HW7 ECE2100 Autumn 2014

Lectures Covered: Lecture52 - Lecture53

HW should be turned in by Monday, Nov. 10, before 4:30pm

Solve all the problems. All problems will not be graded, only a selection of HW problems will be graded.

Show all relevant steps. Don’t just write down the answers.

Late HWs will not be accepted. HW with lowest grade will be dropped. Lecture Students: turn in your HW in class. Recitation students: turn in your HW at the ECE Office Front Desk. HWs turned in anywhere else will not be accepted.

Show your work on these pages, attach additional pages if necessary.

• Be sure to organize the pages in order and staple them all together, otherwise you will lose one point

• Fill out the following section. You will lose an additional point if you fail to provide these details

Your Last Name_____________________________
Your First Name_____________________________

1. Lecture Student ___________ or Recitation Student__________ (check one)
2. If Recitation then fill out the following
   Problems start from next page
   Name of Recitation Instructor________________________ Date/time of recitation ____________
3. Your Lab Section/Group__________________________________________________
Problem 1: Use mesh analysis to determine $V_x$. 
Problem 2: Use node analysis to determine $V_x$
Problem 3: Use superposition to determine I and V.
Problem 4: Use mesh analysis and superposition to determine $I$ and $V$. 

![Diagram of the circuit with labels: 4A, 3Ω, 6Ω, 2Ω, 4Ω, and ±18V.]
Problem 5: Determine the Thevenin's equivalent as indicated in the circuit below and use it to determine \( V_L \) and \( I_L \).
Problem 6: Determine the Norton equivalent as indicated in the circuit below and use it to determine $V_L$ and $I_L$. 

![Circuit Diagram]
Problem 7: Use node analysis to determine the Norton equivalent of the circuit given below.
Problem 8: Use node analysis to determine the Thevenin equivalent of the circuit given below. You can use results obtained while solving Problem 7.