Comprehension Question Related to Computer Networking Subject

The test conducted is based on the four highest cognitive levels established by Benjamin Bloom. These cognitive levels are as follows: (1) C3 (Application): Using the knowledge that has been understood to solve problems or apply it in real-life situations, (2) C4 (Analysis): Analyzing information into smaller components to understand the relationships and structures among them, (3) C5 (Evaluation): Evaluating, assessing, or making judgments about information, arguments, or situations based on predetermined criteria, dan (4) C6 (Synthesis): Integrating information or different elements to create something new or original.

A. Cognitive Level C3 (Application)

1. How do you configure a DHCP Server in the Windows operating system?
2. Draw a network topology diagram using VLAN concepts consisting of 3 different VLANs.
3. Write the Linux command to concatenate multiple files into a single file using the "cat" command.
4. Elaborate on the steps to set up a domain name on a DNS server in the Windows operating system.
5. How do you configure a network router's firewall to block external access to an FTP Server?
6. Describe the steps to create a new partition on a hard drive using the "fdisk" command in Linux.
7. Elaborate on the steps to configure the default gateway on a computer in a TCP/IP network.
8. How can hidden files or directories be accessed in the Linux operating system?
9. Write the Linux command to copy files or directories from one location to another.
10. Draw a data flow diagram in a network using VLANs to separate departments within a company.
11. Explain the steps to configure the IP address and subnet mask on a computer with the Windows operating system.
12. Provide the Linux command to change the ownership of a file or directory.
13. Describe the steps to create a new user account in the Windows operating system.
14. How do you configure a router to forward FTP traffic to an FTP Server in the local network?
15. Elaborate on the steps to delete a partition on a hard drive using the "fdisk" command in Linux.
16. Write the Linux command to display a list of ports that are currently listening on a computer.
17. Provide the Linux command to display users who have specific access rights to a file.
18. Describe the steps to configure NAT on a router to allow internet access for computers in a local network.
19. Write the Linux command to search for files with a specific keyword in a directory and its subdirectories.
20. Describe the steps to configure a DNS Server in the Linux operating system.
21. How do you limit the number of connections to an FTP Server using a firewall in Linux?
22. Provide the Linux command to display users who are currently logged into the system.
23. Elaborate on the steps to change the user group of a file or directory.
24. Write the Linux command to delete a user account from the operating system.
25. Describe the steps to configure a router as a DHCP Relay Agent to redirect DHCP requests to a DHCP server in another network.

B. Cognitive Level C4 (Analysis)

1. Provide examples of tasks typically handled by file administration in Linux operating systems.
2. Analyze the differences between the ext3 and ext4 file systems in Linux.
3. Explain the necessary configurations to implement VLANs on a network switch.
4. Identify and explain the benefits of using a DHCP Server in computer networks.
5. Compare the advantages and disadvantages of FTP and SFTP protocols in terms of file transfer security.

C. Cognitive Level C5 (Evaluation)

1. Evaluate the advantages and disadvantages of using the NTFS file system compared to the FAT32 file system in a Windows environment.
2. Assess and evaluate the effectiveness of VLAN configurations in a computer network based on their objectives.
3. Evaluate the needs and benefits of using an FTP Server compared to other file sharing services.
4. Review and compare manual and automated DHCP Server configurations in terms of reliability and user convenience.
5. Evaluate the impact of firewall software usage on the security of FTP Server access.

D. Cognitive Level C6 (Synthesis)

1. Design an optimal VLAN configuration plan for a campus computer network with the goal of separating student and staff/faculty data traffic.
2. Create a scenario for the efficient and secure usage of an FTP Server in a company with 100 employees connected in a local network.
3. Design and present a model configuration of a DHCP Server that can accommodate the needs of a large-scale network with multiple subnets and complex network routing.
4. Synthesize the requirements and configuration steps necessary to implement a Network File System in a Linux environment.
5. Provide recommendations on whether to use the FTP or SFTP protocol based on security needs and ease of use in a specific organizational context.