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06CS36

Third Semester B.E. Degree Examination, June / July 08
UNIX and Shell Programming

Time: 3 hrs. Max. Marks:100

Note : ***Answer any FIVE full questions selecting atleast TWO full questions from each part.***

PART A

1 a. With a neat diagram, explain the relationship between the kernel and shell in UNIX. **(08 Marks)**
b. Explain briefly the different types of files in an UNIX operating system. **(06 Marks)**
c. Explain the following commands with examples:
i) mkdir ii) Ls – *l* iii) echo iv) cd. **(06 Marks)**

2 a. What is file permission? What are the different ways of setting file permission? Explain. **(08 Marks)**
b. Explain the different modes of operation in a V_i editor. **(06 Marks)**
c. Explain the commands search for pattern and search and replace in V_i editor. **(06 Marks)**

3 a. What is a standard input, standard output and standard error? Explain with respect to UNIX. **(08 Marks)**
b. Frame wild-card patterns:
i) Where the last character is not numeric
ii) That have atleast four characters. **(04 Marks)**
c. What is a process? Explain how a process is created using the three primitives: fork, exec, and wait. **(08 Marks)**

4 a. Explain following environment variables with examples:
i) TERM ii) PATH iii) HOME iv) PS1. **(08 Marks)**
b. Differentiate between hard link and symbolic link with examples. **(04 Marks)**
c. Explain the following commands with examples:
i) head ii) cut iii) sort iv) tr. **(08 Marks)**

PART B

5 a. Explain the grep command using c, i and v options with examples. **(06 Marks)**
b. List and example the Extended Regular Expression (ERE) set used by grep, egrep and awk. **(06 Marks)**
c. List and explain the internal commands used by sed. **(08 Marks)**

6 a. What is shell programming? Explain with examples how expressions are evaluated in shell programming. **(08 Marks)**
b. What are the shell parameters $*, $#, $? and $$? Discuss very briefly. **(06 Marks)**
c. What is 'for' loop in a shell script? Explain the different ways of making the lists. **(06 Marks)**

7 a. State and six built-in variables in awk and explain each. **(06 Marks)**
b. Explain any three built-in functions in awk. **(06 Marks)**
c. Explain 'if' statement and 'while' loop statements with respect to awk, with examples. **(08 Marks)**

8 a. Explain the variables and operators in perl. **(06 Marks)**
b. Explain file handling in perl, with an example. **(08 Marks)**
c. Explain the string handling functions in perl. **(06 Marks)**

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