

TILAK MAHARASHTRA VIDYAPEETH, PUNE

MASTER OF SCIENCE (DATA SCIENCE) (768)

EXAMINATION : JANUARY- 2026

SEMESTER - I

Sub : R Programming for Data Science (76825 -102)

Date : 7/01/2026
Total Marks : 60
Time: 10.00 am To 12.30 pm

Instruction:

1. All questions are compulsory unless and otherwise stated.
 2. Bold figures to the right of every question are the maximum marks for that question.
 3. Candidates are advised to attempt questions in order.
 4. Answers written illegibly are likely to be marked zero.
 5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
 6. Draw neat and labelled diagram wherever necessary.
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Q. 1. Answer the following in 2-3 lines. (Any 5) (10)

1. What is the purpose of the workspace in R?
2. Explain the difference between length() and nrow() functions.
3. Explain the use of the apply() function.
4. What is recycling rule in R.?
5. What is the difference between head() and tail() functions?
6. What is an R package?
7. Explain the purpose of setwd() and getwd() functions?

Q. 2. Answer the following in short. (Any 4) (20)

1. Write an R program to find the maximum and minimum values in a numeric vector.
2. Explain different types of loops in R with examples.
3. Write an R program to sort a data frame based on a column.
4. Explain the use of apply(), lapply(), and sapply() functions.
5. Write an R program to create and manipulate a list.
6. Explain correlation and covariance in R with suitable examples.

Q. 3. Answer the following in detail. (Any 3) (30)

1. Explain vectors in R in detail. Discuss creation methods, vector operations, indexing, and vectorized functions with examples.
 2. Explain control structures in R. Describe if, if-else, switch, and loop constructs with examples.
 3. Explain file handling in R. Discuss reading and writing text, CSV, and RData files with examples.
 4. Explain Simple linear regression and multiple linear regression explain with housing dataset where price ~ size of plot.
 5. Explain Different types of Binding Methods with example.
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