EE233 HW5

Oct. 31st

Due Date: Nov. 7th

Textbook problems: P.13.28, P.13.55

- 1. A $1 k\Omega$ resistor is in series with a 625nF capacitor. This series combination is in parallel with a 100mH inductor.
 - (a) Express the equivalent s-domain impedance of these parallel branches as a rational function.
 - (b) Determine the numerical values of the poles and zeros.
- 2. The switch in the circuit in Figure P.2 has been closed for a long time before opening at t = 0.



Figure P.2

- (a) Construct the s-domain equivalent circuit for t > 0.
- (b) Find V_o
- (c) Find v_o for $t \ge 0$.
- 3. There is no energy stored in the circuit in figure P.3 at $t = 0^{-}$.
 - (a) Find V_o
 - (b) Find v_o
 - (c) Does your solution for v_o make sense in terms of known circuit behavior? Explain.



Figure P.3