

Bsc Semester -III Examination 2020
Subject- Statistics
Paper- SECC-1(Statistical Data Analysis Using R)

Full Marks: 25

Time: 2 hours

Answer any two questions: (Notations have usual meanings)

1. a) Explain what is R.
- b) Explain data (saved in .txt and .csv) import in R.
- c) How missing values and impossible values are represented in R language?
- d) Which function in R language is used to find out whether the means of 2 groups are equal to each other or not?
- e) What is the value of f (2) for the following R code?

```
b <- 4  
f <- function (a)
```

```
{
```

```
b <- 3
```

```
b^3 + g (a)
```

```
}
```

```
g <- function (a)
```

```
{
```

```
a*b
```

```
}
```

2. a) What will be the output of log (-5.8) when executed on R console?
- b) Mention names and give examples of different R data types.

3. Write R codes to read/import the following dataset in R and answer/compute/plot the followings:

Name	Age	Gender	Income (in Rs.)	Education (in yrs.)
Annie	23	Female	60000	15
Bonnie	30	Male	70000	17
Ramu	25	Male	10000	10
Soumitri	31	Female	35000	12
Sarmila	40	Female	20000	8
Shyamal	50	Male	90000	18
Sahin	21	Male	31000	15

- a) What is the dimension of the dataset?
- b) Types of different variables in the dataset.
- c) What is the correlation coefficient of Age and Income?
- d) Plot the scatter diagram to examine if there is any relationship between Education and Income. Is there any correlation, if yes then what is the extent?
- e) Draw the pie chart of the variable gender.
- f) Find and write down the linear relation between Age and Income.