Homework 4

(Due date: 2014/4/16)

This assignment covers Ch9 and Ch10 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 9.14 of the textbook (p371), while the maximum amplitude of the steady-state current in the inductor is changed from 25 A to 20 A.

2) (10 points) Problem 9.35 of the textbook (p374), while the impedance of the left inductor is changed from j5 Ω to j2 Ω.

3) (20 points) Problem 9.45 of the textbook (p375), while the impedance of capacitor is changed from –j48 Ωto –j36 Ω and the resistor R_0 is changed from 36 Ω to 24 Ω.

4) (10 points) Problem 9.59 of the textbook (p377), while the current source is changed from 10+j10 to 10+j20.

5) (10 points) Problem 9.78 of the textbook (p379), while the left resistor is changed from 5 Ω to 10 Ω.

6) (10 points) Problem 10.5 of the textbook (p409), while the current source is changed from 4 cos 5000t mA to 4 cos 2000t mA.

7) (10 points) Problem 10.27 of the textbook (p412), while the voltage drop is changed

from 250 V to 200 V (rms).

8) (20 points) Problem 10.56 of the textbook (p416).