

Physics 220
Homework #5
Spring 2017
Due Wednesday, 5/10/17

** Note this assignment has been updated from the original one. **

1. Griffith's 4.11
2. Griffith's 4.14
3. Griffith's 4.39
4. Griffith's 4.44 parts a and b only.
5. Griffith's 4.45
6. Radial Probability density for hydrogen
 - a. Calculate the location at which the radial probability density is a maximum for the $n = 2, l = 1$ state of the hydrogen atom.
 - b. Calculate the expectation value of the radial coordinate in this state.
 - c. Are the answers to parts a and b the same? If they are, what is the physical significance for the fact that they are? If they are not, what is the physical significance for the fact that they are not.