MDM DHRP Question Bank

Unit 1: Introduction to R Programming

Easy (5 Marks each)

1. What is R, and what is its primary use in data analysis?
2. Describe the key features that make R a preferred tool for statistical computing.
3. What is RStudio? List its main components.
4. Describe the process of quitting RStudio.

Moderate (5 Marks each)

1. Explain the difference between R and RStudio. How do they interact with each other?

Unit 2: R Data Structures and Manipulation

Easy (5 Marks each)

1. How do you create a variable in R? Provide an example.
2. Explain the use of conditional statements in R with an example.

Moderate (5 Marks each)

1. Write an R function to calculate the sum of elements in a vector.

Unit 3: R Packages and Functions

Easy (5 Marks each)

1. What is an R package? Why is it used?
2. How do you install a package in RStudio?
3. Write a simple R function to calculate the square of a number.
4. Explain how to download and import data in R.

Moderate (5 Marks each)

1. Describe the process of creating a custom function in R. Provide an example.

Unit 4: Matrices, Arrays, and Lists

Easy (5 Marks each)

1. How do you create a matrix in R? Provide an example.
2. Describe the operations that can be performed on matrices in R.
3. What is the difference between a vector and a matrix in R?

4. How do you add or delete rows and columns in a matrix?

Moderate (5 Marks each)

1. How would you handle higher-dimensional arrays in R? Explain with an example.

Unit 5: Data Frames

Easy (5 Marks each)

1. What is a data frame in R? How is it different from a matrix?
2. How do you create a data frame in R? Provide an example.
3. What are factors in R? Explain their importance.
4. How can you merge two data frames in R?
5. What is the apply() function in R, and how does it work with data frames?

Moderate (5 Marks each)

1. Write an R function to calculate the mean of each column in a data frame.
2. How can you deal with scope issues when working with functions and objects in R?
3. Write a script to work with tables in R, including creating and applying functions.