ECE65 Quiz 1, Spring 2014

Note: All diodes have a turn-on voltage of 0.7 volts, and all Zener diodes have Vz=5 volts

Question 1 (10 points)

For each of the circuits below, indicate whether the diode is on or off, and the unknown value of v or i.

(a)

(b)

(c)

(d)

(e)

Question 2 (10 points)

Determine the state (on, off, or Zener region) for diodes D1, D2, and D3.
Determine the values of V0, V1, V2, V3, i1, i2, and i3.

Question 3 (10 points)

Find an expression for the transfer function (Vo vs Vi) for the circuit below. Plot the transfer function.