GUJARAT TECHNOLOGICAL UNIVERSITY
MCA INTEGRATED– SEMESTER VIII - EXAMINATION –SUMMER-2021

Subject Code: 4480602   **Date: 04-08-2021**
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.1(a) Do as Directed.   07

1. In 1991, R was developed at the Department of Statistics at the University of _____.
2. In normal distribution, _____ function is used to find CDF.
3. _____ package is used for Decision Tree.
4. `m<-matrix(c(1:6), 3, 2)` then t(m) = _____.
5. _____ function is used to watch for all available packages in library.
6. Function used for linear regression in R is _____.
7. In abline(a, b) function, b represents _____ of a line.

(b) What is data analytics? Explain its types.   **07**

Q.2(a) List the packages and functions used to read a data such as Csv Files, XML File, Web data, JSON File, Excel File. Explain with code snippet.   **07**

(b) What is vector? How it can be created in R? Vector classified into how many parts. Explain How we can access the elements of a vector with the help of vector indexing.   **07**

OR

(b) What is data frame? Explain with example.   **07**

Q.3(a) List out various Graphs available in R. Explain Histogram, Boxplot and Pie Chart in details.   **07**

(b) What is Object? How to convert one object form to another object form? Explain with Example.   **07**

OR

(a) What is list? How to create and access elements of list with different ways. Explain it.   **07**

(b) Explain the rules of variable assignment in R with example. Write commands for creating data frame "Students" which includes fields Name, address, Course and M_number.   **07**

Q.4(a)	What is regression? Write the difference between linear, multiple, and logistic regression.	**07**
(b)	Write a note on Descriptive Analytics in detail.	**07**

OR

(a)	What is the difference between Decision tree and Random Forest? Explain random forest with example.	**07**
(b)	Explain time series analysis with example.	**07**

Q.5(a)	Explain supervised, Unsupervised and reinforcement in detail.	**07**
(b)	Explain various control structure in R with example.	**07**

OR

(a)	Explain dnorm(), pnorm(), qnorm() and rnorm() with suitable example.	**07**
(b)	Write an R script that will receive N numbers and calculate mean, standard deviation, minimum and maximum. Also Plot bar chart of input numbers.	**07**