Code No: 844AB

R17

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA IV Semester Examinations, July/August - 2021
LINUX PROGRAMMING

Time: 3 Hours   Max.Marks:75

Answer any five questions
All questions carry equal marks
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1.   Explain about shell variables and shell Meta characters with suitable examples.   [15]

2.a)   Explain about Piping and I/O redirection operators in Bourne Shell.
   b)   Write a shell script to display the contents of a file without using in-built utilities. [8+7]

3.a)   Give the syntax for open( ) and create( ) system calls and explain.
   b)   Describe the file descriptor and inode table entries with a neat diagram.   [8+7]

4.a)   Explain any two directory related system calls with neat syntax and example.
   b)   Write about hashes and references in Perl.   [8+7]

5.a)   How does a fork( ) system call differs from an exec( ) system call? Explain.
   b)   Write a program that illustrates the concept of zombie process.   [8+7]

6.a)   Illustrate the concept of kill( ) and raise( ) system calls.
   b)   Explain about the primary features of reliable functions with an illustrative example program.   [7+8]

7.a)   What are the security problems associated with system V IPC mechanisms?
   b)   What are the limitations of pipes? List the benefits of FIFOs compared to pipes.   [7+8]

8.   Describe all the elementary socket functions required to write a complete TCP client and server application.   [15]

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