

NATIONAL INSTITUTE OF TECHNOLOGY SILCHAR

Cachar, Assam

B.Tech. IVth Sem

Subject Code: CS216

Subject Name: Applied Probability

Submitted By:

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Branch : CSE – B

1. Write down steps required to perform Kolmogorov-Smirnov Test in R programming with the help of an example. Also take two samples x1 and x2 and visualise it by plotting a graph of the test result using R.

➔ **Steps:**

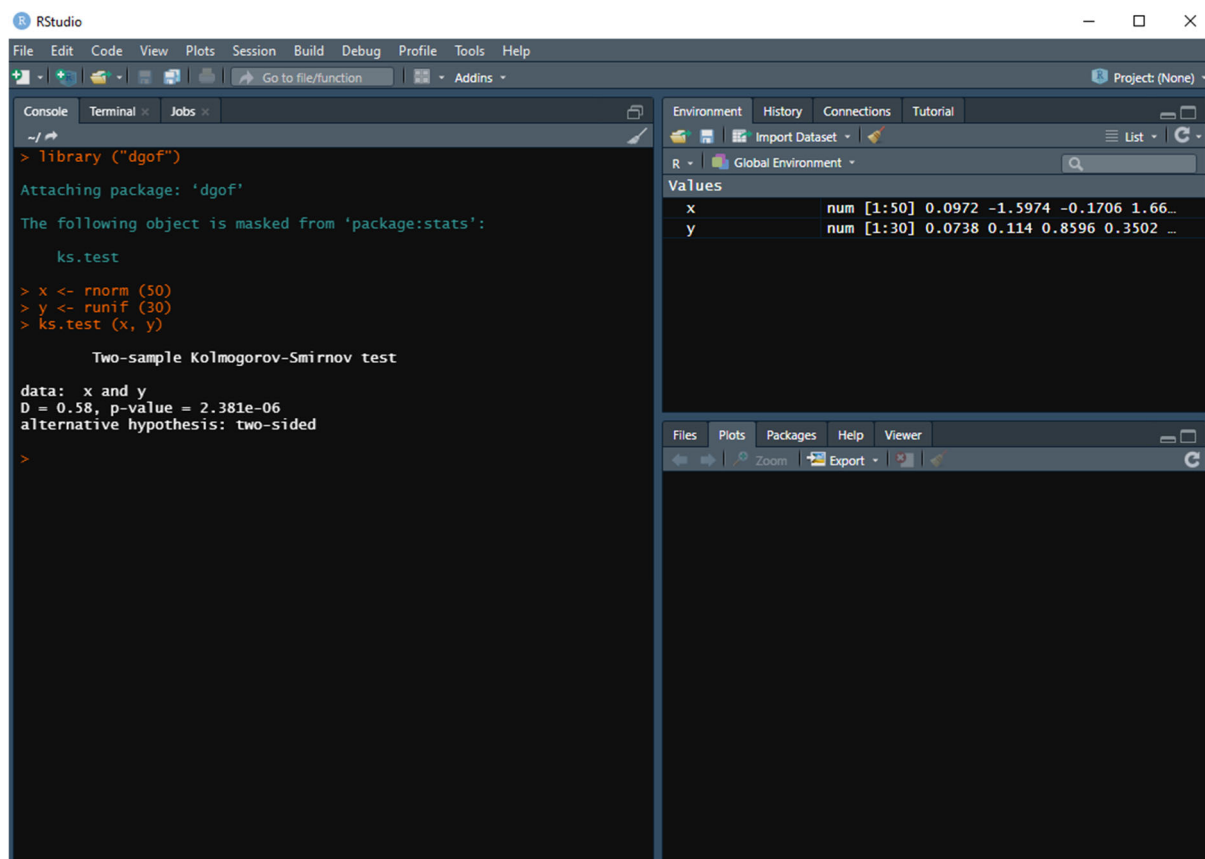
- i. **Install 'dgof' package and load it.**

```
> install.packages("dgof")
> library(dgof)
```
- ii. **Generate samples x and y using the functions rnorm() and runif().**

```
# rnorm () is used to generate random variates
> x <- rnorm (50)
# runif () is used to generate random deviates.
> y <- runif (30)
```
- iii. **Perform Kolmogorov-Smirnov Test on the samples x and y using the function ks.test().**

```
> ks.test (x, y)
```

Example:



```

RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
Project: (None)

Console
~/
> library("dgof")
Attaching package: 'dgof'
The following object is masked from 'package:stats':
    ks.test
> x <- rnorm (50)
> y <- runif (30)
> ks.test (x, y)

Two-sample Kolmogorov-Smirnov test

data: x and y
D = 0.58, p-value = 2.381e-06
alternative hypothesis: two-sided
>

Environment History Connections Tutorial
R Global Environment
Values
x num [1:50] 0.0972 -1.5974 -0.1706 1.66...
y num [1:30] 0.0738 0.114 0.8596 0.3502 ...

Files Plots Packages Help Viewer
Zoom Export

```

Graph visualisation of two samples x1 and x2:

