CBCS SCHEME

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15CS35

Third Semester B.E. Degree Examination, June/July 2018
UNIX and Shell Programming

Time: 3 hrs. Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

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.

Module-1

1 a. Explain the architecture of UNIX operating system with a neat diagram. **(06 Marks)**

b. What are internal and external commands in UNIX? Explain with any three examples in each type. **(06 Marks)**

c. Explain the fields of /etc/passwd and /etc/shadow. **(04 Marks**

OR

2 a. Write a note on man command with options. **(06 Marks)**

b. Explain the following commands with examples :
i) printf ii) passwd iii) date iv) who. **(04 Marks)**

c. Describe with appropriate commands, how to display and set terminal characteristics. **(06 Marks)**

Module-2

3 a. Explain UNIX file system with the help of neat diagram. **(06 Marks)**

b. Explain briefly absolute and relative pathnames with examples. **(04 Marks)**

c. Briefly describe : i) HOME ii) PATH ii) WC iv) pwd. **(06 Marks)**

OR

4 a. Interpret the significance of seven fields of ℓs–ℓ output. **(06 Marks)**

b. Assuming the files current permission are rwx r – – r – x, specify the chmod expression required to change the following using both absolute and relative method of assigning permissions.
i) rwxrwx r–x
ii) r–xr–x––x
iii) r––r–––w– **(06 Marks)**

c. Write a note on directory permissions with examples. **(04 Marks)**

Module-3

5 a. Explain with a neat diagram, three modes of Vi editor. **(06 Marks)**

b. Explain briefly S(substitute command) in exmode of Vi editor. **(04 Marks)**

c. Explain the following commands with examples :
i) set ii) map iii) abbr **(06 Marks**

OR

6 a. Define wild card. With examples, explain shells wild cards. **(06 Marks)**

b. Explain the three standard files with respect to UNIX operating system. **(06 Marks)**

c. Write a command for the following using grep
i) To delete all blank lines from a file named Emp
ii) To list only subdirecteries in the current directory
iii) To display lines containing pattern in file sample SIGSTOP or SIGTSTP
iv) To display number of lines that does not contain pattern 'USA' in file times.txt. **(04 Marks)**

Module-4

7 a. Define shell script. Write a menu driven shell script which displays :
   i) Current users of system
   ii) List of flies
   iii) Today's date
   iv) Process status
   v) Contents of a file **(06 Marks)**

b. Explain expr command applicable to computation and string functions. **(06 Marks)**

c. Explain with example set and shift command in UNIX to manipulate positional parameters. **(04 Marks)**

OR

8 a. Explain the following filters with examples :
   i) head ii) tail iii) cut iv) paste. **(08 Marks)**

b. Differentiate between hardlink and softlink in UNIX with examples. **(04 Marks)**

c. Explain the following with examples :
   i) Umask ii) /dev/null and /dev/tty. **(04 Marks)**

Module-5

9 a. Explain three distinct phases of process creation. Explain how shell is created. **(08 Marks)**

b. Explain the following commands with examples.
   i) Running jobs in background (& and nohup)
   ii) Execute later (at and batch). **(06 Marks)**

c. Write find command to locate from home directory.
   i) All files having inode number 9076
   ii) All files named a.out and all C sources files and remove them interactively. **(02 Marks)**

OR

10 a. Explain string handling functions in Perl with examples. **(06 Marks)**

b. Write a Perl program to find whether a given year is leap year or not using command line arguments. **(04 Marks)**

c. Explain the following in Perl with examples. i) split ii) join. **(06 Marks)**

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