FirstRanker.com
Firstranker's choice
www.FirstRanker.com www.FirstRanker.com

Code: 06MC405C

MCA IV Semester Supplementary Examinations September/October 2014

SYSTEMS PROGRAMMING

(For students admitted in 2008 only)

Time: 3 hours Max Marks: 60

Answer any FIVE questions
All questions carry equal marks

*****

1 (a) Differentiate between :
(i) Kernel modules and application programs.
(ii) Policy and mechanism.
(b) What is the reason for splitting the kernel's role into various tasks?

2 (a) Define a SCULL. What are the various types of devices that are implemented by the SCULL source?
(b) Give the procedure for registering and unregistering a char device into the module.

3 Describe various debugging techniques in the Linux kernel.

4 Explain the following system calls related memory management.
(a) brk( )
(b) kmalloc ( )
(c) vmalloc ( )
(d) malloc ( )

5 Explain briefly about Spinlocks & Completions and various system calls associated with them.

6 (a) Explain the functions related to declare register and remove kernel timers.
(b) What is a tasklet? Explain the purpose of a tasklet.

7 (a) Explain how spinlocks and circular buffers are used to protect data from concurrent access.
(b) Explain various string functions available in Linux kernel for using I/O ports.

8 Describe the procedure for implementation llseek ( ) system call with a sample code.

*****

FirstRanker.com
Firstranker's choice
www.FirstRanker.com