Homework 7

(Due date: 2014/6/11)

This assignment covers <u>Ch14 and Ch18</u> of the textbook. The full credit is <u>100 points</u>. For each question, <u>detailed derivation processes</u> and <u>accurate numbers</u> are required to get full credit.

1)   (10 points) <u>Problem 14.8</u> of the textbook (p574), while the inductor in (e) is changed from 10 mH to 5 mH.

2)   (10 points) <u>Problem 14.15</u> of the textbook (p575), while the resistor is changed from 150 Ω to 200 Ω.

3)   (10 points) <u>Problem 14.30</u> of the textbook (p576), while the center frequency ω_0 is changed from 50 krad/s to 100 krad/s and the capacitor is changed from 20 nF to 10 nF.

4)   (20 points) <u>Problem 14.31</u> of the textbook (p577).

5)   (10 points) <u>Problem 18.18</u> of the textbook (p722), while the resistor is changed from 4 Ω to 10 Ω and the goal is changed from expressions for the *a* parameters to those of the *g* parameters.

6)   (10 points) <u>Problem 18.19</u> of the textbook (p722).

7)   (15 points) <u>Problem 18.29</u> of the textbook (p722), while the right resistor is changed

from 100 Ω to 60 Ω.

8)   (15 points) <u>Problem 18.34</u> of the textbook (p723), while the value of V_1 in Measurement

2 is changed from 20 mV to 25 mV.