

Electron Configuration Practice

A. **For each element:** identify the number of electrons, fill in the electron diagram with up-spin & down-spin electrons, and write the electron configuration. Use “^” for up and “v” for down in the orbital notation. (For the electron configuration- Use a “^” to show the superscript. And put a SPACE after the superscript.)

1. Nitrogen Number of electrons: _____ Electron configuration: _____

1s	2s	2p	3s	3p	4s	3d	4p	5s	4d	5p		

2. Silicon Number of electrons: _____ Electron configuration: _____

1s	2s	2p	3s	3p	4s	3d	4p	5s	4d	5p		

3. Neon Number of electrons: _____ Electron configuration: _____

1s	2s	2p	3s	3p	4s	3d	4p	5s	4d	5p		

4. Copper Number of electrons: _____ Electron configuration: _____

1s	2s	2p	3s	3p	4s	3d	4p	5s	4d	5p		

5. Zirconium Number of electrons: _____ Electron configuration: _____

1s	2s	2p	3s	3p	4s	3d	4p	5s	4d	5p		

B. Write the symbol of the element with the following ground state electron configurations:

- $1s^2 2s^2$ _____
- $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^2$ _____
- $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$ _____
- $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1$ _____
- $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2 5d^9$ _____

C. Write the ground state electron configuration for the following: (Use a “^” to show the superscript. And put a SPACE after the superscript.)

- iron _____
- sulfur _____
- krypton _____

D. Use the **shorthand (noble gas) notation** to write the electron configurations for the following: (Use a “^” to show the superscript. And put a SPACE after the superscript.)

- chlorine _____
- antimony _____
- lanthanum _____