

(Please write your Exam Roll No.)

Exam Roll No.



END-TERM EXAMINATION

FIFTH SEMESTER [BCA] DECEMBER-2007

Paper Code: BCA-305, Paper Id: 20305

Subject: Linux Environment

Time : 3 Hours

Maximum Marks : 75

Note: Attempt all questions. Internal choices is indicated.

- Q1. Attempt any **three** parts out of the following. (3x5=15)
- (a) Write a shell program which informs as soon as a specified user whose name is given along the command line is logged into the system.
 - (b) What is kernel? Illustrate it's functioning in Unix environment.
 - (c) Can windows and Linux machine interact via network? Suggest a mechanism.
 - (d) Write your views on what makes Linux so popular.
- Q2. Attempt any **three** parts out of the following. (3x5=15)
- (a) Write a shell script to calculate factorial value.
 - (b) What is a process? How can we create a process? Discuss the difference in between fork() and vfork().
 - (c) When do you require named and nameless pipes? What will be difficulties if we want to use pipes for client/server applications.
 - (d) Write short comments on
 - (i) Virtual Memory
 - (ii) Block devices
- Q3. Attempt any **two** parts out of the following. (2x7 ½ =15)
- (a) Write a program to simulate sleep and wake up behaviors among two process.
 - (b) What are semaphoses? Does semaphore are available even after me process which created is dead?
 - (c) Write a program which takes a source file name along the command line and duplicate file names along the command lines and copies me contents of sources file from the destination file.
- Q4: Attempt any **two** parts out of the following. (2x7 ½ =15)
- (a) What are sockets? Design a client/server model in which client sends an integer value to the server. Server calculates its square and return it to the client.
 - (b) Define the term "Code inspection". How will you instrument a code by adding few more lines to gather more information about the behaviour of program.
 - (c) What is a file system? What are the various types of file system. Discuss the various file attributes on ext 2 file system.
- Q5. Attempt any **two** parts out of the following. (2x7 ½ =15)
- (a) What is multiprocessing? Explain symmetric multi processing in detail.
 - (b) Write short comments on
 - (i) Spooling
 - (ii) Interrupt handling
 - (c) Write a program which takes a file name along the command line and prints its size.