

B.Tech III Semester Supplementary Examinations, July 2022
R PROGRAMMING

(CSE (DS))

Maximum Marks: 70

Date: 29.07.2022 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.
 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 Define a list with its syntax.
- 2 Define Array with syntax.
- 3 Create a byrow() matrix.
- 4 What is cbind() and rbind().
- 5 What is contingency table?
- 6 Write syntax to Extract sub data frame.
- 7 What is assignment operator?
- 8 Write any two differences between data frame and data table.
- 9 Define grep(), regexr().
- 10 Give a syntax for "what" attribute in scan () function.

Part-B

Answer All the following questions.

(10M X 5=50Marks)

- 11 Explain the following with examples [10M]
 a) Help () b) example () c) rep () d) NA () e) NULL ().
 OR
- 12 Explain and differentiate NA and NULL with an example by applying mean () and mode () [10M]
 OR
- 13 a) Define a matrix and explain three ways of creating a matrix [5M]
 a) Write about list and its syntax and explain about accessing list components. [5M]
 OR
- 14 a) Create a list for student and print the components of a list with the index and name. [5M]
 b) Write a R Program to find Armstrong number or not [5M]
 OR
- 15 Explain the following terms with syntax and examples [10M]
 a) rbind() b) cbind(), c) apply().
 OR
- 6 a) Explain how to merge two data frames with example. [5M]

b) Explain aggregate () and cut () function.

[5M]

- 17 a) What is anonymous function and explain replacement function.
b) Write a program to print squares of numbers in a given range by using functions.

[5M]

[5M]

OR

- 18 a) Explain writing upstairs in R. and explain super assignment operator.
b) Explain random number generation statistical distribution functions.

[5M]

[5M]

[10M]

19 Explain plot(), ggplot() and ggplot2()

OR

20 Explain functions that are accessing through keyboard.

[10M]



R20 Regulation
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)
B.Tech IV Semester Regular Examinations, July 2022

Subject code: 3P4GC

R Programming
(CSE(AI&ML))

Date: 02.08.2022 Duration: 3 hours

Maximum Marks: 70

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

The following questions carry equal marks

(10x2M=20 Marks)

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

Part-B

Answer All the following questions.

(10MX 5=50Marks)

List the inbuilt summary functions to apply on vectors. Create a vector and apply all functions to it. [10]

OR

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]

Explain about Accessing List Components and Values Applying Functions to Lists. [10]

OR

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 $a = c(1, 2, 3)$, $b = c(4, 5, 6)$, $c = c(7, 8, 9)$ and find the value of the following
- 1a.) How do I select the 1? [2]
 - 1b.) How do I select the c (4, 5, 6)? [2]
 - 1c.) How do I select the 5? [2]
 - 1d.) What is $df[, 3]$? [2]
 - 1e.) What is $df[1,]$? [2]
- 16 How to Create a Factor in R? Explain with an example. [10]
- OR
- 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]



B.Tech III Semester Regular Examinations, February 2022
R PROGRAMMING
CSE (DATA SCIENCE)

Maximum Marks: 70

Date: 25.02.2022 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.
 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 List Data types in R.
- 2 List any three differences between vector and scalars.
- 3 Write the process of Creating Matrices.
- 4 Write a short notes on recursive lists.
- 5 How to Merge Two Data Frames in R?
- 6 Write the table() function in R Language.
- 7 What is a scope in R?
- 8 How to Replace specific values in a column in R Data Frame?
- 9 List the methods to read a value from the keyboard.
- 10 How to use 'R' to access data on the web.

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 List the inbuilt summary functions to apply on vectors. Create a vector and apply all functions to it. (10)
- OR
- 12 Elaborate on the process of Regression Analysis of Exam Grades. (10)
 - 13 Describe the principles of Avoiding Unintended Dimension Reduction. (10)
- OR
- 14 How to Create Lists? Give some General List Operations and explain the methods for Accessing List Components and Values Applying Functions to Lists. (10)
 - 15 Create a data frame with $a = c(1, 2, 3)$, $b = c(4, 5, 6)$, $c = c(7, 8, 9)$ and find the value of the following: (10)
 - a.) How do I select the c (4, 5, 6)?
 - b.) How do I select the 1?
 - c.) How do I select the 5?
 - d.) What is $df[, 3]$?
 - e.) What is $df[1,]$?
 - f.) What is $df[2, 2]$?
- OR

- 16 Explain in detail about factors and Tables.
- 17 Analyze the control structures with conditional statements in R with suitable examples.
OR
- 18 Explain any 5 basic math functions available in R with example.
- 19 List out any 8 string manipulation functions and explain them.
OR
- 20 Explain about Creating and Customizing Graphs in R.



R18 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 2P6EB

B.Tech VI Semester Regular/Supplementary Examinations, June 2021

R PROGRAMMING

(COMPUTER SCIENCE & ENGINEERING)

Maximum Marks: 70

Date: 21.06.2022 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 Differentiate between `all()` and `any()`.
- 2 Enumerate on Vectors in R.
- 3 Find median and mode of following numbers
12,13,11,10,9,11,7,11,10,15,16,11
- 4 Outline the different matrix operation functions in R.
- 5 Mention the importance of data frame.
- 6 List the attributes of Factors in R Language.
- 7 Mention three math functions in R.
- 8 What is the nature of the data type of a variable in R.
- 9 How are reading and writing of files handled?
- 10 What is the purpose of `nchr()` function?

Part-B

Answer All the following questions.

(10MX 5=50Marks)

- 11 Explain about variables, constants and data types in R programming with suitable examples.
(10)

OR

- 12 Give a detailed note on Regression Analysis of Exam Grades. (10)

- 13 How to apply same functions to all rows and columns of a matrix? Explain with example.
(10)

OR

- 14 Write R code to generate first n terms of a Fibonacci series. (10)

- 15 A. Describe R functions for reading a data frame from a file. (5)
B. Prepare the summary of employee details in a data frame choosing a sample set of employee salary details. (5)

OR

- 16 Elaborate on the creation and manipulation of Factors in R. (10)

- 17 A. Write R code to the function by using if else command (5)
 $f(x) = x$ if $x < 1/2$
 $= (1-x)$ if $1/2 < x < 1$
 $= 0$ otherwise
B. Elaborate on Anonymous functions in R. (5)
OR
- 18 A. Write about user defined functions in R with suitable example? (5)
B. Explain about default values and in return statements in functions? (5)
- 19 Give a detailed note on the string operations with relevant examples. (10)
OR
- 20 A. Following are the runs scored by a batsman in 10 consecutive matches:
22,98,13,54,77,61,45,32,19,85. Get this as input and store in a file. (5)
B. Retrieve the runs information from the file and calculate his average run rate (5)