

Design a Schmitt trigger to meet the following specifications:

- Trip point for rising inputs:  $V_{TRP+} = 3.5V$
- Trip point for falling inputs:  $V_{TRP-} = 2.5V$
- Maximum propagation delay (rising or falling):  $t_p \leq 50ns$

With the following design constraints:

- Power supplies:  $V_{dd} = 5V$ ,  $V_{ss} = 0V$
- Use the model files from the AMIC5 process located in (as used in 4228/5008):
  - `magellan:/usr/local/cadence/cadence/models/amic5/mos.scs` Section: typ
- Minimum device length:  $L \geq 0.6\mu m$
- Load capacitance:  $C_L = 1pF$

**Turn in the following in a PowerPoint presentation file** via e-mail to the instructor by the due date. Use screen-capture images from cadence for schematics and simulation results. Do not print or turn in hardcopies.

- Full schematic of your design
- Simulation results verifying that each of the above design specifications have been met
- Show a transient simulation with a square wave input of the dynamic current from Vdd during transitions (run your simulation in “conservative” mode). Label the peak current.