

TILAK MAHARASHTRA VIDYAPEETH, PUNE
MASTER OF COMPUTER APPLICATIONS
(Specialization in Data Science)
EXAMINATION : JANUARY - 2025
SEMESTER - II

Sub: R Programming for Data Science (MCDS23-205)

Date : 13/01/2025

Total Marks :60

Time: 02.00 pm to 04.30 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.

Q.1. Answer the following in 2-3lines. (Any 5) (10)

1. What is contingency table?
2. Define repeat statement in R.
3. Define Range. Write a R code to calculate range for the following data:
12,10,9,14,15,11,12,20,19
4. Define apply() function with example.
5. What is Hypothesis?
6. Define summary () function.
7. What is array? Write syntax of array.

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

1. What are the different data types in R?
2. Differentiate between R Programming and Python Programming
3. Write R code to generate first n terms of a Fibonacci series
4. Write R function to check whether the given number is prime or not
5. Explain in details non-parametric test.
6. Define AM. Write a R code to calculate AM for the following data:

Class	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	8	11	9	10	12	13

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

1. Explain following string manipulation functions:
a)paste() b) sprintf() c)sep() d)nchar() e) substr() f)casefold()g) length()
h) cat() i)== j)toupper()
2. Explain box-whisker plot. Write a syntax to create box plot.
3. Write a R code to create box plot using matcarsdataframe. Write a R code to create bar chart.
4. What is Z-test? Explain in details one sample Z-test and two sample Z-test with example.
5. What is vector? Explain operations on vector. Write a R program to find the maximum and the minimum value of a given vector.
