



R20 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

Subject code: 3P3HB

B.Tech III Semester Regular/Supplementary Examinations, March/April 2023

**R PROGRAMMING
(CSE(DATA SCIENCE))**

Maximum Marks: 70

Date:10.04.2023 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 Write the Vectorized if-then-else in R?
- 2 Write about vectors in R?
- 3 How different matrix operation functions in R?
- 4 How to create Lists in R?
- 5 What is the importance of data frame?
- 6 List out common functions used with Factors in R?
- 7 Write about Boolean operators in R?
- 8 Write three math functions in R?
- 9 State the dnorm() function.
- 10 Write R script to create a linegraph?

Part-B

Answer All the following questions.

(5X10M=50Marks)

- 11 (a) Explain different data structures in R. 5M
(b) Discuss about Common Vector Operations in R. 5M

OR

- 12 (a) Illustrate the concept of recycling in vectors. 5M
(b) What effect does concatenate function has on vectors? Explain with an example? 5M
- 13 (a) How to apply same functions to all rows and columns of a matrix? Explain with example? 6M
(b) Write R code to generate first n terms of a Fibonacci series? 4M

OR

- 14 How to create a list and demonstrate all the ways of accessing a list component? 10M
- 15 Which matrix operations are applicable to data frames? Explain with examples? 10M

- OR
- 16 (a) Demonstrate finding the largest cells in a table? 5M
(b) What are the arguments in a call to table()? 5M
- 17 (a) How to create user defined function in R? How to define default values in R? Write syntax and examples? 6M
(b) Write about control statements in R? 4M
- OR
- 18 (a) What kind of tools does R has for simulation programming? 5M
(b) Write a R program to implement quick sort? 5M
- 19 (a) Explain functions for accessing the keyboard and monitor, Reading and writing files. 5M
(b) Describe R functions for Reading a Matrix and Data Frame from a File. 5M
- OR
- 20 (a) Write about String-Manipulation Functions in R programming? 5M
(b) Discuss about Creating and Customizing Graphs in R programming. 5M