

# Electron Configuration Test

Name Kex

Period \_\_\_\_\_ Date \_\_\_\_\_

Write the complete electron configuration for the following elements.

1) Fe  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^6$

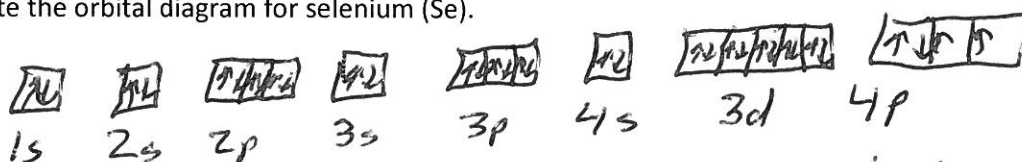
2) Ca  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2$

3) Ag  $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1 4d^{10}$  ~~4d<sup>9</sup>~~ (4d<sup>10</sup>)

Write the noble gas configuration for the following elements.

4) Br [Ar]  $4s^2 3d^{10} 4p^5$  5) Po [Xe]  $6s^2 4f^{14} 5d^{10} 6p^4$  6) Mo [Kr]  $5s^1 4d^5$

7) a) Write the orbital diagram for selenium (Se).



7b) How many electrons are in the highest energy level of selenium (Se)? 6 ( $4s + 4p$ )

8) How many electrons can one orbital hold? 2

9) What is the maximum number of electrons that each of the following sublevels can hold?

s 2 p 6 d 10 f 14

10) How many unpaired electrons are in the last sublevel of phosphorous? 3

11) How many electrons are in the outermost energy level of arsenic (As) 5 ( $s + p$ )

12) Using the electron configurations, identify the following elements:

[Ar]  $4s^2 3d^6$  Fe [Xe]  $6s^2 4f^{14} 5d^{10} 6p^5$  At

13) Electrons that are closer to the nucleus have less energy than those further from the nucleus. True False