

CHEM Electron Configuration Practice #1

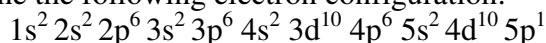
PART 1

Define or describe in your own words...

- | | |
|---------------------------|-------|
| 1) electron | 6) n |
| 2) atom | 7) s |
| 3) sublevel | 8) p |
| 4) principal energy level | 9) d |
| 5) orbital | 10) f |

PART 2

Examine the following electron configuration:



- 11) How many total electrons are there?
- 12) Which element is this?
- 13) How many electrons are in the fourth energy level of this element?
- 14) What is the valence electron configuration of this element?
- 15) How many electrons are in the outermost energy level?

PART 3

For the following **questions**:

- a) Write the element name.
- b) Write out the *complete* electron configuration and *underline* the *valence* parts.
- c) Write out the *condensed* electron configuration.
- d) List how many electrons are in each principal energy level, in order of $n = 1, 2, 3, 4$, etc., by adding the superscripts of each energy level.

EXAMPLE: Zn

- a) zinc
- b) $1s^2 2s^2 2p^6 3s^2 3p^6 \underline{4s^2} 3d^{10}$
- c) $[\text{Ar}] 4s^2 3d^{10}$
- d) 2, 8, 18, 2

QUESTIONS

- 16) Be
- 17) K
- 18) Ar
- 19) Mo
- 20) Si

Optional questions for extra practice...

- 21) Co
- 22) Ba
- 23) I
- 24) U
- 25) At