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Fourth Semester B.E. Degree Examination, June/July 2014
UNIX and Shell Programming

Time: 3 hrs.

Max. Marks:100

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

PART – A

- 1 a. With a neat diagram, explain the architecture of UNIX operating system. List the features also. (08 Marks)
- b. Explain the parent-child relationship of UNIX file system with a diagram. (06 Marks)
- c. Explain with examples :
 - i) Absolute pathname and relative pathname
 - ii) Internal and external commands. (06 Marks)
- 2 a. Interpret the significance of seven fields of `ls -l` output. (07 Marks)
- b. Briefly explain the different ways of setting file permissions. (07 Marks)
- c. With a diagram, explain 3 modes of Vi editor. (06 Marks)
- 3 a. What are wild cards? Explain the shells wild cards, with examples. (08 Marks)
- b. What is a process? Explain the process creation mechanism? Why directory change can't be made in separate process. (08 Marks)
- c. Explain the following environment variables, with examples :
 - i) HOME ii) PATH iii) IFS iv) SHELL. (04 Marks)
- 4 a. What are hard links and soft link? Explain with examples. (06 Marks)
- b. Write a short note on `find` command. (06 Marks)
- c. Explain the following filters with examples :
 - i) head iii) tail iii) cut. (08 Marks)

PART – B

- 5 a. Explain `grep` command with all options. (10 Marks)
- b. What is `sed`? With example, explain line addressing and context addressing. (10 Marks)
- 6 a. What is shell programming? Write a shell script to create a menu which displays :
 - i) List of files ii) Contents of a file iii) Process status
 - iv) Current date v) Clear the screen vi) Current users of system. (10 Marks)
- b. Explain shell features of 'for'. With syntax and examples. (10 Marks)
- 7 a. What is an `awk`? Explain all the built in variables used by `awk`. (10 Marks)
- b. With syntax and examples, discuss the control flow statements used by `awk`. (10 Marks)
- 8 a. Write a Perl script to demonstrate the use of `chop` function. (06 Marks)
- b. Write a Perl script to find the square root of command line arguments. (06 Marks)
- c. Explain the string handling functions of Perl with appropriate examples. (08 Marks)
