Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA (Integrated)- SEMESTER–VIII • EXAMINATION – SUMMER - 2018

Subject Code: 4480602 **Date: 02/05/2018**

Subject Name: Data Analytics with R Programming **Time: 10.30am to 01.00pm**

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.	**07**
	(b)	Write a short note on various types of data.	**07**
Q.2	**(a)**	Explain pie( ) function with all parameters. Explain legend of chart with example.	**07**
	(b)	List the packages and functions used to read a data such as Csv Files, XML File, Web data, JSON File, Excel File. Explain in brief.	**07**
		OR	
	(b)	Explain high level plotting commands and low level plotting commands in R.	**07**
Q.3	**(a)**	What is vector? Explain logical, character, and index vector in detail.	**07**
	(b)	Explain R environment in detail.	**07**
		OR	
Q.3	**(a)**	Explain Data Structures in details.	**07**
	(b)	Explain the rules of variable assignment in R with example. Write commands for creating data frame "Employee" which includes fields Name, Age, Salary, City.	**07**
Q.4	**(a)**	Explain survival analysis in detail with example.	**07**
	(b)	What is regression? Differentiate linear, multiple, and logistic regression.	**07**
		OR	
Q.4	**(a)**	Explain random forest with example.	**07**
	(b)	Explain time series analysis in detail with example.	**07**
Q.5	**(a)**	What is Normal Distribution? Explain following function used in R for Normal distribution. i. dnorm( ) ii. pnorm( ) iii. qnorm( ) iv. rnorm( )	**07**
	(b)	Create a input.csv file with content (id,name,salary,start_date,dept). Perform following operations in above data: i. Get the maximum salary ii. Get the details of the person with max salary iii. Get all the people working in IT department	**07**
		OR	
Q.5	**(a)**	Explain following functions with example : i)ls ii)cbind iii)plot iv)class v)factor vi)str vii)seq	**07**
	(b)	Define prescriptive analysis and explain creating data for analytics through active and reinforcement learning.	**07**

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