

**R09****Code No: F3303****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MCA III Semester Examinations, June/July - 2018****LINUX PROGRAMMING****Time: 3hrs****Max.Marks:60**

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

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- 1.a) Write a shell script that determines the period for which a specified user is working on the system?  
b) Explain reliable and unreliable signals. [6+6]
- 2.a) Write about directory management system calls.  
b) Differentiate pipes and named pipes. [6+6]
- 3.a) Write about orphan process.  
b) Write a C program to create a zombie process. [6+6]
4. Write a C program to create a message queue with read and write permissions to write 3 messages to it with different priority numbers. [12]
- 5.a) What are semaphores? Explain with an example.  
b) Write a note on POSIX thread APIs. [6+6]
- 6.a) Write about shell meta characters.  
b) Differentiate soft links and hard links. [6+6]
7. What is socket? Explain socket system calls for connection oriented protocol. [12]
8. Write short notes on the following:  
a) Socket addresses  
b) Stream errors  
c) FIFO's. [12]

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