H   Roll No. ....

MB–303(BA2)

M. B. A. (THIRD SEMESTER)
MID SEMESTER
EXAMINATION, Jan., 2023
DATA SCIENCE USING R

Time : 1½ Hours
Maximum Marks : 50

Note : (i) This question paper contains two sections–A and B.

(ii) Both Sections are compulsory.

(iii) Answer any *two* sub-questions among (a), (b) and (c) in each main question of Section A. Each question carries 10 marks.

(iv) Section B consisting of case study is compulsory. Section B is of 20 marks.

Section—A

1. (a) Explain data science and its role in the current business scenario.   (CO1)

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(b) Apply data structure in R : Vectors, Matrix with an example. Also, discuss how to access particular data elements in R.(CO2)

(c) Analyze *five* different functions in R and their advantages with examples.   (CO3)

2. (a) Evaluate DPLYR functions in detail and how they can be useful to manage data frames in R.   (CO4)

(b) Discuss Hypothesis testing. Also discuss different types of errors.   (CO1)

(c) Discuss the roles and responsibilities of a data scientist.   (CO1)

3. (a) Discuss various steps to create a .csv file, import it in R studio, and create a working directory.   (CO1)

(b) Differentiate between Matrix and Data frame in R with suitable examples. (CO3)

(c) Demonstrate various features of RStudio. Also, discuss how to install a package in RStudio.   (CO2)

Section—B

4. **Case Study**   20 Marks (CO2)

A marketing campaign is held by an e-commerce company to bring customers, there were three advertisement campaigns, and their Success Index Indicators are as :

Campaign	Customers	Profit	Investment	Revenue
Social Media	110	20	10	30
Radio Adv.	80	10	5	15
Print media	60	5	5	10

(Profit= Revenue – Investment)

(a) Examine the campaigns, and answer which one of them is the best advertisement campaign and why ?

(b) Differentiate descriptive, diagnostic, predictive, and prescriptive analysis and relate it with the data scientist profile in an e-commerce company to increase sales and brand awareness.