

- (e) (i) Print the first, third and fifth rows.
- (ii) Sort the above sample.
- (f) Convert the above data frame into a matrix with object name 'consumers'. Also, determine the structure of it.
- (g) Add the row names : FY2012 FY2013 FY2014 FY2015
FY2016 to the above dataframe.
- (h) Explain the command :

```
data1[seq(1, length(data1), 2)]
```

4. Do any *four* of the following : $3 \times 4 = 12$

- (a) (i) Create the following data frame :

```
> bird
```

	Garden	Hedgerow
Blackbird	47	10
Chaffinch	19	3
Great Tit	50	0
Robin	9	3

- (ii) Plot a bar chart of above data.
- (iii) Alter the scale of the y-axis and add axis labels.

This question paper contains 4+2 printed pages]

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S. No. of Question Paper : 7229

Unique Paper Code : 62353505 J

Name of the Paper : Statistical Software R

Name of the Course : B.A. (Prog.) Mathematics : S.E.C

Semester : V

Duration : 2 Hours

Maximum Marks : 38

(Write your Roll No. on the top immediately on receipt of this question paper.)

All questions are compulsory.

All commands should be written in software R.

1. Do any *five* of the following : $5 \times 1 = 5$

State whether the following statements are true or false :

- (i) `rm()` command finds the defined variables.
- (ii) `colors()` and `colours()` commands give the same output.
- (iii) Quantile-Quantile plots are used for visualizing data in a straight line.
- (iv) `c(3 5 7 9)` gives a vector.

P.T.O.

(v) sample() command selects random elements from data.

(vi) ls.str() command finds the structure of all the defined objects.

2. Do any five of the following : 5x1=5

Fill in the blanks.

(i)command is used to make scatter plot.

(splot() / plot())

(ii)command can be used to view the current type of an object. (summary() / class())

(iii) names() command is used for viewing.....names. (rows/columns)

(iv)command is used to generate a sequence of 10 random numbers. (seq(10)/ rseq(10))

(v) Command for $\cot^{-1}(x)$ is..... (acot(x)/ arccot(x))

(vi)command rearranges the items in a vector to be in order (sort(), order()).

3. Write the commands in R for the following : 2x8=16

(a) (i) Read data from the file "hybrid .txt" .

(ii) Using scan function, enter the following data :

Subject : Eng Sociology Science History

(b) (i) List the object starting with b or ending with t.

(ii) Save the commands in a file with name "commands."

Use data : 2 3 7 2 4 3 2 5 6 3 1 3 7 8; for question(c) and (d)

(c) (i) Display the values less than 4 and greater than 6.

(ii) Count the items in the above sample.

(d) (i) Create a contingency table.

(ii) Create a stem and leaf plot.

Consider the following dataframe 'data', for questions (e)-(g) :

data :	data 1	data 2	data 3
	23	25	34
	43	32	56
	23	65	21
	34	76	78

32 67 32