Due in the "EE 105 box" near 125 Cory Hall by 5pm on Friday 11/30/2012.

Read Sections 10.4–7 in B. Razavi: Fundamentals of Microelectronics

1. Problem 9.4 in B. Razavi: Fundamentals of Microelectronics

2. Problem 9.16 in B. Razavi: Fundamentals of Microelectronics

3. Problem 9.12 in B. Razavi: Fundamentals of Microelectronics

4. Problem 9.67 in B. Razavi: Fundamentals of Microelectronics

5. Problem 10.53 in B. Razavi: Fundamentals of Microelectronics

6. Do the Excercise after Example 10.29 in B. Razavi: Fundamentals of Microelectronics

7. Problem 10.73 in B. Razavi: Fundamentals of Microelectronics

8. Problem 10.81 in B. Razavi: Fundamentals of Microelectronics

9. Do the Excercise after Example 10.27 in B. Razavi: Fundamentals of Microelectronics

10. Do the Excercise after Example 10.28 in B. Razavi: Fundamentals of Microelectronics

11. Problem 10.91 in B. Razavi: Fundamentals of Microelectronics

12. Problem 10.53 in B. Razavi: Fundamentals of Microelectronics

13. Problem 10.57 in B. Razavi: Fundamentals of Microelectronics

14. Problem 10.59 in B. Razavi: Fundamentals of Microelectronics

Final:

- Open-book, two 8.5 by 11 inch page of handwritten notes (two sided)
- Write all your work and answers on the exam sheet
- Clearly mark results with a box around them
- Show your work (large and small-signal circuit diagrams, analysis/design equations)
- ~~Cross out incorrect answers.~~ If you present two or more inconsistent answers we invariably grade the wrong one.
- Notation: $V_x = V_X + v_x$, where V_X is the large signal bias and v_x is the small signal value.

Unless otherwise specified, use the following parameters:

Device	Parameter values
BJT	$I_s = 1\,\text{fA}$, $\beta = 100$, and $V_A = 100\,\text{V}$
N/PMOS	$\lvert V_{TH}\rvert = 400\,\text{mV}$, $C_{ox} = 10\,\text{fF}/\mu\text{m}^2$, $C_{ol} = 0.2\,\text{fF}/\mu\text{m}$, $\lambda = 0.02\,\text{V}^{-1}$, $\gamma = 0\,\text{V}$, $L_{\text{min}} = 180\,\text{nm}$
NMOS	$\mu_n = 300\,\text{cm}^2/\text{Vs}$
PMOS	$\mu_p = 150\,\text{cm}^2/\text{Vs}$
—	$V_t = 25\,\text{mV}$