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DEPARTMENT: MECHATRONICS

MATRIC NO: 16/ENG05/002

ENG281

```
commandwindow
```

```
clear
```

```
clc
```

```
syms t
```

```
q= 0.25 * sin (25 * pi * t);
```

```
tn=[0:0.0001:0.35];
```

```
qn = subs(q,tn);
```

```
figure(1)
```

```
plot(tn, qn)
```

```
xlabel("Time(s)");
```

```
ylabel("Charge(Q)");
```

```
title("Charge against Time Graph");
```

```
grid on
```

```
grid minor
```

```
v = 0.5 * cos(0.2 * pi * t);
```

```
w = v * q;
```

```
wn = subs(w,tn);
```

```
figure(2)
```

```
plot(tn, wn)
```

```
xlabel("Time(s)");
```

```
ylabel("Work(J)");
```

```
title("Work against Time Graph");
```

```
grid on
```

```
grid minor
```

```
figure(3)
```

```
plot( tn, wn,tn, qn)
xlabel("Time(s)");
ylabel("Charge(Q) & Work(J)");
title("Charge/Work against Time Graph");
grid on
grid minor
legend("Power(W)","Current(A)");
```



