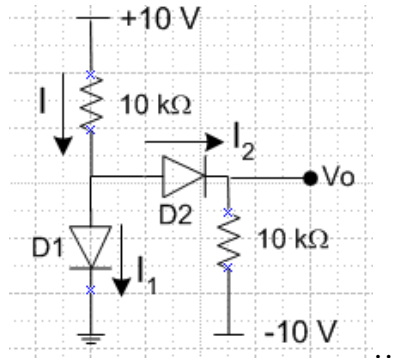


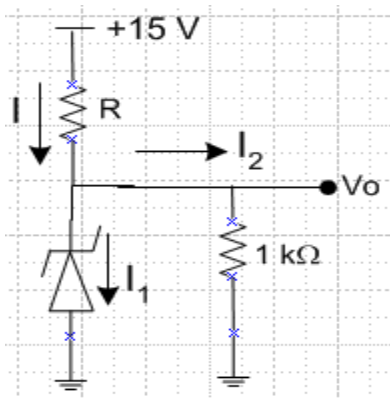
EE311 / Spring 2007
Homework # 5

1. Determine the output voltage V_o and currents I , I_1 and I_2 for the circuit shown below. Assume both diodes are conducting.



2. The zener regulator circuit shown below is to provide an regulated 10 V output voltage V_o . Assuming zener diode current $I_1 = 5$ mA and output current $I_2 = 20$ mA. The zener diode provides a current of 25 mA and resistance $r_z = 7$ ohm at a voltage drop of 10 V. Determine the following:

- V_{Z0}
- The value of the resistance R
- The fluctuation in the output voltage when the supply voltage increases by 5 V. What is the load regulation?
- Compare the % changes in the supply voltage and output voltage.



Text book problems:

3.25, 3.51, 3.65