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Physics 404 **HOMEWORK ASSIGNMENT #9** **Spring 2012**

Due date: Thursday, Nov. 8 **Deadline:** Tuesday, Nov. 13

S means a problem in Schroeder's text. The number in parentheses is the number of points.

1. (10) S 6.48 Entropy and chemical potential of a diatomic gas.

2. (5) S 6.52 Finding Z_1 for a relativistic gas, so an unconventional energy dispersion relation.

3. (15) S 7.2 Model for hemoglobin attachment. Note that S 7.1 is essentially the Langmuir problem done in class, so this problem is a generalization of that. You do not need to do the comparison, etc., in the last two lines of the problem.

4. (15) S 7.5 a-c Ionization of donors in a semiconductor.