



Code No: F3303

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MCA III Semester Examinations, January - 2018

LINUX PROGRAMMING

Time: 3hrs

Max.Marks:60

**Answer any five questions
All questions carry equal marks**

- 1.a) Explain various process utilities available in linux.
- b) Write a shell script that deletes all lines containing a specified word in one or more files supplied as arguments to it. [6+6]
- 2.a) Explain the kernel support for file system.
- b) Explain about symlink () function with example program. [6+6]
- 3.a) Explain various patterns and actions in awk.
- b) Write an awk script to perform simple arithmetic operation. [6+6]
- 4.a) Differentiate soft link and hard link with examples.
- b) Describe usage of dup(), dup2() system calls with example. [6+6]
- 5.a) What is an orphan process? Write a program to illustrate orphan process.
- b) Define Signals. What do you mean by Unreliable Signals? Explain. [6+6]
- 6.a) What is a pipe? Using pipe, how IPC can be implemented.
- b) Compare the IPC functionality provided by message queues and FIFO's. What are the advantages and drawbacks of each? Explain briefly. [6+6]
- 7.a) Differentiate all IPC mechanisms with examples.
- b) Write a C Socket Program for Linux with a Server and Client Example Code. [6+6]
- 8.a) Write briefly on POSIX threads.
- b) Write briefly on Thread synchronization with semaphores. [6+6]

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