

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER VIII- EXAMINATION –SUMMER-2022

Subject Code: 4480602**Date:02/06/2022****Subject Name: Data Analytics with R****Time: 10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q 1a** **Do as directed :** **07**
- (i) A variable is called ___ variable whose value is gathered through experiments?
(a) Predictor (b) Response (c) Clustering (d) None of these
- (ii) What will the following code print ?
> a=c(2,3,4,5)
>b=c(1,2)
>d= a*b
>print(d)
- (iii) Which of the following syntax is used to install forecast package ?
(a) install.pack(“Randomforest”)
(b) install.package(“RandomForest”)
(c) install.packages(“RandomForest”)
(d) None of above
- (iv) What will be the output of the following R code snippet?
> f <- function(a, b) {
+ a^2
+ + }
> f(2)
- (a) 4 (b) 3 (c) 2 (d) 1
- (v) How many ways to create new variable in R programming explain with example?
- (vi) month.abb is Built-in list in R programming. (True/False)
- (vii) Full form : AOV
- Q 1b** What is data analytics ? Explain types of data analytics. **07**
- Q 2a** Explain five characteristics of effective data analytics. **07**
- Q 2b** Explain all the data types in R with example. **07**

OR

- Q 2b** Define data analytics and write any two applications of data analytics? **07**
- Q 3a** What is regression ? Explain linear and multiple regression with example. **07**
- Q 3b** Discuss Reinforcement Learning in detail. **07**

OR

- Q 3a** Explain Histogram with example. **07**
- Q 3b** Explain time series analysis in detail with example. **07**

- Q 4a** Explain following function with example : **07**
(i) List() (ii) ts() (iii) setwd()

- Q 4b** What is Normal Distribution? Explain following function used in R for Normal distribution. **07**
(i) dnorm() (ii) pnorm() (iii) qnorm() (iv) rnorm()

OR

- Q 4a** Explain following function with example : **07**
(i) rbind() (ii) toupper() (iii) typeof()

- Q 4b** Describe decision tree with example. (output is not required) **07**

- Q 5a** Discuss design of experiment explain in detail? **07**

- Q 5b** Write a program to read data from excel file and convert it into dataframe and display 1).structure 2).colnames 3).no of columns and 4). rows of data frame. **07**

OR

- Q 5a** How to read data from json and csv file? Explain in detail **07**

- Q 5b** Write R script to create data frame “student” with the fields of stud_id, stud_name, email_id and mobile_no. Perform following operations: **07**
a. Display data of data frame
b. Display summary of data frame
c. Display structure of data frame
d. Extract and display only stud_name and mobile_no from data frame
