

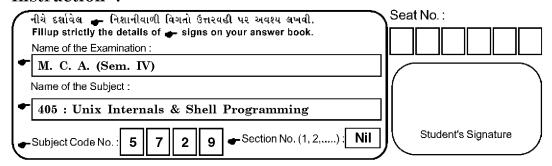
DMM-5729

M. C. A. (Sem. IV) Examination March / April - 2016

405: Unix Internals & Shell Programming

Time: 3 Hours] [Total Marks: 70

Instruction:



1 Attempt any two:

14

- (1) Explain in detail about the UNIX Operating system structure.
- (2) Explain structure of INODE with neat and clean diagram.
- (3) Explain UNIX disk architecture and how it allocates space for new file ?

2 Attempt any two:

14

- (1) Explain following commands with example: head, cut, uniq, cat.
- (2) Write short notes on the following:(a) Process utilities (b) Disk utilities
- (3) Explain command line parameters and shell script function with example.

3 Attempt any two:

14

- (1) What is a semaphore? How we can synchronize processes using semaphores?
- (2) Explain following system calls: fork(), wait(), semget(),
- (3) What is signal? Explain signals trapping in brief with example.

DMM-5729] 1 [Contd...

4 Attempt the following:

- (1) What is zombie? Why is its importance in UNIX? Give commands to list all zombie process currently present in system.
- (2) Which is fastest IPC mechanism? Why? Justify your answer.

5 Do as directed:

14

14

- (1) Give command to check for palindrome word in last line of file.
- (2) Write shell script to add extension '.txt' to all files 4 in current directory.
- (3) Write awk script to check if given string is present in 4 a text file.
- (4) Write a script to check if given user has logged into system at particular time.