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 _____

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