17CS/IS35

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

Time: 3 hrs.   Max. Marks: 100

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

Module-1

1   a.   Explain with a figure, the kernel and shell relationship in Unix operating system.   **(08 Marks)**
     b.   Explain with suitable example, options and filenames as arguments.   **(06 Marks)**
     c.   What is the use of following commands : echo, ℓs, who   **(06 Marks)**

OR

2   a.   List and explain the salient features of UNIX operating system.   **(08 Marks)**
     b.   List and explain the important sections of man command with suitable example.   **(06 Marks)**
     c.   Explain the use of following commands : printf, passwd, cal   **(06 Marks)**

Module-2

3   a.   What is a file? Explain the three categories of files in UNIX operating system.   **(08 Marks)**
     b.   Explain the ℓs command with all the options.   **(06 Marks)**
     c.   Explain the following commands with syntax, option and example : mkdir, rmdir, od mv.   **(06 Marks)**

OR

4   a.   What is parent child relationship? Explain with a figure, the UNIX file system.   **(06 Marks)**
     b.   Explain the use of chmod command to change file permission using both absolute and relative methods.   **(06 Marks)**
     c.   Explain the following commands with syntax and example : cat rm cp wc   **(08 Marks)**

Module-3

5   a.   Explain with a figure, the three mode of Vi editor.   **(08 Marks)**
     b.   Explain the various ex mode commands with example.   **(06 Marks)**
     c.   Evaluate the following commands and write the output.
          i)   ℓs −ℓ |grep "^d" > file1
          ii)   grep − v "ZEE" news.txt | wc
          iii) grep "8 . . . . $" file1
          iv)   grep jai sharma emp · lst
          v)   grep − c member file1
          vi)   grep ^[^3] filename.   **(06 Marks)**

OR

6 a. What are wild cards? Explain the various shell wild cards with suitable example. **(08 Marks)**
   b. Explain the grep command with all the options. **(06 Marks)**
   c. Apply the shell's wild cards and write the output :
      i)   [a – z] [1 – 4]* · txt
      ii) * · [!c] [!p] [!p]
      iii) *[0 – 3] [A – Z]
      iv) chap* [!0 – 9]
      v)   chap [0 – 1] [0 – 9]
      vi) [A – Z] [a – z] [0 – 9]* **(06 Marks)**

Module-4

7 a. Explain the sort command with options and example. **(06 Marks)**
   b. Explain the three different forms of if conditional statement. **(06 Marks)**
   c. Write a menu driven shell script to perform the following operations.
      i) List of Users   ii) Files in a directory
      iii) Today's date   iv) Count number of files in a directory. **(08 Marks)**

OR

8 a. What is hard link and soft link? Give differences between them. **(04 Marks)**
   b. Explain the following commands with options and example: head tail cut paste. **(08 Marks)**
   c. Write a menu driven shell script using case statement to perform all arithmetic operations. **(08 Marks)**

Module-5

9 a. What is a process? Explain the mechanism of process creation. **(06 Marks)**
   b. Explain the following commands with options and example : ps kill at bg. **(08 Marks)**
   c. Write a perl script to check whether the given year is a leap or not. **(06 Marks)**

OR

10 a. Explain string handling functions in perl. **(08 Marks)**
    b. Explain with example, how the variables are defined and initialized in perl. **(06 Marks)**
    c. Write a perl script to convert the given decimal number into its equivalent binary number. **(06 Marks)**