

NORTHERN ILLINOIS UNIVERSITY

PHYSICS DEPARTMENT

Physics 283 – Modern Physics

Fall 2024

Problem Set #4

Problem Set Due: Thurs., Oct. 3, 2024

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 (**Let $d = 0.120 \text{ nm}$**)

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)