



R20 Regulation
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 3P4GC

B.Tech IV Semester Regular Examinations, July 2022

R Programming
(CSE(AI&ML))

Maximum Marks: 70

Date:02.08.2022 Duration: 3 hours

- Note:
1. This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit which carries 10M.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks

(10x2M=20 Marks)

- 1 Identify the steps in creating and running an R script?
- 2 Differentiate R while comparing it with other programming languages.
- 3 Point out how to Name Matrix Rows and Columns.
- 4 Explain the process of Avoiding Unintended Dimension Reduction.
- 5 Give the Common Functions Used with Factors.
- 6 How to create a data frame?
- 7 List a few math functions available in R. Give an example.
- 8 Explain set operations for simulation.
- 9 List out the functions to Accessing the Keyboard and Monitor using R.
- 10 What is the use of read.delim() function?

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 List the inbuilt summary functions to apply on vectors. Create a vector and apply all functions to it. [10]
- OR
- 12 The price of one kg of rice is Rs. 40.75 and one kg of sugar is Rs. 30. Write R program to get the total amount of 2kg rice and 5kg sugar purchase. [using apply functions to data frame]. [10]
 - 13 Explain about Accessing List Components and Values Applying Functions to Lists. [10]
- OR
- 14 Write an R program to create an array of two 3x3 matrices each with 3 rows and 3 columns from two given two vectors. Print the second row of the second matrix of the array and the element in the 3rd row and 3rd column of the 1st matrix. [10]

- 15 Create a data frame with $a = c(1, 2, 3)$, $b = c(4, 5, 6)$, $c(7, 8, 9)$ and find the value of the following
- How do I select the c (4, 5, 6)? [2]
 - How do I select the 1? [2]
 - How do I select the 5? [2]
 - What is $df[, 3]$? [2]
 - What is $df[1,]$? [2]

OR

- 16 How to Create a Factor in R? Explain with an example. [10]

- 17 Explain the control statements, Arithmetic, and Boolean Operators with examples. [10]

OR

- 18 What is Recursion and Recursive Function in R Programming? Find the Sum of Natural Numbers using Recursion. [10]

- 19 How to Create Graphs in R programming? [10]

OR

- 20 Explain in detail about String-Manipulation Functions with example. [10]