## **LECTURE 6**

- 1. (a) How many different values of the quantum number l are possible when n = 14?
  - (b) How many different values of m<sub>1</sub> are allowed for an electron in a 9d subshell?
  - (c) How many values of m<sub>1</sub> are allowed for a 5s subshell?
- 2. (a) What is the total number of nodes in a 5p orbital?
  - (b) How many radial nodes are in a 4p orbital?
  - (c) How many radial nodes are in a 3s orbital? Draw the radial probability distribution for a 3s orbital. Indicate each radial node with an arrow. You should label the axes, but should not include any numerical values.

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## 5.111 Principles of Chemical Science Fall 2014

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