

ENEE 302 Midterm Exam Study Points, Spring 2005

The following are items being considered for the midterm. Check later for updates

1. Transistor characteristics
 - CMOS transistors in three main regions
 - BJT transistors in forward active region, meaning of beta
 - Early effects
2. Current mirrors
 - Setting output currents
 - Design comparison with Widlar form
3. CMOS Inverters
 - Setting output level and adjustments via W and L
4. Charging of capacitors of logic circuits
 - Capacitor law, KCL, KVL
 - Nonlinear ODE descriptions in CMOS circuits
5. Pass transistor characteristics
 - Use of clock control
 - Effect of substrate