Code: 9F00303

MCA III Semester Supplementary Examinations September/October 2014
LINUX PROGRAMMING
(For students admitted in 2009, 2010, 2011 and 2012 only)

Time: 3 hours   Max Marks: 60

Answer any FIVE questions

All questions carry equal marks
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1 (a) Explain briefly about text processing and process utilities in Linux.
   (b) Write a short note on awk command.

2 (a) Define shell. Explain how a shell variable can be defined and initialized.
   (b) Write a shell script to delete duplicate files in the directory.

3 (a) Describe the file system structure and different file types in Linux system.
   (b) Compare hard links with soft links.

4 (a) Write a program to check the value of a volatile variable both in child and parent process and also list the differences in using fork ( ) and vfork ( ) system calls in the given program.
   (b) Write a short note on kill ( ) and raise ( ) functions.

5 (a) What is a signal? Discuss the signals SIGKILL and SIGSTOP.
   (b) What is the difference between reliable and unreliable signals? Explain with suitable examples.

6 (a) Explain the advantages of FIFOs over pipes.
   (b) 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) Explain various multithreading models with suitable examples.

8   Explain briefly about the following socket API with syntax:
   (a) socket.
   (b) connect ( ).
   (c) accept ( ).
   (d) send ( ).

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