**Quantum Mechanics Homework – General**

1. How did scientists in the early 20th century know that there were flaws in the Bohr model of the atom?
2. The basic idea of spectroscopy is that when energy is added to an atom, an electron is promoted from a low energy ground state to a higher energy excited state. How does the Bohr model differ from the quantum model in how it claims this happens?
3. What are some of the main differences in the nature of electrons between the quantum mechanical model and Bohr model?
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5. What’s a good definition for the word “orbital”?
6. What are the long and abbreviated electron configurations for astatine (At)?