

NAME \_\_\_\_\_

## Electron Configurations

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

- 1) sodium \_\_\_\_\_
- 2) iron \_\_\_\_\_
- 3) bromine \_\_\_\_\_
- 4) barium \_\_\_\_\_
- 5) neptunium \_\_\_\_\_

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

If the configuration represents an element in the ground state then identify the element. If the configuration demonstrates an excited state, identify the element and its ground state configuration. If the configuration is not allowed then circle the problem and fix it using the same number of electrons; identify the element represented by your configuration.

- 16)  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 4p^5$  \_\_\_\_\_
- 17)  $1s^2 2s^2 2p^6 3s^3 3d^5$  \_\_\_\_\_
- 18)  $[\text{Ra}] 7s^2 5f^8$  \_\_\_\_\_
- 19)  $[\text{Kr}] 5s^2 4d^{10} 5p^5$  \_\_\_\_\_
- 20)  $[\text{Xe}]$  \_\_\_\_\_