MASSACHVSETTS INSTITVTE OF TECHNOLOGY
Department of Electrical Engineering and Computer Science

6.002 – Electronic Circuits
Fall 2001

Problem Set 5

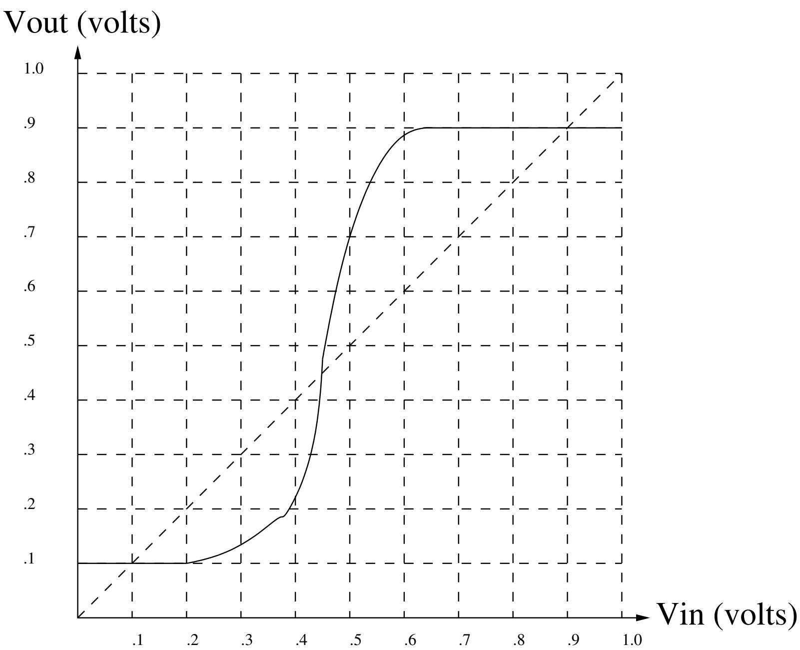
Issued: October 4, 2001 Due: October 12, 2001

Reading:

- A&L Chapter 6 for Thursday, October 4 and Friday, October 5
- A&L Chapter 9 and 10.1 for Thursday, October 11
- A&L Chapter 10.2 for Friday, October 12

Problems:

1. Consider the input/output graph of a buffer shown below.



(a) What is the highest value one can choose for V_{OL}?
(b) What is the lowest value one can choose for V_{OH}?
(c) What is the highest value one can choose for V_{IL}?
(d) What is the lowest value one can choose for V_{IH}?
(e) What is the noise margin for low inputs?

2. A&L Problem 1 (circuits c and f only), p. 368.
3. A&L Problem 2, pp. 369 and 370.
4. A&L Problem 8, p. 372.
5. A&L Problem 14, p. 375.
6. A&L Exercise 2 (part c only), pp. 425 and 426.
7. A&L Problem 2, p. 429.