Quantum Mechanics II: PHYS 314 (Spring 2021)
Quick quiz 5

Chris Monahan
William & Mary

Instructions

These quick quizzes are low-stakes assessment tools to help cement your understanding of our material. They will help you remember the key facts and can serve as a study guide to help you focus on material you are less familiar with. These quizzes do not contribute to your grade and are for your own use.

1. **Without looking at your notes or the textbook, and without consulting with your neighbour**, write your answer to each question in the **first column**.
2. Discuss with your neighbour and use your notes or the textbook as needed to answer each question and write your answers to each question in the **second column**. You should complete the second column, but do not add anything to your first column.

There are four questions.

Question 1

What are the key lessons from the free electron gas model and the Bloch model of atomic solids?

Question 2

Suppose two electrons are in a spin triplet state. What must properties must their spatial wavefunctions have?

Question 3

Explain how the double slit experiment motivates the path integral formulation of quantum mechanics.

Question 4

What have you found most challenging about the course so far? What about the most interesting?