



**Code: 9F00303**

**MCA III Semester Supplementary Examinations May 2019**

**LINUX PROGRAMMING**

(For 2009, 2010, 2011, 2012 (LC), 2013, 2014, 2015 & 2016 admitted batches only)

**Time: 3 hours**

**Max. Marks: 60**

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

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- 1 (a) Explain various text processing utilities along with proper syntaxes and give suitable example for each.  
(b) Write an awk script to find the number of characters, words and lines in a file.
- 2 (a) Write a shell script to delete duplicate files in the directory.  
(b) Explain the control structures of shell in Linux with proper syntaxes.
- 3 (a) With a neat sketch, explain the Linux file system layout.  
(b) Explain the file and the record locking in Linux.
- 4 (a) Draw and explain the structure of a typical process.  
(b) Explain differences in using fork() and vfork() system calls.  
(c) Write a program to create the zombie process.
- 5 (a) What is a signal? Discuss the signals SIGKILL and SIGSTOP with example.  
(b) Explain the signal functions in detail.
- 6 (a) What is IPC? Explain it by using FIFO's.  
(b) Explain how pipes are used as a standard input and output.  
(c) Write a C program to illustrate two way communication using FIFOs.
- 7 (a) What is meant by synchronization? How synchronization is achieved with semaphores?  
(b) Distinguish between threads and processes.
- 8 (a) What is a socket? Explain various data types used by the sockets interface.  
(b) Explain the process of creating client/server communication in connection oriented model.

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