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18/ENG02/007

COMPUTER ENGINEERING

Initial Temp = 10°C at 0°C
 $S_{\text{min}} = 20^{\circ}\text{C}$
actual Temperature = 25°C
 $x_{\text{min}} = 24.9^{\circ}\text{C}$
at $S_{\text{min}} = 20^{\circ}\text{C} = 22.5^{\circ}\text{C}$
 $y = y_0 e^{kt}$
 $22.5 = 10 e^{0.162t}$
 $2.25 = e^{0.162t}$
 $\ln 2.25 = kt$
 $0.81 = 0.162t$
 $24.9 = 10 e^{0.162t}$
 $2.49 = e^{0.162t}$
 $\ln 2.49 = 0.162t$
 $0.9 = t$
 0.162
 $t = 5.63 \text{ min}$
 $\therefore 5.63 \text{ min} = 24.9^{\circ}\text{C}$

```
commandwindow
clear
clc
close all
format short g
mdata=xlsread('onlinequizdata','fluiddata')
x=mdata(1:2:250,1)
y=mdata(1:2:250,2)
plot(x,y)
grid on
grid minor
```

Command Window

```
86
88
90
92
94
96
98
100
102
```

print In 11 Col 11