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Physics 404 HOMEWORK ASSIGNMENT #8 Spring 2012

Due date: Thursday, Nov. 1 **Deadline:** Tuesday, Nov. 6

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

- 1. (10) S 6.5 3-state model and the role of zero-point energy.
- 2. (5) S 6.12 Estimate of temperature of interstellar clouds.
- 3. (15) S 6.22 b-e Paramagnet with n states. We did part a in class. Part f is a straightforward grind.
- 4. (10) S 6.41 2D Maxwell speed distribution. We did most of this in class. Just find the mean, the mode, and the rms speeds.
- 5. (10) S 6.42 Free energy of N SHO's. In part b, comment on the meaning of the two terms.