

DOKTOR OGHTENREKOR KISDOM

18/11/2013/322

ELECTRICAL ENGINEERING

EEG 282

QUESTION 1

$$T_1 \text{ of thermometer} = 10^\circ\text{C}$$

$$T_2 \text{ of thermometer} = 20^\circ\text{C}$$

$$\text{Time taken} = 5 \text{ minutes} = 300 \text{ sec}$$

$$\Delta T = 20 - 10 = 10^\circ\text{C}$$

$$T = 24.9^\circ\text{C}$$

$$\Delta T_c = 24.9 - 10 = 14.9^\circ\text{C}$$

$$10^\circ\text{C} = 300 \text{ sec}$$

$$14.9^\circ\text{C} = x$$

$$10x = 300 \times 14.9$$

$$10x = 4470$$

$$x = \frac{4470}{10}$$

$$x = 447 \text{ sec}$$

$$\therefore x = 7 \text{ min } 27 \text{ second}$$

M Mathcad - [Untitled:2]

File Edit View Insert Format Tools Symbolics Window Help

Normal Arial 10

My Site Go

$t \rightarrow 0, 1, 35$

$T(t) \rightarrow -15 \exp(-0.21972 \cdot t) + 25$

$T(t) =$

| |
|--------|
| 24.138 |
| 24.308 |
| 24.444 |
| 24.554 |
| 24.642 |
| 24.713 |
| 24.769 |
| 24.815 |
| 24.851 |
| 24.881 |
| 24.904 |
| 24.923 |
| 24.938 |
| 24.95 |
| 24.96 |
| ... |

Calculator

Graph

Activate Windows
Go to Settings to activate Windows.

Press F1 for help. AUTO NUM Page 1

9:23 AM
27/04/2020