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** Presidency University**

**Bengaluru**

**SCHOOL OF MANAGEMENT UG**

**MAKE UP EXAMINATION – SEP 2023**

**Winter Semester: 2022-23 Date: 04-10-2023**

**Course Code: MGI 239 Time: 9.30AM – 12:30 PM**

**Course Name: R for Business Analytics Max. Marks: 100**

**Program: BBA (Business Analytics) Weightage: 50%**

**Instruction:**

*Read all questions carefully and answer accordingly*

**PART A**

***Answer all the ten questions* (10Q x 2M = 20M)**

|  |  |
| --- | --- |
| 1. How do you assign a value to a variable in R? | C.O.No. 2 [Knowledge] |
| 1. Which function is used to read data from a CSV file in R? | C.O.No. 3 [Application] |
| 1. Describe the syntax of installing a package in R? | C.O.No. 3 [Application] |
| 1. What is a vector in R, and how is it useful in data analysis and programming? | C.O.No. 1 [Comprehension] |
| 1. Explain the main types of datasets in R programming | C.O.No. 1 [Comprehension] |
| 1. How would you define a library in the context of R programming, and what is its role and functionality? | C.O.No. 1 [Comprehension] |
| 1. classify and name the various visualization tools that are available in R Programming? | C.O.No. 1 [Comprehension] |
| 1. Define the syntax of Histogram | C.O.No. 4 [Application] |
| 1. Explain the significance of handling missing values in a dataset during data analysis. | C.O.No. 2 [Knowledge] |
| 1. write R code to demonstrate the calculation of the square root of a given number x? | C.O.No. 3 [Application] |

**PART B**

***Answer all the four questions* (4Q x 10M= 40M)**

1. What are the key features of the R programming language?

C.O.No. 2 [Comprehension]

1. Describe some common file formats for storing data that can be imported into R. C.O.No. 3 [Comprehension]
2. Define a matrix in R and explain its structure with an example.

C.O.No. 3 [Comprehension]

1. Explain the difference between built-in packages and user-installed libraries in R.

C.O.No. 3 [Comprehension]

**PART C**

***Answer the two questions* (2Q x 20M = 40M)**

1. **A retail store offers discounts based on the purchase amount. Write a program in R that prompts the user to enter the purchase amount and calculates the discount based on the following conditions: C.O.No. 4 [Application]**
   1. If the purchase amount is less than ₹500, there is no discount.
   2. If the purchase amount is between ₹500 and $1000 (inclusive), a 10% discount is applied.
   3. If the purchase amount is between ₹1001 and ₹2000 (inclusive), a 20% discount is applied.
   4. If the purchase amount is greater than ₹2000, a 30% discount is applied.

Use Else If Statement

1. **Working with a dataset named "Sales\_report.xls", write the syntaxes in R to perform the following operations:**  **C.O.No. 4 [Application]**
   1. Read the excel file.
   2. Print the data from the "Sales\_report" dataset.
   3. Print the number of rows in the dataset.
   4. Print all the column headers.
   5. Add a new column to the dataset.
   6. Delete a specific column from the dataset.
   7. Rename a column in the dataset.
   8. Print the number of missing values in the dataset.
   9. Extract rows from the dataset where the "Customer\_ID" column is equal to "CUS100".
   10. Delete all rows in the dataset that contain missing or null values.

Write the R syntaxes for each of the above operations.