Homework #4

(due Wednesday, May 8, 2024)

1. (10 pts) Problem 6.6 parts (a) and (c) in B&J.

2. (10 pts) Two identical particles are moving in the Coulomb potential. Suppose at time t =0 one particle is in the state $|1\rangle = |n_1 l_1 m_1\rangle$, whereas the other one is in the state $|2\rangle = |n_2 l_2 m_2\rangle$. At what time t will the occupation of the states be reversed? What process is responsible for this?

3. Reading assignment: Chapters 4-7 of B&J.