University of Portland
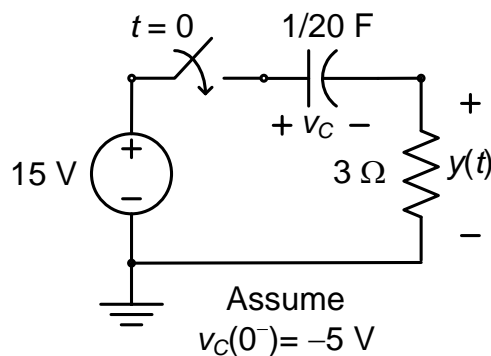# *School of Engineering*

EE 262/Spring 2018
A. Inan

Homework # 5-Application of Laplace Transform in LTI Systems
(Assigned: Friday, March 9, 2018)
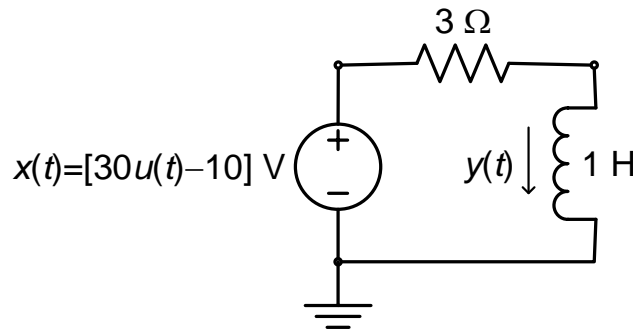(Due: Monday, March 26, 2018, 9:15a.m.)

Inan problem # 11: Laplace transform in electric circuits.
For the electric circuit shown, given that $v_C(0^-) = -5\,\mathrm{V}$, find the mathematical expression for the signal $y(t)$ for $t > 0$ and sketch it.
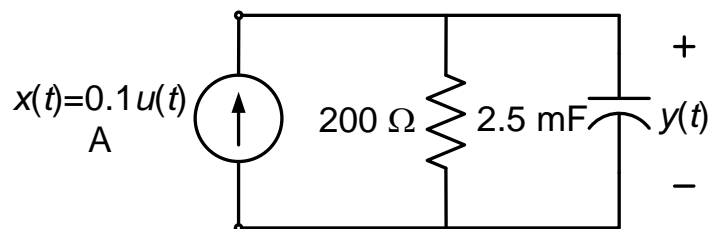

Inan problem # 12: Laplace transform in electric circuits.
For the electric circuit shown, find the signal $y(t)$ for $t \geq 0$.
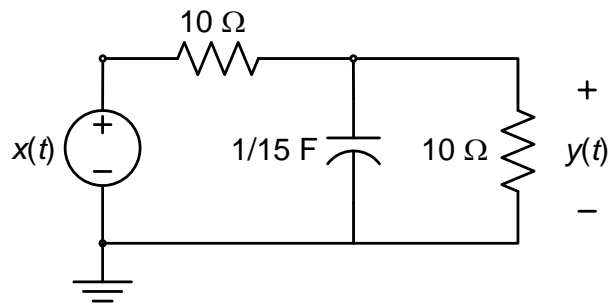

Inan problem # 13: Laplace transform in electric circuits.
For the electric circuit shown, find the signal $y(t)$ for $t \geq 0$.

Inan problem # 14: Laplace transform in electric circuits.
Find (a) the transfer function; (b) the impulse response; and (c) the unit-step response of the electric circuit shown.
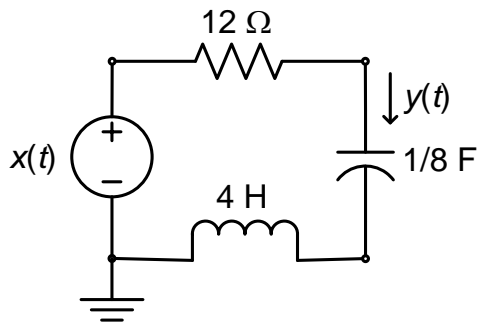

Inan problem # 15: Laplace transform in electric circuits.
Find (a) the transfer function; (b) the impulse response; and (c) the unit-step response of the electric circuit shown.

Inan problem # 16: Laplace transform in electric circuits.
Find (a) the transfer function; (b) the impulse response; and (c) the unit-step response of the electric circuit shown.
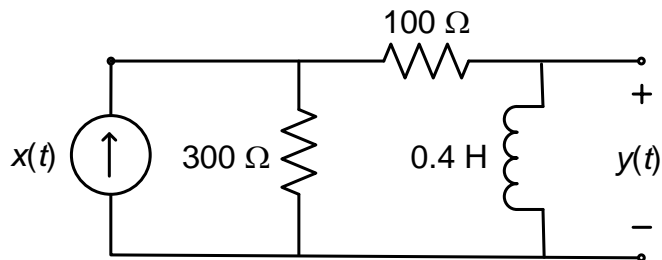

Please use the following guidelines for your homework solutions:
1) On the first sheet, at the top center, write: Homework #5-Solutions.
2) Provide your full name on the upper right corner of the first sheet.
3) Also write: EE 262/Spring 2018 on the upper left corner of the first sheet.
4) Solve each problem on a separate sheet unless your solution is very short.
5) Box all of your answers.
6) Staple your solutions in the above order before you turn them in.

Please turn in your homework on time.