Final Exam Q&A

Administration: How ll grades be up! Pick em up from labs.

Codes are getting updated.

* If you did check in the class & got away with it so far, I got news for u:
You WILL get screwed on the final (Best guarantee this!)
I.e., you really didn’t get away with it!
What. or. the final:

Problem 1:
25 points
model
analysis

Problem 2:
25 points
Diode
op-amps

Problem 3:
Diode
PC, RC,
oscillators, Hop

Problem 4:
Diodes
Graphical
method

Note: There will be a lab question (not project) on the final. Not like: what is the part number on your scope? No!

i.e. Lab circuits
Work of advice: Leave nothing out. Least.
Questions:

1. Load line method
2. RC, RL
3. Diodes

Load line = Graphical way of solving circuits. Very useful if you have one nonlinear element in your circuit.
(a) Find the operating point(s) for the circuit.

Load line

R_m = ?
\[ R_m = R_{eq} = (1k) \parallel (1.1k) \]
\[ = 500 \, \Omega \]

Note:

linear

Recall: \( V_{oc} = I_{sc} R_m \)
(a) Voltage across current source:

Find $V_{in}$.

Do not ignore ratios!

Assume op-amp does not hold. Find $V_o$ & make sure

$12V < V_o < -12V$

\[ V_o = V_{o_+} = 0 \quad \therefore \quad V_o = -2V \in [12V, -12V] \]
What if op-amp rails?

If $V_{V_{in}} = 0$,

\[ V_o = -20V \]

$V_o = 12V$

Op-amp RAILS!
RC / RL problem. Refer to review problems online.