



Library
Brainware University
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BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Sc.(ANCS)-Hons-2022
Course Name – Linux Administration II
Course Code - BNCSC502
(Semester V)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Which of the following best describes a disk quota in Linux?
 - a) A limit set on the amount of available disk space for a user or a group.
 - b) A command used to format a new disk in the Linux filesystem.
 - c) A utility that displays the disk usage statistics for a particular directory.
 - d) A program that automatically compresses files to save disk space.
- (ii) Select from the following options that allow for fast file system recovery in Linux:
 - a) Ext2
 - b) Caching
 - c) Journaling
 - d) Sysfs
- (iii) Identify the private IP address range for a Class A network.
 - a) 10.0.0.0-10.255.255.255
 - b) 10.0.0.0-11.255.255.255
 - c) 1.0.0.0-1.255.255.255
 - d) 11.0.0.0-11.255.255.255
- (iv) Which command is used to trace the path to a remote host on a Linux system?
 - a) traceroute
 - b) tracepath
 - c) ping
 - d) netstat
- (v) If you need to modify IP parameters in a Linux system, identify where these parameters are typically stored:
 - a) /etc/sysconfig/network
 - b) /etc/sysconfig/sysctl.conf
 - c) /etc/sysconfig/network-scripts/ifcfg-eth0
 - d) /etc/host.conf
- (vi) Select the system that translates internet domain and host names to IP addresses.
 - a) Domain name system
 - b) Network time protocol
 - c) Routing information protocol
 - d) Internet relay chat
- (vii) Select the keyword used to define a domain alias in DNS records.

7. Analyze the differences in addressing schemes between IPv4 and IPv6, evaluating their impact on network scalability and management. (5)
8. Evaluate the importance of the /etc/resolv.conf file in DNS resolution processes and its impact on network configurations. (5)
9. Justify the significance of MAC binding in network security and its implications for managing device access in a network. (5)
10. Identify the concept of a grace period in Linux disk quota management and demonstrate how to modify it using the edquota command with an example. (5)
11. Illustrate the netstat command's functionality for listing all open network connections and explain how to use different options to enhance the output. (5)
12. Evaluate the benefits and challenges of integrating DNS with DHCP for efficient IP management. (5)

OR

Assess the role of DHCP Relay in extending IP address management across subnets. (5)
