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MASTER OF SCIENCE (M.Sc) in COMPUTER APPLICATIONS

EXAMINATION : MAY/JUNE - 2026

SEMESTER - I

Sub : Advanced Linux & Shell Programming

(MSC24-104)

Date : 3/06/2026 **Total Marks : 60** **Time: 10.00 am To 12.30 pm**

Instruction:

1. *All questions are compulsory unless and otherwise stated.*
2. *Bold figures to the right of every question are the maximum marks for that question.*
3. *Candidates are advised to attempt questions in order.*
4. *Answers written illegibly are likely to be marked zero.*
5. *Use of scientific calculators, Log tables, Mollier Charts is allowed.*
6. *Draw neat and labelled diagram wherever necessary.*

Q. 1. Answer the following in 2 - 3 lines. (Any 5) **(10)**

1. State the advantages of Linux operating system.
2. List various shells used in Linux and State the features of bash shell in Linux.
3. Define kernel space in Linux.
4. Define inode in Linux.
5. List various commands to shut down and reboot the Linux operating system.
6. Explain use of head and tail commands with option and examples.
7. Define process in Linux. List various states of process.

Q. 2. Answer the following in short. (Any 4) **(20)**

1. What are different help levels are available in Linux? Explain with examples.
2. Explain working of useradd and passwd commands with various options and examples.
3. Explain working of VIM editor. State its advantages and disadvantages.
4. Write a detail procedure to create, format and mount data partition in Linux with various commands used.
5. Define RAID. What are RAID1 and RAID5 levels? Explain with diagram. State the advantages and disadvantages of both RAID1 and RAID5.
6. What is the use of yum command? Explain with various options and examples.

Q. 3. Answer the following in detail. (Any 3) **(30)**

1. Explain Linux directory structure in detail with diagram.
2. Explain working of tar command with various options and examples in detail.
3. What are the different I/O channels used in Linux? Give examples of it. Explain common redirection operators used in Linux.
4. Write a procedure to schedule a task to display “Good Morning” message every day at 9:30 AM using crontab command.
5. Define shell script? When should the shell script used? State its advantages and disadvantages.