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## Third Semester B.E. Degree Examination, Dec.2019/Jan.2020 Unix and Shell Programming

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Describe the salient features of UNIX Operating System. (07 Marks)  
b. Write the general structure for command usage in UNIX. (03 Marks)  
c. Explain in detail the commands needed for user management. (06 Marks)

OR

- 2 a. Compare and contrast External and Internal commands. (04 Marks)  
b. Mention the use of following commands:  
(i) script  
(ii) cat  
(iii) who  
(iv) pwd  
(v) ls  
(iv) cal (12 Marks)

### Module-2

- 3 a. Elaborate on absolute and relative pathnames with suitable example. (04 Marks)  
b. With a neat diagram explain the UNIX file system organization that explains parent child relationship. (09 Marks)  
c. Describe the /etc/shadow folder in UNIX file system. (03 Marks)

OR

- 4 a. Demonstrate the usage of any five commands related to files and directories. (10 Marks)  
b. Illustrate the usage of ls command along with various options. (06 Marks)

### Module-3

- 5 a. Define vi editor. Explain the different modes of vi editor. (10 Marks)  
b. Write the wildcards for the following :  
(i) name of a person containing only alphabets  
(ii) marks of student 0 to 80  
(iii) all names of the starting with lab  
(iv) vowels of English alphabet  
(v) names of students not starting with x, y and z  
(vi) a single character after f. (06 Marks)

OR

- 6 a. Illustrate the usage of three standard files used in the shell. (06 Marks)  
b. Briefly explain the application of local shell variables. (07 Marks)  
c. Write a note on grep. (03 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.

**Module-4**

- 7 a. Define Environment Variable. Explain some environment variables. (06 Marks)  
 b. Explain Positional Parameters. (05 Marks)  
 c. Differentiate Hard and Softlink. (05 Marks)

**OR**

- 8 a. Write a shell program to find the factorial of a number. (04 Marks)  
 b. Explain the usage of sort command with options. (05 Marks)  
 c. Given a file

```
emp.lst
101 cse pabubali prof 1234567890
110 ise vikram prof 6789012345
121 civ pratap Asst prof 1234567899
156 auto chennamma prof 9900011111
101 cse bahubali prof 1234567890
252 mech karuna prof 2222333344
```

- (i) display the top 5 employees of emp.lst.  
 (ii) display the last 4 employees of emp.lst.  
 (iii) cut the 3<sup>rd</sup> field of emp.lst. (07 Marks)

**Module-5**

- 9 a. Explain the following : (08 Marks)  
 (i) PS (ii) PID (iii) Zombie (iv) nice  
 b. Name the different phases of Process Creation. Explain. (08 Marks)

**OR**

- 10 a. Mention the operators used for string comparison in Perl. (03 Marks)  
 b. Write a Perl script to convert Decimal number to Binary number. (06 Marks)  
 c. Elaborate on array handling functions used in Perl with suitable example. (07 Marks)

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