Experiment : 3

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Course : B.Sc. Hons. Electronics
Semester : 5th

Experiment : 3

Aim : To plot the 2D and 3D Graphical plotting with change of view and rotation

Apparatus Required : A desktop with Scilab installed in it.

Theory : A plot is a graphical technique for representing a data set, usually as a graph showing the relationship between two or more variables. Plots play an important role in statistics and data analysis. Scilab can produce many types of 2D and 3D plots. It can create x-y plots with the plot function, contour plots with the contour function, 3D plots having x, y, z plots with the surf function, histograms with the hist plot function and many other types of plots.

Code :

Example 1 :

```
clc;
a=gca();
t=[0:0.3:2*%pi]';
x=cos(t);
y=tan(t)*cos(t');
subplot(121);
plot(t,x);
title("2d graphical plot");
a.rotation_angles=[30 60];
a.view="3d";
subplot(122);
plot3d(t,t,y);
title("3d graphical plot");
a.rotation_angles=[30 60 120];
a.view="3d";
```

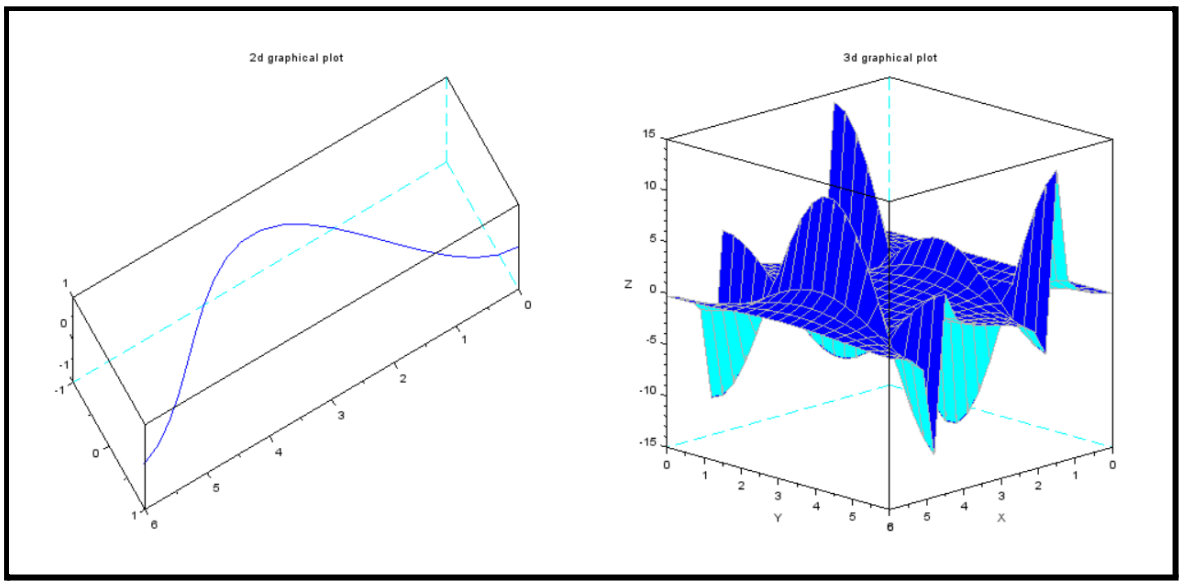
Example 2 :

```
clc;
a=gca();
t=[0:0.3:2*%pi]';
x=sin(t);
y=tan(t)*sin(t');
subplot(121);
plot(t,x);
title("2d graphical plot");
a.rotation_angles=[30 60];
a.view="3d";
subplot(122);
```

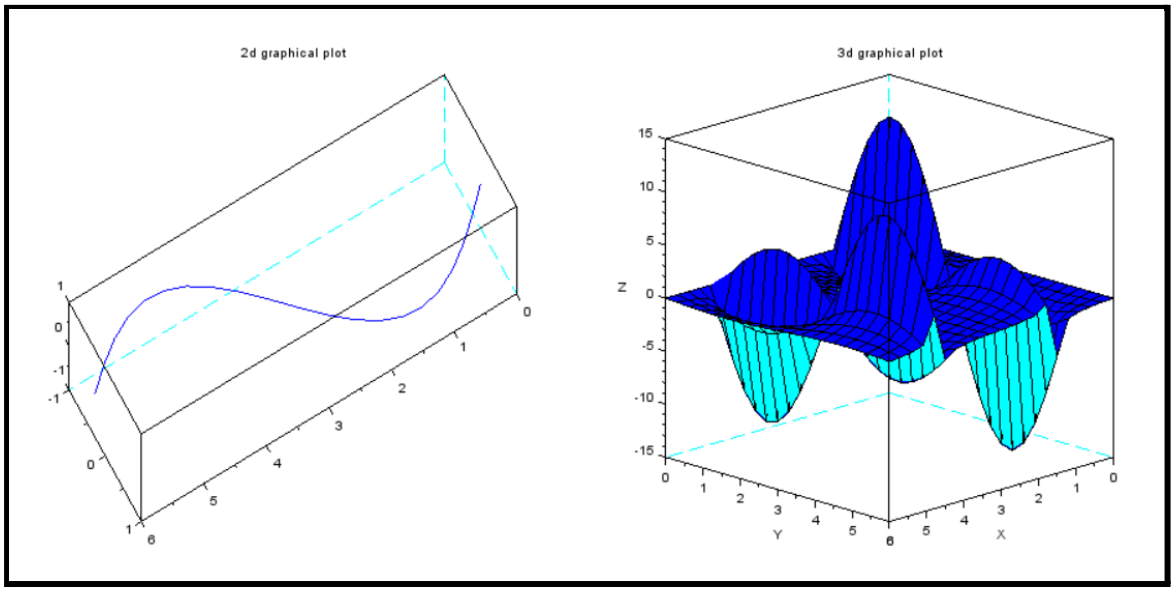
```
plot3d(t,t,y);
title("3d graphical plot");
a.rotation_angles=[30 60 120];
a.view="3d";
```

Output :

Example 1 :



Example 2 :



Result : 2D and 3D Graphical plotting with change of view and rotation has been plotted successfully for different-different functions.