University of Portland
School of Engineering

EE 261-Electrical Circuits-3 cr. hrs.
Fall 2015

Midterm Exam # 2

(Friday, November 13, 2015)

Happy Sequential Calendar Date 11/13/15!

(Closed Book Exam, Two Formula Sheets Allowed)

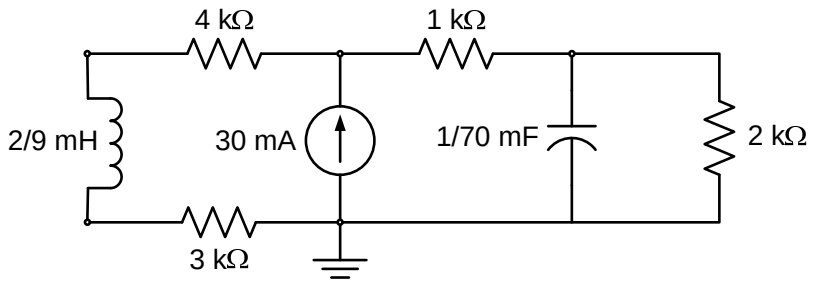
(Total Time: 55 minutes)

Name:_____☺

Signature:_____☺

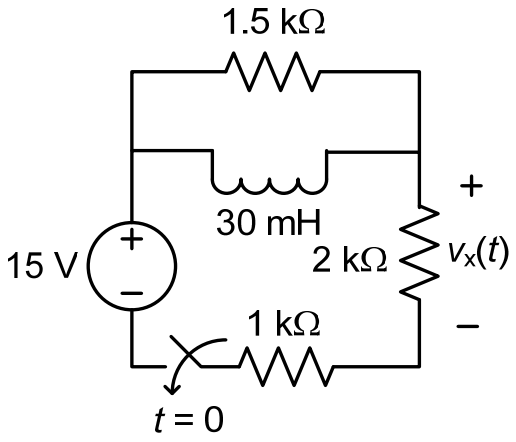
> ***"An honest mind possesses a kingdom."***
> **Lucius Annaeus Seneca (4B.C.–65A.D.)**
>
> ***"Honest people are the true winners of the universe."***
> **Anonymous**

1. (25 points) The electric circuit shown below is at DC steady state. Find the energies stored in the capacitor and the inductor. Provide units for your answers. Box your answers.

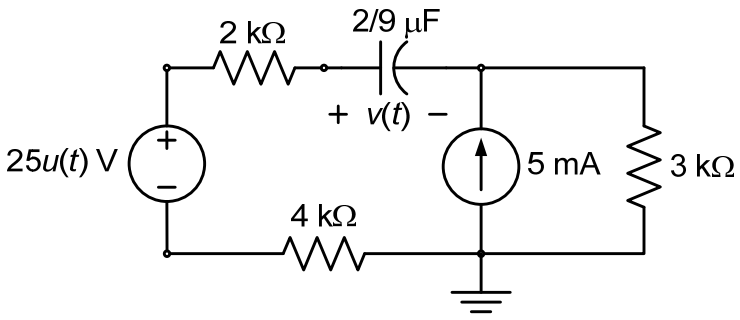


1	
2	
3	
4	
Total	

2. (25 Points) For the electric circuit shown, find the voltage $v_x(t)$ across the 2 kΩ resistor for $t > 0$. Assume the switch to be open for a long time before it closes at $t = 0$.



3. (25 Points) For the electric circuit shown, find the voltage waveform $v(t)$ across the capacitor for $t \geq 0$. (Hint: Note that the capacitor voltage is not zero at $t = 0^{-}$!)



4. (25 Points) For the op-amp circuit shown, given the source voltage to be $v_S = 0.21$ V, determine the values of the current i_o and the voltage v_o. Provide the correct unit for each answer. Please box your answers.