

ENEE 303 Fall 2008 final study topics

1. Small signal equivalent circuits, BJT and MOS (N & P)
2. Inverters
 - a) characteristics
 - b) gates made from
 - c) linear behavior at bias point
3. Voltage and current transfer functions (in s)
 - a) Finding
 - b) Resulting differential equations ($s=d/dt$)
 - c) Poles and zeros ($s=\sigma+j\omega$)
 - d) Frequency response, amplitude and phase ($s=j\omega$)
4. Biasing: diodes, BJTs and MOS
5. Op-amp characterization and use in a circuit.
6. MOS & BJT
 - a) Symbols
 - b) g_m , input and output impedances
 - c) Early effect
 - d) Spice parameters
 - e) Differential pairs
 - f) Current mirrors