



Library Brainware University 398, Ramkrishnapur Road, Barasat Kolkata, West Bengal-700125

## **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

[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

Time: 2:30 Hours

Choose the correct alternative from the following :

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- (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 d) A program that automatically compresses for a particular directory.
  - 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) 1.0.0.0.0-1.255.255.255

- d) 11.0.0.0.0-11.255.255.255
- (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.

5 x 6=30

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	a) CNAME	b) NS	
	d) PTR  Predict the outcome of using the rndc reload command on a DNS server.		
(VIII)		b) Transfer hostname	
	a) Transfer date and time	d) Transfer IP address	
/iv\	c) Transfer zone file	ed to securely share large files with your	
(IX)	You are working on a team project where you need to securely share large files with your colleagues across different locations. Which of the following file-sharing protocols would you choose to ensure secure and efficient file transfer?		
	a) Telnet	b) FTP	
	c) NFS & CIFS	d) HTTP	
(x)	When managing SELinux, select the command the SELinux Boolean values.	at you would use to see the status of	
	a) setsebool	b) getsebool	
	c) setstatus	d) None of these	
(xi)	You need to ensure that SELinux remains permanently disabled across system reboots. Choose the correct directive to add to the SELinux configuration file to achieve this.		
	a) SELINUX=disabled	b) SETSEBOOL=disabled	
	c) GETSEBOOL=disabled	d) None of these	
(xii)	Classify the types of limits imposed by disk quotas	5.	
	a) Soft and Hard Limits	b) User and Group Limits	
,	c) Temporary and Permanent Limits	d) Logical and Physical Limits	
(XIII)	Explain how to set a grace period for a user who h		
	a) Modify /etc/quotatab	b) Use edquota command	
(s.i)	c) Use quotaon command	d) Use repquota command	
(XIV)	Compare the functionalities of SMTP and IMAP.		
	a) Both are used to send emails	b) SMTP retrieves emails, IMAP sends th	nem
(xv)	c) SMTP sends emails, IMAP retrieves them d) Both are used for email retrieval Compute the difference between anonymous and registered Samba access.		
	a) Anonymous access requires authentication	b) Registered access allows anonymous connections	
	c) Anonymous access does not require a username	d) Registered access does not require authentication	
	Group		
	(Short Answer Ty	oe Questions)	3 x 5=15
	efine the utility of NFS in a Linux environment.		(3)
	. Identify the daemons used by the NFS server.		
	4. Define the concept of disk quotas in Linux.		
<ul><li>5. What is the purpose of the /etc/sysconfig/network file in Linux?</li><li>6. Analyze the advantage of Samba over NFS for cross-platform file sharing.</li></ul>			(3)
J. 7	OR	nation in the snaring.	(3)
C	ompare the functionality of Samba daemons smbd	and nmbd in file and network services.	(3)
	Group	-C	

(Long Answer Type Questions)

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