

Name: \_\_\_\_\_

Student ID #: \_\_\_\_\_

**EECS 170A**  
**Homework #7**

HW will be collected in discussion section.

Please do not turn your HW in **anywhere else**.

Due: 4:00pm Wednesday, November 23, 2011 beginning of Lecture.

Please *staple* this sheet to the front of your homework.

1	2	3	4	Total
/25	/25	/25	/25	/100

- 1) Problem 17.2, Semiconductor Device Fundamentals, by R. Pierret, Page 639
- 2) Problem 17.3, Semiconductor Device Fundamentals, by R. Pierret, Page 639
- 3) Problem 17.19, Semiconductor Device Fundamentals, by R. Pierret, Page 643
- 4) Diode connected load:

In modern integrated circuits, it is easier to manufacture a MOSFET than a resistor. From the circuit model below, show that by connecting the gate to the drain, the device behaves like a two terminal device. Calculate its resistance.

