogs between source and destination applications.

It also handles exchange of information between applications.

4. The Presentation Layer involves coding and conversion, compression, encryption and decryption of transmitted data.

5. The protocols used in the Application Layer are:

- Domain Name Service Protocol (DNS) – resolve internet names to IP addresses
- Telnet protocol – provide remote access
- Bootstrap Protocol (BOOTP) – obtain IP addressed during bootup
- Dynamic Host Control Protocol (DHCP) – assign IP addresses
- Hypertext Transfer Protocol (HTTP) – transfer files in WWW
- File Transfer Protocol (FTP) – file transfer
- Trivial File Transfer Protocol (TFTP) – transfer of mails and attachments
- Post Office Protocol (POP) – retrieve mails, port 110
- Internet Message Access Protocol (IMAP) – retrieve mail
- Simple Mail Transfer Protocol (SMTP) – send mail, port 25

6. In Peer-to-Peer applications, client and server are considered equal in the communication process.

7. In a Client-Server system, resources are stored in the server.

8. The MDA (Mail Delivery Agent) ,

- Accepts email from MTA (Mail Transfer Agent) and delivers it to the correct mail box
- Performs virus scanning, spam filtering, return-receipt handling

9. DNS (Domain Name Service) protocol resolves a human-legible name to the numeric network address, such as ‘www.cisco.com’ to ‘198.133.219.25’. If it is not able to resolve the name, it will contact other servers.

10. The DNS server stores the name, address and type of records. The types of record include:

- A (an end device address)
- NS (name server)
- CNAME (canonical name)
- MX (mail exchange)

11. The OS utility ‘nslookup’ allows users to query name servers to resolve a host name.

12. The DHCP allows a host to obtain an IP addres automatically.

13. FTP allows data transfer between a client and a server.

14. The whole process of data travelling from Application Layer to destination device:

- Application Layer sends HTTP GET data to Transport Layer.
- Transport Layer divides data into segments and add a TCP header (encapsulation), and send segment to Internet Layer.
- Internet Layer creates an IP datagram or packet with source and destination IP addresses, and sends it to the Network Access Layer.
- The Network Access layer frames the datagram/packet with source and destination MAC addresses, and converts data into electrical signals and send the signals to the destination device.
- At the end device the service port number directs data to the correction conversation (HTTP, File Transfer or Mail).