Information about the Final Exam

- The final exam is cumulative with material from throughout the course receiving equal weight.
- There are five sections on the exam labeled: Short Answer, One Dimensional Schrodinger Equation, Harmonic Oscillator, Formalism, and Angular Momentum. Each of the five major headings has 4 subsections worth 5 points apiece. The exam is graded out of 100 points.
- You are responsible for the formulas that you were asked to memorize from the earlier exams. The additional information that you need to know since Exam 2 is:
  - The relation between spin and the Pauli spin matrices for spin 1/2 particles: $\vec{S} = (\hbar/2)\vec{\sigma}$. You will be given the Pauli spin matrices if needed for a problem.
  - Addition of angular momentum as in the last homework assignment either by using the J_- operator or by using the Clebsch-Gordon coefficient table.
  - Wavefunctions for two indistinguishable Fermions (-) and Bosons (+):

$$\psi(r_1, r_2) = \frac{1}{\sqrt{2}}(\psi_a(r_1)\psi_b(r_2) \pm \psi_b(r_1)\psi_a(r_2)).$$

- The additional formulas on the study guides for Exams 1 and 2 will be given when needed for specific problems.