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

Subject Code: 4480602   **Date: 19/12/2022**
Subject Name: Data Analytics with R
Time: 02:30 PM TO 05:00 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)**	What is Data Analytics? Explain types of Data Analytics with example.	**07**
	(b)	What is variable? How to assign variable and remove variable in R programming?	**07**
Q.2	**(a)**	Write R script to create data frame "student" with the fields of stud_id, stud name, email_id and mobile no. Perform following operations: 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.	**07**
	(b)	Explain data types in detail with example.	**07**
		OR	
	(b)	What is data frame? Explain the functionally of data frame with example.	**07**
Q.3	**(a)**	What is vector? How to create a vector? Explain logical and character vector with example.	**07**
	(b)	List the packages used to read a data such as Csv Files, XML File, Web data, JSON File, Excel File. Explain in brief.	**07**
		OR	
Q.3	**(a)**	Explain histograms and box plot using suitable example.	**07**
	(b)	How to read data from database (MS Access/ Oracle/MySQL). Explain in detail.	**07**
Q.4	**(a)**	What is prediction? Differentiate random forest and decision tree. Which decision model is best for decision making?	**07**
	(b)	What is linear regression? Explain with example.	**07**
		OR	
Q.4	**(a)**	Explain various control structure in R with sample example code.	**07**
	(b)	Explain survival analysis in detail.	**07**
Q.5	**(a)**	Explain active learning process in detail.	**07**
	(b)	What is Graph? Explain graphical elements in detail.	**07**
		OR	
Q.5	**(a)**	Discuss Reinforcement Learning in detail.	**07**
	(b)	Explain following functions in brief.	**07**

        1. getwd( )
        2. rm( )
        3. which( )
        4. ls( )
        5. list( )
        6. any( )
        7. seq()

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