Phys 511   Prof. P. Berman
Quantum Mechanics I   Fall, 2003
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Problem Set 9
Due Friday, November 7

1-2. 44-45

3. S7. (S refers to problem on supplementary problems handout).

4. Plot $(r/a_0)^2 |R_{n\ell}(\frac{2r}{na_0})|^2$ for the hydrogen atom as a function of r/a_0 for $n = 1$; $n = 2, \ell = 1, 0$; and $n = 10, \ell = 0, 2, 5, 7, 9$. Interpret your results.

5-6. S1,S2 Note: this problem is solved in Schiff.

7. Problem 51.