

NORTHERN ILLINOIS UNIVERSITY

PHYSICS DEPARTMENT

Physics 383 – Modern Physics

Fall 2023

Problem Set #4

Problem Set Due: Thurs., Oct. 5, 2023

Read Krane: Chapter 5.1-5.4, Lecture Notes #1

1. **OpenStax University Physics Vol. 3: Section 4.4:** Problem 41
2. **OpenStax University Physics Vol. 3: Section 4.5:** Problem 55
3. **OpenStax University Physics Vol. 3: Section 4.6:** Problem 73

4. **Krane: Problem 2** page 174
5. **Krane: Problem 5** page 174 (draw energy level diagram) (see Fig. 5.13)
6. **Krane: Problem 7** page 174 (draw figure)
7. **Krane: Problem 9** page 174 (sketch wavefunction)
8. **Krane: Problem 15** page 174 (just show calculation)
9. **Krane: Problem 16** page 174 (just show calculation)