

Homework Assignment No. 4

Due on Wednesday, February 11, 2004

1.) Problem P4.2 of the text. (This problem should refer to Fig. P4.1 not Fig. P4.2)

[Partial Answers: a.) $V_{OH} = V_{DD}$ and $V_{OL} = 0.055V$ b.) $V_{OH} = 0.733V$, and $V_{OL} \approx 0.69V$, c.) $V_{OH} = 1.11V$ and $V_{OL} = 0.69V$]

2.) Problem P4.3 of the text. Use SPICE to confirm the results.

[Partial Answers: $V_{IH} = 0.65V$ and $V_{IL} = 0.55V$]

3.) Problem P4.9 of the text.

[Answers: $W_n = 0.2\mu m$, $0.1\mu m$ and $0.6\mu m$]