

Code No: 09A70501

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November - 2013

**Linux Programming
(Computer Science and Engineering)**

Time: 3 Hours

Max. Marks: 75

**Answer any Five Questions
All Questions Carry Equal Marks**

- 1.a) Discuss the significance of filters and identify some filter commands of your choice. Explain them briefly.
- b) Compare the features of stream editor with line editor.
- c) Write a short note on du and df utilities. [15]

- 2.a) Explain various conditional structures supported by shell with programming examples.
- b) Devise a shell that lists all file in the home directory without using ls command. [15]

- 3.a) Discuss various status flags and file modes associated with an open system call.
- b) Differentiate library functions and system calls. [15]

4. Explain any three system calls in UNIX that supports efficient process management and maintenance. [15]

5. Compare the IPC functionality provided by pipes and message queues. What are the advantages and drawbacks of each? Explain briefly. [15]

- 6.a) Explain about the data structure of semaphore in kernel.
- b) List and explain the various system calls that are associated with semaphores. [15]

7. What are the benefits of using multithreaded programming? Explain the relationships of threads, LWPs and hardware processes with the help of a neat diagram. [15]

8. Explain the following functions:
a) socket() b) bind() c) connect(). [15]

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