King Fahd University of Petroleum & Minerals
Department of Electrical Engineering
EE-205 Electric Circuits II
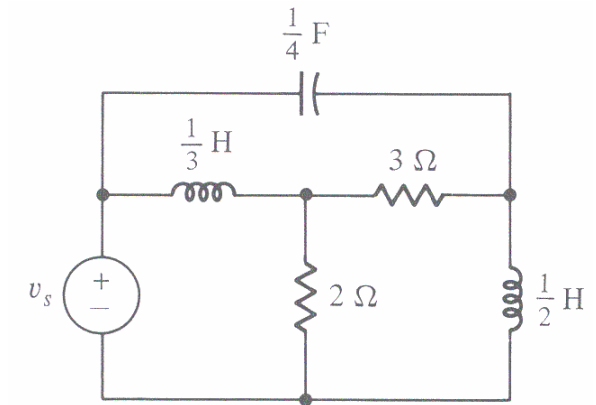
Exam: II
Date : May. 21, 2005
Place: Bldg. 6 Room 125
Time: 5:15 – 6:40 pm

Student Name	:	
Student ID	:	Sec. No.
Instructor	: Dr. Abdelmalek ZIDOURI	

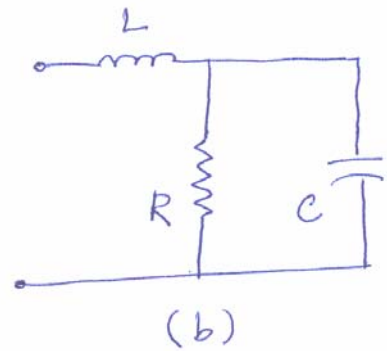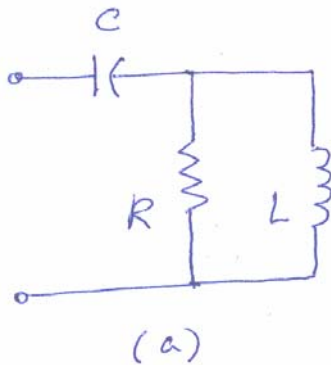| Problem I	Problem II	Problem III	Total/20

Problem I (7pnts):

Write the matrix state equation for the circuit below.

Problem II (7pnts):

a) Find the resonance frequency for each of the circuits shown below.

c) Find the quality factor for the circuit in (a) given that $R = 5\,\Omega$, $L = 2\,H$, $C = \dfrac{1}{5}F$

(a)

(b)

Problem III (6pnts):

Draw the pole-zero plot of $H(s) = V_2/V_1$ for the circuit below, given that: $R_1 = 8\,\Omega$, $R_2 = 4\,\Omega$, $L = 2\,H$, $C = \dfrac{1}{8}F$