Practical 6: MATLAB

6.1 Import the data from excel then,

- Extract value from column 1
  Column_1 = data(1:end,1)
- Extract value from column 1 from row 2 to end
  Column_1/2 = data(2:end,1)
- Extract only the selected values from column 1
  Selected_value = data(2:10,1)
- Extract the values form row 1
  row = data(1,1:end)
- Extract all the values
  whole_data = data(:,1:end)
- Convert the whole values in a single row
  single_row = data(1:end)
- Convert the value of column 1 to the log of column 1
  Logofcolumn_1 = log[column_1]
- Multiply the whole data by 2
  data2 = 2*data
- Calculate the average from column 2
  average = mean(data(1:end,1))

6.2 Preparation of plain contour map

```
[a,b] = meshgrid(-3:0.1:3,-3:0.1:3);

c = (a.^2-b.^2);

contour(a,b,c)

contour(a,b,c,25)

[C,h] = contour(a,b,c);

clabel(C,h)
```

6.3 Preparation of 3D contour map

```
[a,b] = meshgrid(-3:0.1:3,-3:0.1:3);

c = (a.^2-b.^2);

contour3(a,b,c)

contour3(a,b,c,25)
```