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10CS44

Fourth Semester B.E. Degree Examination, Dec.2016/Jan.2017
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. Explain the salient features of UNIX operating system. (07 Marks)
b. With neat diagram explain the architecture of UNIX clearly bring out the division of labor between Kernel and shell. (08 Marks)
c. Explain the following commands with examples. (05 Marks)
i) cat ii) pwd iii) who iv) tty v) bc
- 2 a. What is file permission? What are the different ways of setting file permission? Explain. (07 Marks)
b. A file's current permission are rw – r – xr – – specify the chmod expression required to change them for the following. Using both relative and absolute methods of assigning permissions. (08 Marks)
i) –w –r – – – – ii) r – – r – – – – – iii) rwxrwxrwx iv) – – – – –
c. Explain the three modes of Vi editor with diagram. (05 Marks)
- 3 a. What is shell process? What are the different phases in the creation of process? (07 Marks)
b. Explain what wild – card patterns match : (08 Marks)
[A – Z]????* ii) *[0 – 9]* iii) *![0 – 9] iv) *· [!S] [!h]
c. What is process status? Explain ps command with options. (05 Marks)
- 4 a. Differentiate between hard link and soft link in UNIX with examples. (06 Marks)
b. Explain the following filters with examples: (08 Marks)
i) tail ii) tr iii) pr iv) cut.
c. Explain the following environment variables with examples: (06 Marks)
i) LOGNAME ii) PATH iii) HOME.

PART – B

- 5 a. With the example, explain the grep command any five options. (10 Marks)
b. What is sed? Explain the difference between line addressing and context addressing in sed. (10 Marks)
- 6 a. What is shell programming? Write a shell program in order to perform the following tasks: (08 Marks)
i) Display current login users ii) print current directory iii) Process status.
b. Explain the shell features of while and for loop with examples. (08 Marks)
c. Explain trap in shell scripts with suitable example. (04 Marks)
- 7 a. Explain the following Built in variables of awk with examples. (08 Marks)
i) FS ii) NF iii) FILENAME iv) NR.
b. With suitable examples, explain if and while statement in awk. (06 Marks)
c. Explain the following built-in functions of awk with examples : (06 Marks)
i) Substr ii) length iii) index.
- 8 a. Explain the string handling functions of perl with examples. (08 Marks)
b. Explain the following with respect to PERL with examples: (06 Marks)
i) For each looping construct ii) Join.
c. Write a PERL program to print numbers that are accepted from the keyboard using while. (06 Marks)

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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.