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COURSE: ENG 382
DEPARTMENT: ELECTRICAL & ELECTRONICS
MATRIC NO: 16/ENG04/035

```
commandwindow
clear
clc
close all
t=0
y=1.4
h=0.1
for i=1:5
    iter(i+1)=i
    t(i+1)= (t(i)+h);
    y(i+1)=y(i)+ h*(2*(t(1)))+y(1)^2;
end
table= [iter' t' y']
```

Answer

t=

0

y=

1.4000

h=

0.1000

iter =

0 1

iter =

0 1 2

iter =

0 1 2 3

iter =

0 1 2 3 4

iter =

0 1 2 3 4 5

table =

0 0 1.4000

1.0000 0.1000 3.3600

2.0000 0.2000 5.3200

3.0000 0.3000 7.2800

4.0000 0.4000 9.2400

5.0000 0.5000 11.2000

```
function dQdt = assignmentVbb(t,Q)
dQdt(1) = (-0.15*Q(1)) + (0.005*Q(2)) + 1;
dQdt(2) = (0.03*Q(1)) - (0.018*Q(2)) + (0.0075*Q(3));
dQdt(3) = (0.013*Q(2)) - (0.0325*Q(3));
dQdt = dQdt';
```

```
commandwindow
clear
clc
close all
[t,Q]= ode45('Assignmentbb',0:0.1:1200);[0 0 0];
plot(t,Q)
xlabel('t')
ylabel('Q')
legend('Q**1', 'Q...2', 'Q...3')
```

STEADY STATE VALUE

y1 = 7.1417

y2 = 14.286

y3 = 5.7143

