

M.Sc. Sem.-3 Examination

502

Bio-Informatics

Time : 2-30 Hours]

November-2025

[Max. Marks : 70

- Qu1: a. Explain briefly what is an operating system and features of an operating system (7)
 b. Explain briefly the architecture of Linux and types of shells in Linux (7)
 OR
- Qu1: a. Explain briefly the directory structure in Linux (7)
 b. Explain briefly the ls command and its options using examples (7)
- Qu2 : a. Explain briefly filters and pipes in Linux using examples (7)
 1. Show all ordinary files only in the current directory with the size and name
 2. Show the column 1,3 from data.txt file containing name, age, hrs worked
 sorted on hrs worked in descending order
 b. Explain briefly the atleast 4 file commands in Linux using examples (7)
 OR
- Qu2 : a. Explain briefly redirection in Linux using examples (7)
 b. Explain briefly the cut filter in Linux using examples (7)
- Qu3 : a. Explain briefly the wc, less and more filter in Linux using examples (7)
 b. Write a shell script to input a file name, if it exists print its content with line numbers
 and also print the number of lines, word and characters in the file (7)
 OR
- Qu3 : a. Explain briefly the sort command and its options using examples (7)
 b. Write the command to do the following (7)
 - Sort a comma separated file on its 3rd column numerically and show only the first 3
 columns
 - Sort a comma separated file on its 4th and 5th columns alphabetically
 - Sort a comma separated file on its 1st column numerically. Show only unique rows
- Qu4 : a. Explain briefly the grep filter, its options and meta characters using examples. (7)
 b. Explain briefly the sed command using examples (7)
 OR
- Qu4 : a. Briefly explain the awk command using examples. (7)
 b. Write a awk script to print the ProdID, Desc, Category, Rate (7)
 The file is (ProdID, Desc, Category, Rate, Qty) separated by comma.
 Print all the rows for Category 'FMCG' only
 Print the average Rate
- Qu5 : Attempt any seven from following (14)
 1. Write command to display the 4 – 6 columns from Data.txt and sort it in descending order
 2. Write command to show all the lines in the file Data.txt which has lines containing words
 'x' followed by a 't' or 'q' followed by 3 digits
 3. Define the touch command in Linux
 4. Write the command to show only the unique rows from Data.txt
 5. Define the uname command in Linux and its uses
 6. Write command to list all parent directory whose name begins with an 'F' and ends in .txt
 7. Write sed command to delete all lines in Data.txt which begins with 'T'
 8. Write sed command to replace all occurrences of 'Brown' with 'Blue' in Data.txt. Replace
 regardless of any case
 9. Write sed command to print every 3rd line in the file Data.txt
 10. 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
 11. Write the awk command to show the contents from Course.csv(CourseID, CourseName,
 Duration, Mode) show only the course where the mode is Online and Duration is 8 hrs
 12. Write the chmod command to give all permission to the owner and r-x permission to
 group and x permission to others for the file data.sh

