

Name : _____ Date : _____

Score : _____



Electron Configuration



1. Determine what elements are denoted by the following configurations.

i. $1s^2 2s^2 2p^6 3s^2 3p^4$ _____

ii. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^5$ _____

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

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

v. $[\text{Ne}] 3s^2 3p^1$ _____

2. Write the full electron configuration (ex., $1s^2 2s^1$) of the following elements?

i. Nitrogen _____

ii. Silicon _____

iii. Calcium _____

iv. Strontium _____

v. Bismuth _____

3. Write the abbreviated electron configuration (ex., $[\text{He}] 2s^1$) of the following element?

i. Fluorine _____

ii. Magnesium _____

iii. Selenium _____

iv. Rubidium _____

v. Lead _____

4. If each orbital can hold a maximum of two electrons, how many can each of the following hold?

i. $2s$ _____ ii. $5p$ _____ iii. $4f$ _____ iv. $3d$ _____ v. $4d$ _____

5. What is the shape of an s orbital? _____

6. What is the shape of a p orbital? _____