ECE 65: Components & Circuits Lab

Review

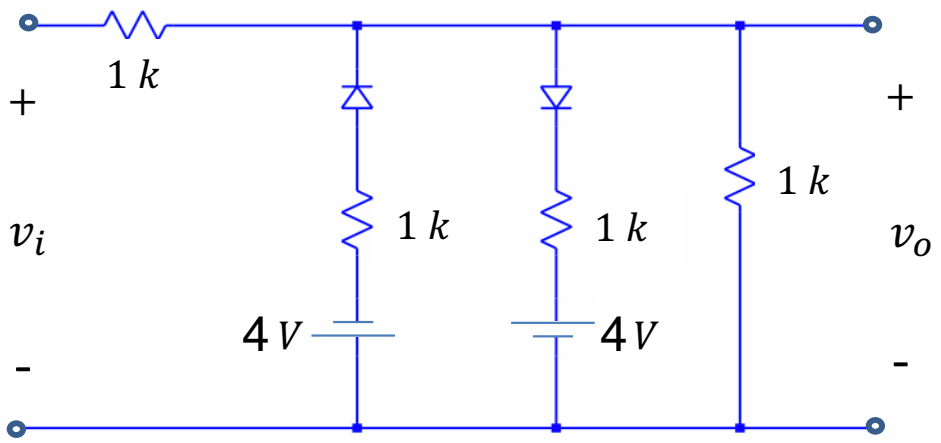
Saharnaz Baghdadchi

Practice problem 1.

a) Find and draw the transfer function of the below diode circuit.

Assume $V_{D0} = 0.7\ V$.

b) Find and draw the output voltage for $v_i = 3\sin(\omega t)$.



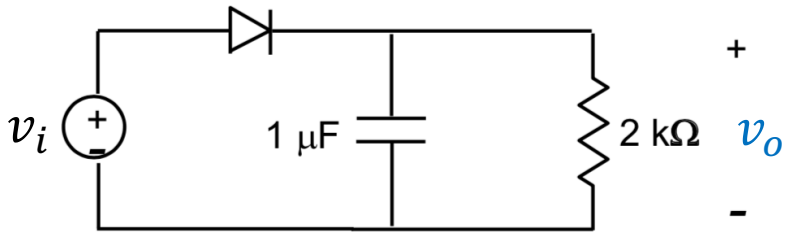
Practice problem 2.

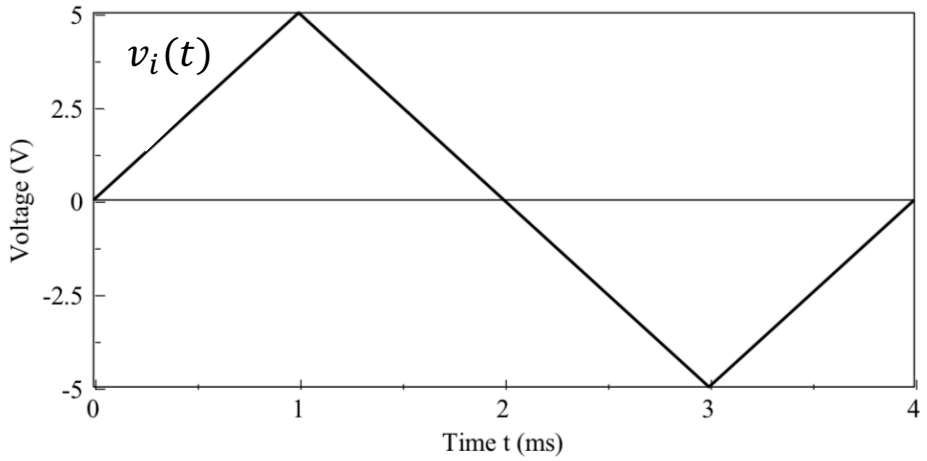
The diode in the below circuit has V_{D0} = 0.7 V. $v_i(t)$ is a triangular wave shown below.

$v_o(0) = 0$.

(a) What is v_o at t=1ms?

(b) What is v_o at t = 2 ms?





Practice problem 3.

In the following op-amp circuit, the output voltage, V_o, can be varied by turning the wiper of the $100\ k\Omega$ potentiometer.

a) Find the range over which V_o can be varied.

b) If the potentiometer is a "10-turn" device, find the change in V_o corresponding to each turn of the pot.