



Code No: F3303

**R09**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**MCA III Semester Examinations, August - 2017**

**LINUX PROGRAMMING**

**Time: 3hrs**

**Max.Marks:60**

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

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- 1.a) What are the features of LINUX Operating System?  
b) Describe the contents of a directory, explaining the mechanism by which its entries are updated by cp, mv, and rm commands. [6+6]
- 2.a) Explain briefly about Mathematical functions in awk.  
b) Write a shell script to find the smallest of 10 integers using positional parameters.[6+6]
- 3.a) Differentiate between hard linking and soft linking.  
b) Write the syntax of read( ) and write( ) system calls and explain with an example code. [6+6]
4. Write the syntax of six versions of exec functions and also explain how these functions differ from each other. [12]
5. Define a signal. What are the uses of signals? What are the conditions that can generate a signal? Describe the actions to be taken by the kernel when a signal occurs. [12]
6. What are pipes? Explain how pipes are created and used in IPC with an example also mention their limitations. [12]
7. Explain the following POSIX APIs with clear syntax and with an example code:  
a) pthread\_self( )      b) pthread\_kill( )      c) pthread\_exit( ) [12]
8. Explain briefly about the following socket APIs with clear syntax:  
a) socket( )      b) bind( )      c) listen( )      d) accept( ) [12]

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