**Assignment: Linux**

**Module: 1 - Linux server - Understand and use essential tools**

1. What is the minimum number of partitions you need to install Linux?

ANS: Minimum number of partitions for Linux installation

At least one partition (/) is required. However, it's recommended to have at least two:

* + / (root) - the main file system
  + swap - for virtual memory

2. Explain About Chmod Command.

**ANS:** chmod(Change Mode) is a command used to change file or directory permissions in Linux. It controls who can read, write, or execute a file.

Example: chmod ugo+rw (file name)

3. How to check Linux memory utilization

**ANS:** free -h (Quick overview of memory usage)

4. · Use grep to search for specific patterns in files.

**ANS:** grep (Global Regular Expression Print) is a command-line tool used to search for specific patterns in files.

grep "pattern" filename

Example: grep "error" filename

5. · Get Connecting on a linux server by ssh

**ANS:** SSH (Secure Shell) is used to securely connect to a remote Linux server.

Example: ssh username@server-ip

6. Create 5 files in the /tmp directory, and then use tar and gzip to bundle and compress the files.

**ANS:**

7. Describe the root account.

**ANS:** The root account is the **superuser** in Linux with full administrative privileges. It can modify any file and execute any command.

8. What is shell?

**ANS:** A shell is a command-line interface that allows users to interact with the OS using commands. Examples: Bash, Fish.

9. What is Linux?

**ANS:** Linux is an open-source, Unix-like operating system kernel. Various distributions (Ubuntu, CentOS, Debian) are built on it.

10. What is Bash?

**ANS:** Bash (Bourne Again Shell) is a popular Linux shell used for executing commands and scripting.

11. You have a new empty hard drive that you will use for Linux. What is the first step you use.

**ANS:** Use fdisk or parted to partition the disk:

fdisk /dev/sdX

Then format it with mkfs and mount it.

12. Write the Linux command to show the current working directory.

**ANS:** In linux, command to show the current working directory is pwd.

13. write the Linux command to get help with various options.

**ANS:** The Linux command to get help with various options is man command.

14. Write the linux comman! to display what all users are currently doing.

**ANS:** The linux command to display what all users are currently doing is w or who.

15. write the Linux command to get information about the operating system.

**ANS:** the Linux command to get information about the operating system is uname -a .

16. Write the Linux command to create a hard link of a file.

**ANS:** the Linux command to create a hard link of a file is ln file1 file1\_hardlink .

17. Write the Linux command to create a soft link of a file as well as Directory.

**ANS:** The Linux command to create a soft link of a file as well as Directory is

ln -s file1 file1\_symlink

ln -s /directory /directory\_symlink

18. Write the Linux command! to search for specific pattern in a file.

**ANS:** the Linux command! to search for specific pattern in a file is

grep "pattern" filename

19. Write the Linux command to show the use of basic regular expressions using grep command.

**ANS:** grep -E "pattern1|pattern2" filename