2111E744   Candidate's Seat No :_____

M.Sc Sem-3 Examination
502
Bioinformatics

Time : 2-30 Hours]   November-2024   [Max. Marks : 70

Qu1 : a. Explain briefly the directory structure in Linux and their functions. (7)
b. Explain briefly the architecture of Linux and briefly describe the shells in Linux. (7)

OR

Qu1 : a. Explain briefly the features of an operating system. (7)
b. Describe atleast 4 directory commands and their options (7)

Qu2 : a. Explain briefly the metacharacter *, ? and [] using examples (7)
b. Briefly explain what are filter commands and describe the uniq filter and tr filter. (7)

OR

Qu2 : a. Briefly explain the cut filter and head and tail filter using examples. (7)
b. Briefly explain what are pipes. Write the commands to (7)
1. Show all files in the current directory with their size and names only
2. Show the 3 rd column only sorted in reverse order of numbers from data.txt file
   containing 3 numerical columns

Qu3 : a. Briefly explain the grep filter in Linux. (7)
b. Briefly explain the chmod command and its options (7)

OR

Qu3 : a. Briefly explain the cal and date commands in Linux using examples. (7)
b. Write a shell script to input a filename if it exists display the contents of file with line numbers. (7)

Qu4 : a. Briefly explain SDLC and its phases. (7)
b. Briefly explain the find command and its options (7)

OR

Qu4 : a. Briefly explain the awk command using examples. (7)
b. Write a awk script to print the Rno, Name Average and Grade The file is (Rno,
Name,Marks1,Marks2, Marks3) separated by comma.
The grade is 'P' if average is greater than 45 or 'F' if less (7)

Qu5 : Attempt any 7 (14)
1.   Write the command to show the detailed contents of the Books directory. The size should be displayed in KB, MB …etc
2.   Write the command to display 3rd to 6th columns from the file data.txt which is a comma separated file
3.   Write the command to show all the lines in the file data.txt which has lines containing words 'A' followed by a b or d followed by 3 digits
4.   Write the command to show all the duplicates from the file books.txt
5.   Write the command to show all the files in the Books directory which begin with the letter 'Rep' and end in '.sh'
6.   Write a shell script to input 2 nos and print their sum
7.   Write the sed command to replace all occurrences of Orange with Apple. Replace even if there are multiple occurrences on the same line
8.   Write the sed command to print every 2nd line in the file data.txt
9.   Write the awk command to show the contents from data.csv (Rno, Name, Age, Course) where the age is greater than 20 and course is MSc
10.   Write the awk command to show the contents from data.csv(Rno, Name, Age, Course, Duration) show only the name and course where the duration is greater than 20 hrs
11.   Write the chmod command to give rwx permission to the owner and rw- permission to group and others for the file data.sh
12.   Define touch command and its uses