|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DIT UNIVERSITY DEHRADUN**   |  |  | | --- | --- | | **B.TECH (IT)** | **MID TERM (BACK) EXAMINATION, EVEN SEM 2022-23 (SEM VI)** | | | | | | | | | | | | | |
| **Roll No.** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Subject Name: R Programming** | | | | | | | | | | | | |

|  |  |
| --- | --- |
| **Time: 2 Hours** | **Total Marks: 50** |
| **Note: All questions are compulsory. No student is allowed to leave the examination hall before the completion of the exam.**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Q.1)** | **Attempt all Parts :** | | **BTL** | **CO** | |  | **(a)** | What is R programming? How to run R? | **L1** | **CO1** | |  | **(b)** | Write about vector in R. | **L2** | **CO3** | |  | **(c)** | Explain about variables, constants, and data types in R | **L2** | **CO2** | |  | **(d)** | What are the uses of cat and paste function? Explain with example. | **L1** | **CO1** | |  |  | **[4 x 2.5= 10]** |  |  | |  | | |  |  | | **Q.2)** | **Attempt all Parts :** | | **BTL** | **CO** | |  | **(a)** | Explain the importance of data frame. | **L2** | **CO2** | |  | **(b)** | Explain the difference between switch case and else if statement with example. | **L2** | **CO1** | |  | **(c)** | **In R how missing values are represented? Explain.** | **L1** | **CO2** | |  | **(d)** | What happens in case the number of values passed to an array is less than the size of array. | **L1** | **CO2** | |  |  | **[4 x 2.5= 10]** |  |  | |  | | |  |  | | **Q.3)** | **Attempt any Two Parts :** | | **BTL** | **CO** | |  | **(a)** | Explain the difference between repeat loop and while loop with proper syntax and example. | **L3** | **CO2** | |  | **(b)** | Describe R functions for reading and writing a matrix and data frame from a file. | **L2** | **CO2** | |  | **(c)** | Describe and explain 3 math function in R. | **L2** | **CO3** | |  |  | **[2 x 5= 10]** |  |  | |  | | |  |  | | **Q.4)** | **Attempt any Two Parts :** | | **BTL** | **CO** | |  | **(a)** | Explain the difference between vector and data frame with example. | **L2** | **CO2** | |  | **(b)** | Implement binary search tree with R. | **L3** | **CO3** | |  | **(c)** | Write a R program to find the sum, mean and product of vector. | **L3** | **CO2** | |  |  | **[2 x 5= 10]** |  |  | |  | | |  |  | | **Q.5)** | **Attempt any Two Parts :** | | **BTL** | **CO** | |  | **(a)** | Explain the classes of data types in R. | **L2** | **CO2** | |  | **(b)** | Write a R program to implement bubble sort. | **L3** | **CO2** | |  | **(c)** | Write a short note on different types of data type available in R. | **L2** | **CO2** | |  |  | **[2 x 5= 10]** |  |  | | **-----END OF PAPER ----** | | |  |  | | |