(T) Roll No. .....

PAPER ID—21136

B.Tech. EXAMINATION, 2025

(Fourth Semester)

COMPUTER SCIENCE AND ENGINEERING

R Programming

Time : 3 *Hours* *Maximum Marks* : 70

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. Each question carries 14 marks.

1. (i) Briefly explain the importance of script file in R

(ii) What is the purpose of description() in R ?

(iii) Explain matrix function used in R with an example.

(iv) How factors are created in R ?

(v) Explain the purpose of polygon() function used in R.

(vi) What do you mean by list tags ?

(vii) Explain the purpose of getwd(). 2×7=14

Unit I

2. Write a program in R language to create a factor that stores 10 numbers and set its level values (low, medium and high) 14

3. Write the code in R to create a 5×3 row-wise matrix using rbind() function. Illustrate with example. 14

Unit II

4. Differentiate between built-in function and user defined functions. Write a function R that will check whether the character entered by the users a vovel or not. 14

5. (a) Differentiate between while loop and repeat loop used in R.

   (b) What is the difference between break statement and next statement ? Explain with example. 14

Unit III

6. Write the program in R to create a list that stores some arbitrary numbers as components. Now add three new numbers on the list and delete third and eighth old numbers of the list. 14

7. Write the program in R to create an array and sort the elements of this array using bubble sort. 14

Unit IV

8. Explain, how heat and contour plots are plotted in R ? Illustrate with suitable example. 14

9. Design a dataframe in R named Furniture that defines all the required information about the furniture and export it into a CSV file. Now export this CSV file into an Excel file. 14

