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BRAINWARE UNIVERSITY

Library
Brainware University
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Term End Examination 2025-2026
Programme – B.Sc.(ANCS)-Hons-2023
Course Name – Linux Network Service Management
Course Code - BNC50116
(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) Identify the concept that 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 the utility you would use to provide a summary of disk space used in the current working directory (pwd).

a) du.
b) fdisk.
c) mkfs.
d) mount.

(iii) Choose the correct system ID when partitioning with fdisk in Linux.

a) 82.
b) 83.
c) 5.
d) 4.

(iv) Identify the configuration file where you would set the hostname in Linux.

a) /etc/defaults/hostname.
b) /etc/hosts.
c) /etc/hostname.
d) /etc/sysconfig/network.

(v) Select the configuration file responsible for resolving hostnames locally.

a) /etc/host.
b) /etc/hosts.
c) /etc/host.conf.
d) /etc/hostname.

(vi) Select the command that traces the route to a remote host.

a) traceroute.
b) tracepath.
c) ping.
d) netstat.

(vii) State the value to set for BOOTPROTO in the /etc/sysconfig/network-scripts/ifcfg-enp0s3 file for a static network configuration.

a) Static
b) NFS
c) DHCP
d) SMB

(viii) Choose the command that is used to resolve domain names to IP addresses.

a) dig.
b) host.
c) nslookup.
d) ping.

(ix) 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-enp0s3.
d) /etc/host.conf.

(x) Identify the port on which DNS services listen by default.

a) TCP 53.
b) Either (a) or (c).
c) UDP 53.
d) Both (a) and (c).

(xi) Select the configuration file that can be used to resolve host names to IP addresses locally.

a) /etc/host.
b) /etc/hosts.
c) /etc/host.conf.
d) /etc/hostname.

(xii) Select the role of the IP in the DNS allow-transfer {192.168.10.10; }, configuration.

a) Master DNS.
b) Cache DNS.
c) Slave DNS.
d) Both (b) and (c).

(xiii) Identify the daemon responsible for handling NFS requests on the server side of a Linux system.

a) nfsd.
b) rpcbind.
c) nfsd-manager.
d) mountd.

(xiv) Identify the abbreviation NFS.

a) Null File System.
b) Network File System.
c) New File System.
d) Netware File Server.

(xv) Choose the secure file-sharing protocol best for large data across locations.

a) Telnet.
b) FTP.
c) NFS & CIFS.
d) HTTP.

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Group-B

(Short Answer Type Questions) 3 x 5=15

2. Differentiate between block quotas and inode quotas. (3)
3. Classify the network and broadcast addresses of the IP address 205.16.37.39/24. (3)
4. Identify the primary function of DHCP. (3)
5. Explain the process to permanently mount an NFS file system with an example. (3)
6. Identify the purpose of the Apache HTTP Server. (3)

OR

Establish the concept of virtual hosts in Apache. (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Compare POP3 and IMAP and assess which is more suitable for multi-device access. (5)
8. Analyze how NFS export permissions can impact file access control. (5)
9. Evaluate how combining TLS and SELinux enhances email security posture. (5)
10. Compare user-based and group-based disk quotas in Linux. (5)
11. Explain the role of the /etc/sysconfig/network and /etc/resolv.conf files in network management, and evaluate how they contribute to the overall network configuration. (5)
12. Evaluate the impact of permissive vs enforcing mode in SELinux during application deployment. (5)

OR

Assess the role of boolean values in fine-tuning SELinux security policies. (5)