PHYS 1301	IDEAS	OF MODERN PHYSICS	

HOMEWORK I

Name
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Print out and use this as a cover sheet for your hand-written answers.

- 1. What were the shortcomings with Rutherford's nuclear model of the atom due to
  - (a) ideas of electromagnetism?
  - (b) actual observations of light emitted from atoms?
  - [6.1 Structure and Properties]
- 2. Explain what is meant by a *standing wave* in general.
  - [6.1 Structure and Properties]
- 3. How do electron wave-functions explain atomic stability and the characteristic discrete frequencies of light emitted and absorbed by atoms?
  - [6.2 Quantized Energy]