R15

Code No: 824AB

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA IV Semester Examinations, June/July - 2018
LINUX PROGRAMMING

Time: 3hrs   **Max.Marks:75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

                                                       5 × 5 Marks = 25

1.a) How can you debug the shell scripts? Explain. [5]
  b) What are soft links? And What are hard links? [5]
  c) Differentiate threads and processes. [5]
  d) Explain popen () system call. [5]
  e) What are the advantages of Berkeley sockets? [5]

PART - B

                                                       5 × 10 Marks = 50

2.a) Explain Backup utilities.
  b) Write a shell script that allows a user to view, add, delete or modify a setting in a configuration file? [5+5]

OR

3.a) Develop an AWK program to summarize from the list of all processes, a count of processes run by every user (including root).
  b) Write about text processing utilities. [5+5]

4. Differentiate between the following terms:
  a) getc( ) Vs fgetc( )   b) stat( ) Vs fsat( )
  c) printf( ) Vs fprint( )   d) scanf( ) Vs fscanf( ). [5+5]

OR

5. Write a program to print the type of a file for each command line argument. [10]

6.a) What are the signals that are not ignored or blocked? Explain the reason behind it with an example?
  b) Illustrate SIGKILL and SIGINT with an example program. [5+5]

OR

7.a) Differentiate between fork( ) and vfork( ).
  b) Write the syntax of six versions of exec functions and also explain how these functions differ from each other. [5+5]

8.   Explain the following concepts about pipes:
      a) Pipes between two process   b) Pipes among three processes.   [5+5]

OR

9.a)   What is message queue explain with example?
  b)   Write a program to implement two-way communication using pipes.   [5+5]

10.   Explain a stream socket with a illustrative example for client/server program.   [10]

OR

11.   Explain briefly about the following socket APIs with clear syntax:
      a) socket( )   b) bind( )   c) listen( )   d) accept( )   e)connect( ).   [10]

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