

Physics 487 Homework 8: Due 9:00pm, Apr. 14, 2015

1.) Griffiths, 9.7, 9.12, 9.13, 9.15, 9.18, 9.22.

2.) A hydrogen atom in its ground state is subject to an applied electric field,

$$\mathbf{E} = \epsilon_0(\hat{x} + \hat{y} + \hat{z})e^{-t/\tau}. \quad (1)$$

Find the probabilities that after a long time the atom is found to be in each of the $n = 2$ states.