

M.Sc Sem.-2 Examination
P - 410-EB
Statistics (R Programming)

Time : 2-00 Hours]

June 2022

[Max. Marks : 50

Instruction: All questions in **Section-I** carry equal marks.

Attempt any **Three** questions in **Section-I**.

Question 9 in **Section-II** is **COMPULSORY**.

Section-I

- Q.1 What is a operator in R? Explain arithmetic and logical operators with example. [14]
- Q.2 (A) Write about data frame in R. [07]
(B) Discuss about list in R. [07]
- Q. 3 (A) Explain, how will you create a pie-chart using the pie() function ? [07]
(B) Explain, about plot() and lines() functions with examples. [07]
- Q. 4 (A) Explain, how will you create a histogram? [07]
(B) Discuss about return values in R. [07]
- Q.5 (A) Write R function to check whether the given number is prime or not. [07]
(B) Explain if-else statement with examples. [07]
- Q.6 (A) Discuss about loops in R programming with examples. [07]
(B) Write R code to the function by using if else command [07]
- $$f(x) = x \quad \text{if } x < \frac{1}{2}$$
- $$= (1-x) \quad \text{if } \frac{1}{2} < x < 1$$
- $$= 0 \quad \text{otherwise.}$$
- Q.7 (A) Explain dbinom (), pbinom (), rbinom () about binomial distribution. [07]
(B) Explain dnorm (), pnorm (), qnorm () about normal distribution. [07]
- Q.8 Explain multiple and logistic regression in R programming. [14]

Section-II

- Q.9 Answer any eight. [08]
- (i) What is the use of legend () function?
- (ii) In R, equality operator is given by _____.
- (a) = (b) == (c) != (d) none of these

P.T.O

E 556-2

(iii) What is the use of par() function?

(iv) R command for extracting fourth value of vector a is ____.

- (a) a4 (b) a(4) (c) a[4] (d) none of these

(v) What is the use of cbind() function?

(vi) The ____ command is used to repeat same value in R.

- (a) rep() (b) repeat() (c) replicate() (d) all of these

(vii) What is the length of x?

x <- 2:8

- (a) 8 (b) 5 (c) 6 (d) 7

(viii) R is mostly used in _____.

- (a) Problem solving (b) Statistics (c) Probability (d) all of the above

(ix) What is the use of rbind() function?

(x) _____ function is used to watch for all available packages in library.

- (a) lib() (b) fun.lib() (c) libr() (d) library()

(xi) What is the use of apply() function?

(xii) In R, to obtain transpose of matrix A, the command used is _____.

- (a) t(A) (b) tran(A) (c) tra(A) (d) none of these

(xiii) What will be the output of the following R code?

```
> x <- 2:5
```

```
> y <- 5:8
```

```
> z <- x+y
```

```
> z
```

- (a) 7 9 11 13 (b) 7 9 11 13 14 (c) 9 7 11 13 (d) NULL

(xiv) We wish to calculate the correlation between two columns of a data set. Which of the below codes will achieve the purpose?

- (a) cor(X,Y) (b) corr(X,Y) (c) core(X,Y) (d) correlation(X,Y)

(xv) _____ shortcut used to clear the console.

- (a) Ctrl + K (b) Ctrl + L (c) Ctrl + C (d) Ctrl + V

(xvi) What is the use of min() function?
