

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:

6. $1s^2 2s^2$ _____
7. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^2$ _____
8. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^4$ _____
9. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1$ _____
10. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^2 4d^{10} 5p^6 6s^2 5d^9$ _____

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

11. iron _____
12. sulfur _____
13. 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.)

14. chlorine _____
15. antimony _____
16. lanthanum _____