

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA – SEMESTER – IV • EXAMINATION – SUMMER 2018

Subject Code: 3640005

Date: 28-May-2018

Subject Name: Data Analytics with R

Time: 10.30 am to 1.00 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. What is scatterplot?
 2. Can we use = for assigning values in R? True or False
 3. Give output for the following code in R.

```
>v<-c(1:4)
>-v
```
 4. From _____ web page we can directly install package to R.
 5. How we can declare function in R.
 6. How to sort character vectors in reverse order?
 7. What we can understand from Histogram?
- (b)** Explain the significance of Data Analysis in current era. **07**
- Q.2 (a)** i) See the following code and write the output: **03**
- ```
m<-matrix(c(1:9),nrow=3,ncol=3,byrow=TRUE)
print(m[1,3])
print(m[1,])
print(m[,2])
```
- ii) See the following code and write the output: **04**
- ```
r<-array(c(c(1:3),c(11:14)),dim=c(2,3,3))
print(r[, ,2])
print(r[1, ,2])
print(r[1,1,1])
```
- (b)** What is array? How we can create 3-dimensional array and access elements of array in R? Explain with code and output. **07**
- OR**
- (b)** What is matrix? How we can create matrix and access elements of array in R? Explain with code and output. **07**
- Q.3 (a)** Write a code to read a .csv file containing enrollment number, marks obtained out of 700. Along with displaying data, print minimum marks, maximum marks, mean, median, mode, average marks. **07**
- (b)** Write a R script that will create a function isPalindrome() and return True if argument number is palindrome otherwise false. (A number should be entered by user) **07**
- OR**
- Q.3 (a)** Write a R script that will create a function factorial() and return factorial of parameter. (A number should be entered by user) **07**
- (b)** Write a code to read a .csv file containing month, item, and sales in rupees. Along with displaying data, sales of month – May, highest sales in month February, average sales of March **07**

PTO

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| Q.4 | (a) Explain dnorm() and pnorm() in detail. | 07 |
| | (b) Explain how we can have bar chart in R with label, title and colors. | 07 |
| | OR | |
| | (a) Explain dbinom() and pbinom() in detail. | 07 |
| | (b) Explain how we can have line chart in R with multiple lines, label, title and colors. | 07 |
| Q.5 | (a) Explain how we can read CSV file and write into CSV file with appropriate code. | 07 |
| | (b) Explain various data types in R. | 07 |
| | OR | |
| Q.5 | (a) Explain various types of loops in R. | 07 |
| | (b) What is Prescriptive analysis? Explain data creation for analytics through designed experiments. | 07 |