ECE 3043 Summer 2018
Homework Problem Set No 3 for Experiment No. 3

Due Second Meeting Week of June 4

1. The excitation for both circuits shown below is $v_i(t) = 10\,\mathrm{V}u(t)$. Plot the voltage $v_o(t)$, the reactive voltage and current for the two circuits using Mathcad. Plot the circuit variables as t varies from 0 to two time constants for the circuits.. The values of the circuit components are $R_1 = 12\,\mathrm{k}\Omega$, $R_2 = 15\,\mathrm{k}\Omega$, $R_3 = 4.3\,\mathrm{k}\Omega$, $L = 3\,\mathrm{mH}$, and $C = 0.022\,\mu\mathrm{F}$.

2. Make the same plot as in Problem 2 using Matlab.

3. Make the same plot as in Problem 2 using National Instruments SPICE (Multisim).

4. Make the same plot as in Problem 2 using LTSpice (text editor input mode).