CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
IV–B.TECH–II–Semester End Examinations (Regular) – April - 2024
R PROGRAMMING
(MECH)

[Time: 3 Hours]   [Max. Marks: 70]

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A   (20 Marks)

1. a)	List and define some basic data types in R.	[2M]
b)	What is a factor in R?	[2M]
c)	What are vector operations? Explain	[2M]
d)	Difference between data frame and a matrix in R?	[2M]
e)	Explain creating lists.	[2M]
f)	How do you perform basic arithmetic operations (addition, subtraction, multiplication, division) on matrices in R?	[2M]
g)	Describe write.table() function.	[2M]
h)	Distinguish between min() and pmin() functions.	[2M]
i)	Write about S Classes.	[2M]
j)	What is code profiling?	[2M]

PART-B   (50 Marks)

2. Explain about basic R operators with examples.   [10M]

OR

3. Discuss about variable assignment and removing variables.   [10M]

4. Discuss about applying functions to data frames with example.   [10M]

OR

5. Write a R program to find the maximum and the minimum value of a given vector. Explain the functions with syntax.   [10M]

6. How to create a list and demonstrate all the ways of accessing a list component?   [10M]

OR

7. What are matrices in R, and how do you create them?   [10M]

8. Write formulas, means and variances for various statistical distributions.   [10M]

OR

9. What are functions for statistical distributions? Explain.   [10M]

10. Explain about s generic functions.   [10M]

OR

11. Explain about writing s classes using inheritance.   [10M]

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