

Homework 3

(Due date: 2014/3/19)

This assignment covers Ch4.10-4.4.13 and Ch6.1-6.3 of the textbook. The full credit is 100 points. For each question, detailed derivation processes and accurate numbers are required to get full credit.

- 1) (10 points) Problem 4.66 of the textbook (p160), while the current source is changed from 4 A to 6 A.
- 2) (10 points) Problem 4.77 of the textbook (p161), while the current-controlled voltage source is changed from $10i_{\Delta}$ to $20i_{\Delta}$.
- 3) (20 points) Problem 4.83 of the textbook (p162), while the right resistor is changed from $20\ \Omega$ to $100\ \Omega$ and the power dissipated in the resistor R_0 is changed from 250 W to 225 W.
- 4) (10 points) Problem 4.95 of the textbook (p163), while the top current source is changed from 5 mA to 10 mA.
- 5) (10 points) Problem 4.102 of the textbook (p165), while the resistor is changed from $20\ \Omega$ to $30\ \Omega$.
- 6) (10 points) Problem 6.15 of the textbook (p228), while the initial voltage on the capacitor is changed from -60.6 V to -100 V.

- 7) (20 points) Problem 6.31 of the textbook (p230), while the resulting current $i(t)$ is changed from $800e^{-25t}$ to $960e^{-30t}$.
- 8) (10 points) Problem 6.34 of the textbook (p230).