Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER- IV EXAMINATION - SUMMER - 2017

Subject Code:3640005

Subject Name: Data Analytics with R Time: 10:30 A.M. – 01:00 P.M. **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 0.1 07 (a) Do as directed: 1. Give the difference between & and &&. 2. .result 1 is valid variable name? Explain. 3. Give output for the following code in R. v <- LETTERS[1:4] for (i in v) { print(i) } 4. Give the use of %*% operator in R. 5. Give the function name to delete a variable in R. 6. How to sort character vectors in reverse order? 7. Give the difference between Barchart and Histogram. What is Data Analytics? Explain classification of Data with example. 07 **(b) Q.2** (a) i) What is R? Give features of R. 03 ii) Give the syntax to create a vector in R. Explain the concept of vector 04 recycling with example. What is list? Create a list which contains one vector having 5 numbers and one 07 **(b)** matrix of size 2x3. Give names to the list elements "Vector" and "Matrix". Print the list. Convert list to vector. Explain array() and apply() function with example. **07 (b) Q.3** Explain UDF in R. Also explain the concept of default argument. Create UDF (a) 07 to print square from 1 to n (pass n as an argument). Write R script to connect MySQL Database in R. 07 **(b)** a. Create a connection object for the database named Test. b. Insert 5 records in table named Employee (Emp. id, name, salary). c. Fetch all the records of Employee table in R. d. Drop Employee table. OR Explain pie() function with all parameters. Explain legend of chart with 0.3 07 example.

P.T.O.

Date:06/06/2017

	(b)	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
Q.4	(a)	What is Linear Regression? Give steps to establish a Linear Regression in R.	07
		Explain lm() function with example.	
	(b)	What is a Decision Tree? How does it work? Explain ctree() function of party package with example.	07
		OR	
	(a)	What is Normal Distribution? Explain following function used in R for Normal	07
		distribution.	
		i) dnorm()	
		ii) pnorm()	
		iii) qnorm()	
		iv) rnorm()	
	(b)	i) What is Logistic Regression? Explain glm() function.	03
		ii) What is Survival Analysis? Give syntax of Surv () and survfit() function.	04
Q.5	(a)	Write a short note on Applications of Data Analytics.	07
	(b)	What is Prescriptive Analytics? Explain data creation for analytics through active learning.	07
		OR	
Q.5	(a)	Read the csv file named input.csv (id, name, salary, dept) into R. Print number of rows and columns of file. Write records of IT department in it_dept.csv	07
	(b)	What is Prescriptive Analytics? Explain data creation for analytics through	07
		designed experiments.	
