

Fourth Semester B.E. Degree Examination, June 2012
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 neat diagram, explain the architecture of unix operating system. (06 Marks)
- 4 b. With the help of a diagram, explain the parent-child relationship. Explain the unix file system. (06 Marks)
- 3 c. Explain the following with examples:
i) Absolute and relative path names ii) Internal and external commands. (08 Marks)
- 2 a. A file's current permissions are rw _ r _ x r _ _ . Specify the chmod expression required to change them for the following:
i) rwx rwx rwx ii) r _ _ r _ _ _ _ _
iii) _ _ _ _ _ _ _ _ _ _ iv) _ _ _ r _ _ _ r _ _
using both the relative and absolute methods of assigning permissions. (08 Marks)
- 1 b. Explain briefly the file attributes listed using ls - l command. (06 Marks)
- 4 c. What are the different modes of Vi editor? Explain with a diagram. (06 Marks)
- 3 a. Explain the three standard files with respect to unix operating systems. (06 Marks)
- b. Explain the mechanism of process creation. (06 Marks)
- c. Explain the following commands with an example:
i) Running jobs in background ii) Execute later. (08 Marks)
- 4 a. Explain the following environment variables with examples:
i) SHELL ii) LOGNAME iii) PATH (06 Marks)
- 3 b. Differentiate between hard link and soft link in unix with examples. (06 Marks)
- 3 c. Explain the following commands with example:
i) tail ii) paste iii) tr iv) pr (08 Marks)

PART – B

- 5 a. With suitable examples, explain the grep command and its various options. (08 Marks)
- 2 b. Explain the line addressing and context addressing in sed with examples. (06 Marks)
- 2 c. Explain the different ways of using test statements, with examples. (06 Marks)
- 6 a. What is shell programming? Write a shell program that will do the following tasks in order:
1 Clear the screen
 Print the current directory
 Display current login users. (08 Marks)
- 3 b. Explain the shell features of 'while' and 'for' with syntax. (08 Marks)
- 2 c. What is the 'exit' status of a command and where is it stores? (04 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

- 7 a. What is AWK? Explain any three built in functions in AWK. (07 Marks)
b. Write an AWK sequence to find HRA, DA and Netpay of an employee, where DA is 25% of basic, HRA is 50% basic and netpay is the sum of HRA, DA and basic pay. (07 Marks)
c. Explain the list and arrays in PERL. (06 Marks)
- 8 a. Explain the following string handling functions of PERL with examples:
i) length ii) index iii) substr iv) reverse (08 Marks)
b. Write a PERL program to print numbers that are accepted from keyboard using while and array construct. (06 Marks)
c. Explain the following in PERL with examples.
i) for each looping construct ii) join (06 Marks)

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