



Code No: 824AB

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**MCA IV Semester Examinations, April/May - 2019****LINUX PROGRAMMING****Time: 3hrs****Max.Marks:75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A**5 × 5 Marks = 25**

- 1.a) Explain in detail about Process Utilities. [5]
- b) Differentiate soft link and hard link with examples. [5]
- c) Compare and Contrast Reliable and Unreliable Signals. [5]
- d) Write a short note on "rclose()" library function. [5]
- e) What are Berkeley socket and write a note on 'socket options'? [5]

PART - B**5 × 10 Marks = 50**

2. a) Write a shell script to print the details of the user login information. [5+5]
 - b) Explain various patterns and actions in awk. [5+5]
- OR**
3. a) Write an awk script to perform simple arithmetic operations. [5+5]
 - b) Give any 3 examples for control structures in shell programming. [5+5]

4. a) Explain the support given by kernel for files in detail. [5+5]
- b) What do you mean by a hole in a file? How does the use of lseek() result in hole in a file? Explain with an example program. [5+5]

OR

5. Describe Unix file system advantages and also state different commands used in System calls for I/O operations. [10]
6. Write a detailed note on following processes: [5+5]
 - a) Zombie processes
 - b) Orphan processes.

OR

7. Explain the below system calls with the help of syntax and examples: [10]
 - a) kill
 - b) raise
 - c) alarm
 - d) pause
 - e) abort
- 8.a) Describe the API provided by linux for semaphores. [5+5]
- b) Write a program for locking a file using semaphore. [5+5]

OR

9. Explain the following concepts about pipes: [5+5]
 - a) Pipes between two process
 - b) Pipes among three process in a shell.
10. Explain the usage of Stream Sockets using Client-Server Message handling example. [10]

OR

- 11.a) Explain how to attach and detach a shared-memory segment. [5+5]
- b) Explain how to handle multiple simultaneous clients. [5+5]

