JECRC University, Jaipur

Assignment Unit IV

MCA - III Semester

Subject: Statistical Computing using R

Subject Code: MCA206A

Date of Release:

Last Date of Submission:

Part-A **10X1=10**

Q.1 Which of the following statement gives cumulative sum?
a) cumsum(x,na=rm=TRUE)
b) cumprod(x)
c) cummax(x)
d) cummin(x)

Q.2 Which of the following statement tells the row with the minimum value for every column?
a) which.min(x)
b) which.max(x)
c) z=apply(x,1,which.min)
d) z=apply(1,1,which.max)

Q.3 Which of the following function is used for plotting histogram?
a) hist()
b) histog()
c) histg()
d) histo()

Q.4 Which of the following will add the title "R language" to the graph?
a) titleAdd("R language")
b) title("R language")
c) titleBar("R language")
d) var(x, na.rm=TRUE)

Q.5 _____ finds K best paths in a given graph.
a) kBestShortestPaths
b) kcirt
c) ktrees
d) kmap

Q.6 _____ is used to view packages currently loaded.
a) library()
b) search()
c) .libPaths()
d) stringr()

Q.7_____ is used to view packages currently loaded.

a) library()

b) search()

c) .libPaths()

d) stringr()

Q.8 _____ read only parameter that returns the width and height of the current device surface in inches.

a) Din

b) Fin

c) Gin

d) Kin

Q.9Which level plotting commands generate figures?

a) Low

b) High

c) Both high and low

d) No levels

Q.10 Which of the following method make vector of repeated values?

a) rep()

b) data()

c) view()

d) read()

Q.11 For the population

Y<-c(1,2,3,4,5),Write the R command to find the mean?

a)mean{y}

b)mean[y]

c)mean(y)

d)means(y)

Q.12 Which of the following is multivariate version of lapply?

a) apply()

b) lapply()

c) sapply()

d) mapply()

Q.13 _____ loop over a list and evaluate a function on each element.

a) apply()

b) lapply()

c) sapply()

d) mapply()

Q.14_____ produces one-dimensional scatterplots.

a) xyplot

b) stripplot

c) barchart

d) bwplot

Q.15Which is the R command for obtaining 1000 random numbers through normal distribution with mean 0 and variance 1?

qnorm(0, 1, 1000)

rnorm(0, 1, 1000)

rnorm(1000, 0, 1)

norm(1000, 0, 1)

Q.16 _____ and _____ are types of matrices functions?

a) None of These

b) apply() and sapply()

c) apply() and lapply()

d) Both

Q.17 R Language functionality is divided into a number of _____

a)Documentation

b)Functions

c)Domains

d)Packages

Q.18What will be the output of the following R code?

```
> x <- list(a = 1:5, b = rnorm(10))
> lapply(x, mean)
```

a)$a

[1] 3

$b

[1] 0.1322028

b) $a

[1] 4

$b

[1] 0.1322028

c) $a

[1] 5

$b

[1] 0.1322028

d) $a

[2] 5

$b

[1] 3

Q.19 If a Programmer wants the output to be a list then _____ function is used.

a)Zapply

b)Sapply

C)Vapply

d) Lapply

Q.20 Which function helps you perform sorting in R language?

a) Library

b) Order

c)Simple

d)Inorder

Part-B **5X2=10**

Q.1What does apply() do in R? Give Example

Q.2 How do you make a graph in R programming?

Q.3 Why do we use line charts in R ?

Q.4 Differentiate between Pie Chart, Bar Graph and Histogram?

Q.5 What are the data frames? Write its significance in R-Language?

Part-C **5X6=30**

Q.1 Name different Types of Graphs in R Programming? Explain all with Example.

Q.2 What is Histogram? How do you make a Histogram in R?

Q.3 Write the steps how to Make BoxPlots in RStudio.

Q.4.Explain tapply() function with its parameter.

Q.5How do you apply a Dataframe in R Programming?

.

Part-D **2X10=20**

Q.1 Write a script that will print 'Is a Matrix' if the variable x is a matrix, otherwise "Not a Matrix".

Q.1 (a) What do you mean by Apply Function? Write the command in R console to specify the columns that needs to be excluded in the apply function.

(b) Write a Program Using R pie chart, demonstrate the percentage conveyance of various ways for travelling to office such as walking, car, bus, cycle and train.

Q.2. (a) Calculate the mean of ozone, solar radiation, and wind within each month using sapply for air quality dataframe

(b). Write the command in R console to obtain mean using tapply function by considering a vector having 10 normal and 10 uniform variables. Assume that these vectors have three groups.