1. Explain what “ultraviolet catastrophe” is and where it came from.

2. Explain how the assumption that energy is quantized is brought up, and why it was an issue for classical physics.

3. Explain what the photoelectric effect is, and why the idea of a photon is helpful as an explanation.

4. Summarize the development of atomic theory in the early 20th century, and identify important names that contributed to the development.

5. Explain Albert Einstein’s contributions to the establishment of quantum theory, and summarize his attitudes towards it.

6. Explain why we do not see energy quantizations in our everyday life.

7. Choose one interpretation of quantum mechanics and briefly explain how it works.

8. For a mass m connected to an ideal spring with spring constant k, solve for the motion of this mass if I give it an initial displacement of x0. Ignore resistance (resistance is futile).