END SEMESTER EXAMINATION - MARCH 2026
SEMESTER 6 : INTEGRATED M.Sc. PROGRAMME COMPUTER SCIENCE - DATA SCIENCE
COURSE : **21UP6CRMCP18 : LINUX AND SHELL PROGRAMMING**
(For Regular 2023 Admission and Supplementary 2022/2021 Admissions)

Time : Three Hours   Max. Weightage: 30

PART A
Answer any 8 Questions

1. Explain with an example - touch command.
2. Explain the purpose of awk command.
3. Expand GNU.
4. Expand and describe PAM.
5. Describe the components of a shell script.
6. Recall the basic syntax of the fdisk command
7. Recall the basic syntax for the passwd command.
8. Write a command to install Linux.
9. Mention primary goal of processor scheduling, and comment on its contribution to system performance.
10. The _____ is a command interpreter that provides a user interface to the operating system.

(1 x 8 = 8 Weight)

PART B
Answer any 6 Questions

11. Evaluate the consequences of not properly unmounting a file system before removing a storage device.
12. Explain the difference between :w, :q, and :wq in Vim.
13. Briefly explain the ls command with any 4 of its options.
14. Explain variables in shell.
15. Explain how do file permissions differ from that of directories.
16. Develop a diagram illustrating the hierarchical structure of the Linux file system, highlighting the mentioned directories.
17. Differentiate between GUI and CLI.
18. Define process and its attributes.

(2 x 6 = 12 Weight)

PART C
Answer any 2 Questions

19. Develop a shell script for changing password of users and explain in detail.
20. Give description for each of the commands given below.
    a. cat b. head c. tail d. ps e. echo f. grep
21. Explain the sort command in detail.
22. Define various file types in a Linux file system and discuss their characteristics and examine the role of file permissions in file management.

(5 x 2 = 10 Weight)