

1. Differentiate R Console and R studio.
2. List out the rules to define a variable name in R.
3. Illustrate general format of factors in R.
4. Compare .csv files and .tsv files.
5. Relate charts and graphs.
6. Who uses R?
7. Define R list
8. Show the value of $f(2)$ for the following R code.

```
b <- 4
```

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

```
{
```

```
b <- 3
```

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

```
}
```

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

```
{
```

9. How can you read .xlsx file in R
10. List the importance of data visualization.

1. Categorize various objects in R with example
2. Identify commands used in R Programming
3. Distinguish the data structures in R with example
4. Illustrate data frame concept in R and clarify how you will merge two data frames with example
5. Experiment with databases in R programming
6. Construct the data visualization techniques for student performance in R programming
7. Experiment with Xml and Json data in R programming
8. Elaborate getting data into R with examples?

1. Examine the concept of vector in R. Explain how you can find the index of maximum and minimum value in a matrix using R.

2. Analyze the given dataset and solve the following questions in R.

- (i) How can you load a .csv file in R?
- (ii) Get the highest salary
- (iii) Organize all the IT department personnel
- (iv) Get people who earn more than 600 salaries in IT department
- (v) Find out who joined after 2014

id	name	salary	start_date	dept
1	Rick	623.3	1/1/2012	IT
2	Dan	515.2	9/23/2013	Operations
3	Michelle	611	11/15/2014	IT
4	Ryan	729	5/11/2014	HR
5	Gary	843.25	3/27/2015	Finance
6	Nina	578	5/21/2013	IT
7	Simon	632.8	7/30/2013	Operations
8	Guru	722.5	6/17/2014	Finance

3. Analyze R vector object creation, accessing and manipulating vector elements in detail with example. In the vector $v \leftarrow c(1,12,3,14,-1,-3)$ count the number of vector values present in range between -1 to 8 using R

4. Examine the following air quality data set and visualize data set using bar chart, box plots.

Ozone	Solar R.	Wind	Temp	Month	Day
41	190	7.4	67	5	1
36	118	8	72	5	2
12	149	12.6	74	5	3
18	313	11.5	62	5	4

NA	NA	14.3	56	5	5
28	NA	14.9	66	5	6