



BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Sc.(ANCS)-Hons-2024
Course Name – Linux Administration
Course Code - BNC27102 (T)
(Semester II)

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

Full Marks : 40

Time : 2:0 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 10=10

1. Choose the correct alternative from the following :

- (i) Define open-source software.
 - a) Software with freely available source code.
 - b) Software that is free to download.
 - c) Software with no copyright.
 - d) Software created only for Linux.
- (ii) Label the root directory in Linux.
 - a) /home
 - b) /var
 - c) /usr
 - d) /
- (iii) Outline the purpose of the GRUB bootloader.
 - a) Manages system logs.
 - b) Allocates user permissions.
 - c) Loads the operating system kernel.
 - d) Provides GUI options.
- (iv) Apply the correct command to create a new file in Vim editor.
 - a) vim filename
 - b) touch filename
 - c) nano filename
 - d) gedit filename
- (v) Label the permission represented by 644.
 - a) Owner: read/write, Group: read, Others: read.
 - b) All: read/write/execute.
 - c) Owner: execute, Group: write, Others: none.
 - d) None for all.
- (vi) Identify the primary difference between a hard link and a soft link.
 - a) Soft links share the same inode, hard links do not.
 - b) Hard links share the same inode, soft links do not.
 - c) Hard links can point to directories.
 - d) Soft links cannot cross file systems.
- (vii) Choose the purpose of the find command in Linux.

- a) Locates files and directories based on specific criteria.
- b) Compresses files.
- c) Displays system information.
- d) Manages user permissions.
- (viii) Find the command to install a package using dnf in RedHat-based systems.
 - a) yum install package_name
 - b) dnf install package_name
 - c) apt-get install package_name
 - d) rpm -i package_name
- (ix) Outline the main use of Access Control Lists (ACLs) in Linux.
 - a) Create user accounts.
 - b) Monitor file activity.
 - c) Provide fine-grained permissions.
 - d) Encrypt user data.
- (x) What is YUM in Linux?
 - a) A file system
 - b) A package manager for RPM-based systems
 - c) A service configuration tool
 - d) A type of kernel

Group-B

(Short Answer Type Questions)

3 x 5=15

- 2. Name three advantages of using Linux over other operating systems. (3)
- 3. Differentiate between Debian-based and Red Hat-based Linux distributions. (3)
- 4. Explain the concepts of Shell and Kernel in Linux. (3)
- 5. Discuss the advantages and disadvantages of using hard links over soft links. (3)
- 6. Explain the process and importance of managing local user accounts in Linux. (3)

OR

Explain how Access Control Lists (ACLs) provide more granular control over file permissions compared to traditional UGO permissions. (3)

Group-C

(Long Answer Type Questions)

5 x 3=15

- 7. What is the purpose of the /etc/shadow file? (5)
- 8. Compare between the ext2 and ext3 file system. (5)
- 9. Elaborate the various types of Linux network services and their purposes, including SSH, FTP, and HTTP. (5)

OR

Elaborate on the features and workings of YUM. (5)
