

Code No:46-R6-R7

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MCA IV Semester Supplementary Examinations January 2010

SYSTEMS PROGRAMMING

Time: 3 hours

Max.Marks:60

Answer any FIVE questions

All questions carry equal marks

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1. a) Briefly discuss about building and running modules in detail?
b) What is the role of device drivers in system programming, explain?
2. a) Explain read and write methods in detail?
b) Briefly discuss about internal representation of device numbers?
- 3.a) Elaborate the data structures used in Kernel of LINUX?
b) Explain debugging support in kernel in detail?
- 4.a) Discuss about virtual address space of a process?
b) Explain Kmalloc and vmalloc in detail?
5. a) Explain using semaphores in scull?
b) Describe reader/writer spin locks?
6. Briefly discuss about the following
 - a) Kernel Timers
 - b) Tasklets
7. Explain in detail about user IO ports with an example?
- 8.a) Discuss assigning explicit size of data items in detail?
b) With an example describe blocking IO?
