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06CS36

Third Semester B.E. Degree Examination, January 2013
UNIX and Shell Programming

Time: 3 hrs.

Max. Marks:100

Note: *Answer FIVE full questions, selecting*
at least TWO questions from each part.

PART – A

1 a. With a neat diagram, explain the architecture of UNIX. **(06 Marks)**
   b. List and briefly explain the features of UNIX. **(06 Marks)**
   c. Describe the organization of man documentation and a typical man page. Hoe do you direct man to use a specific pager, say, less. **(08 Marks)**

2 a. What is a file? Describe different types of files in UNIX. **(07 Marks)**
   b. Clearly bring out the command structure, usage and behavior (with respect to absolute and relative pathnames) of the following commands with suitable examples: i) mkdir; ii) rmdir. **(06 Marks)**
   c. Explain the significance of *ls*-1 output. **(07 Marks)**

3 a. How do you use chmod command to change file permissions? Explain with illustrative examples. **(06 Marks)**
   b. Explain the two commands for changing file ownership. **(04 Marks)**
   c. With illustrative examples, explain the three modes used by vi editor. **(10 Marks)**

4 a. What activities are typically performed by the shell in its interpretive cycle? **(04 Marks)**
   b. With suitable examples, discuss how wild-cards can be used for pattern matching in UNIX. **(07 Marks)**
   c. Explain the importance of three special files for redirection. How UNIX commands can be grouped based on their use of the standard input and standard output? **(09 Marks)**

PART – B

5 a. Define a process. Explain the mechanism of process creation. **(06 Marks)**
   b. Explain the following environment variables:
      i) PATH ;   ii) CDPATH ;   iii) PS1 ;   iv) TERM. **(04 Marks)**
   c. Explain the significance of the directory permissions. **(06 Marks)**
   d. Explain the pr command with its different options. **(04 Marks)**

6 a. What are hard links and soft links? Explain the difference between them with suitable examples. **(06 Marks)**
   b. Explain various options of grep with examples. **(08 Marks)**
   c. Explain line addressing and context addressing, using sed, each with an example. **(06 Marks)**

7 a. What is the purpose of test statement? Explain three ways of using test statement. **(07 Marks)**
   b. Write a note on the "here" document. **(04 Marks)**
   c. With syntax and suitable example, describe how awk works. **(04 Marks)**
   d. State and brief any five (05) built-in functions in awk. **(05 Marks)**

8 a. Explain the following functions with suitable examples: i) Split; ii) Join;   iii) Splice. **(06 Marks)**
   b. Write a perl script that adds the numbers specified as command-line arguments and displays the result. **(06 Marks)**
   c. Explain how file handling is managed in perl. Write a perl script to copy contents of a source file, "sample.in" to a destination file, "sample.out". **(08 Marks)**

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