

Name \_\_\_\_\_ Per \_\_\_\_\_

### Electron Configuration Practice Worksheet

***In the space below, write the unabbreviated electron configurations of the following elements:***

1. sodium \_\_\_\_\_

2. magnesium \_\_\_\_\_

3. iron \_\_\_\_\_

4. potassium \_\_\_\_\_

5. selenium \_\_\_\_\_

***In the space below, write the abbreviated electron configurations of the following elements:***

6. cobalt \_\_\_\_\_

7. silver \_\_\_\_\_

8. tellurium \_\_\_\_\_

9. radium \_\_\_\_\_

10. lawrencium \_\_\_\_\_

***Determine what elements are denoted by the following electron configurations:***

11.  $1s^2 2s^2 2p^6 3s^2 3p^4$  \_\_\_\_\_

12.  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1$  \_\_\_\_\_

13.  $[\text{Kr}] 5s^2 4d^{10} 5p^3$  \_\_\_\_\_

14.  $[\text{Xe}] 6s^2 4f^{14} 5d^6$  \_\_\_\_\_

15.  $[\text{Rn}] 7s^2 5f^{11}$  \_\_\_\_\_

***Explain what is wrong with the following electron configurations:***

16.  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^6$

17.  $1s^2 2s^2 2p^6 3s^3 3d^5$

Name \_\_\_\_\_ Per \_\_\_\_\_

### Chemistry I Practice - "Electron Configurations"

Use the following electron configurations and your periodic table to identify the element:

1.  $1s^2 2s^2 2p^6 3s^2 3p^5$     2.  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$     3.  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^1$

4. Describe the method that you used to solve problems 1 - 3. Be specific.

Use the following clues to identify the element. Show any figuring in the space below.

5. This element has a 3p sublevel that contains 3 electrons.
6. This element has a 4s sublevel with 2 electrons for its outermost electrons.
7. This element has 1 electron in its 3d sublevel.
8. This element has 5 electrons in its 5p sublevel
9. This element has a completely filled 3p sublevel for its outermost electrons.
10. This element has 2 electrons in its 6p sublevel.

## Electron Configuration Practice Worksheet

In the space below, write the unabbreviated electron configurations of the following elements:

- 1) oxygen \_\_\_\_\_
- 2) sodium \_\_\_\_\_
- 3) iron \_\_\_\_\_
- 4) bromine \_\_\_\_\_
- 5) barium \_\_\_\_\_
- 6) nitrogen \_\_\_\_\_
- 7) chlorine \_\_\_\_\_
- 8) argon \_\_\_\_\_

In the space below, write the abbreviated electron configurations of the following elements:

- 9) cobalt \_\_\_\_\_
- 10) silver \_\_\_\_\_
- 11) tellurium \_\_\_\_\_
- 12) iodine \_\_\_\_\_
- 13) cesium \_\_\_\_\_

Determine what elements are denoted by the following electron configurations:

- 14)  $1s^2 2s^2 2p^6 3s^2 3p^4$  \_\_\_\_\_
- 15)  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1$  \_\_\_\_\_
- 16)  $[\text{Kr}] 5s^2 4d^{10} 5p^3$  \_\_\_\_\_
- 17)  $[\text{Xe}] 6s^2 4f^{14} 5d^6$  \_\_\_\_\_
- 18)  $[\text{Xe}] 6s^2$  \_\_\_\_\_

These electron configurations are NOT valid, determine what is wrong with them:

- 19)  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^5$  \_\_\_\_\_
- 20)  $1s^2 2s^2 2p^6 3s^2 3d^5$  \_\_\_\_\_
- 21)  $[\text{Ra}] 7s^2 5f^8$  \_\_\_\_\_
- 22)  $[\text{Xe}]$  \_\_\_\_\_