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15CS35

Third Semester B.E. Degree Examination, June/July 2019
UNIX and Shell Programming

Time: 3 hrs.   Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

1 a. With a neat diagram, explain the architecture of UNIX operating system. **(08 Marks)**
   b. Describe the salient features of UNIX operating system. **(08 Marks)**

OR

2 a. Explain the following commands with example:
      i) who   ii) echo   iii) date **(06 Marks)**
   b. What are internal and external commands? List any two examples. **(04 Marks)**
   c. With the help of examples, explain (i) man man   (ii) apropos **(06 Marks)**

Module-2

3 a. Explain the different types of files supported in UNIX. **(06 Marks)**
   b. What is parent-child relationship? With the help of neat diagram, explain UNIX file system tree. **(06 Marks)**
   c. With suitable example, bring out the difference between absolute and relative pathnames. **(04 Marks)**

OR

4 a. Briefly describe the significance of the seven fields of the 'ls − l' command. **(08 Marks)**
   b. File current permissions are rw_ _ w_r_ _. Write chmod expression required to change them for the following:
      (i) r _ _ r _ _ _ x   (ii) r w x r w x _ x   (iii) r _ x r _ x r _ x   (iv) r w x r w x r _ _
      using both relative and absolute methods of assigning permissions. **(08 Marks)**

Module-3

5 a. What are the different modes of operations in Vi editor? Explain with a suitable diagram. **(08 Marks)**
   b. Write the output for the following UNIX commands:
      i) mv * ··/bin   ii) cp ?????? progs
      iii) lp note[0-1][0-9]   iv) rm *·[!ℓ][!o][!g] **(04 Marks)**
   c. Explain concept of Escaping and Quoting with suitable example. **(04 Marks)**

OR

6 a. What are the three standard files in UNIX? **(06 Marks)**
   b. Explain 'grep' command with its options. **(06 Marks)**
   c. Write the output of the following:
      i) sed '3q' abc
      ii) ℓs − l/grep   '∧d' >directories
      iii) sed −n '$p' abc
      iv) sed −n '3, $!p' abc **(04 Marks)**

Module-4

7 a. Explain the following environment variables with example each:
     i) SHELL   ii) LOGNAM   iii) PATH   iv) PS1   **(04 Marks)**
  b. Explain sort command with options.   **(08 Marks)**
  c. What are hard link and symbolic links?   **(04 Marks)**

OR

8 a. Explain special parameters used by the shell.   **(08 Marks)**
  b. Write a menu driven shell script to display list of files, process of user, today's date and users of the system.   **(08 Marks)**

Module-5

9 a. Explain the mechanism of process creation using system in UNIX.   **(06 Marks)**
  b. Explain here document (<<) with an example. Also mention its use.   **(04 Marks)**
  c. Explain the following commands with example: (i) kill (ii) bg (iii) fg   **(06 Marks)**

OR

10 a. Explain split and join functions with example.   **(04 Marks)**
  b. How is file managed in perl? Explain with an example.   **(04 Marks)**
  c. Using command line arguments, write a Perl program to find whether a given year is leap.   **(06 Marks)**

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