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MATRIC NO: 16/ENG06/002

**DEPARTMENT: MECHANICAL
ENGINEERING**

COURSE CODE: ENG 382

ASSIGNMENT 6

1B)

MATLAB CODE

```
commandwindow clear
clc
ukuku=xlsread('ass6')
t=ukuku(:,1)
d=ukuku(:,3) [xr
xc]=size(t)
x0=ones(xr,1) x=[x0
t] ebe=regress(d,x)
a0=ebe(1) a1=ebe(2)
a= 10^a0 b=10^a1
dsim= a0+a1*t
Rvalue= corr(d,dsim)
Rsquare= Rvalue^2
```

RESULTS

ukuku =

0	2	0.30103
1	5	0.69897
2	19	1.2788
3	50	1.699
4	151	2.179
5	470	2.6721
6	1435	3.1569
7	4512	3.6544
8	12936	4.1118
9	41125	4.6141
10	1.1102e+05	5.0454

t =

0
1
2
3
4
5
6
7
8
9
10

d =

0.30103
0.69897
1.2788
1.699
2.179
2.6721
3.1569
3.6544
4.1118
4.6141
5.0454

xr =

11

xc =

1

x0 =

1
1
1

1
1
1
1
1
1
1
1
1

x =

1 0
1 1
1 2
1 3
1 4
1 5
1 6
1 7
1 8
1 9
1 10

ebe =

0.27511
0.47973

a0 =

0.27511

a1 =

0.47973

a =

1.8841

b =

3.0181

dsim =

0.27511

0.75484

1.2346

1.7143

2.194

2.6738

3.1535

3.6332

4.1129

4.5927

5.0724

Rvalue =

0.99984

Rsquare =

0.99969