EPS 200 (Stapleton)

Atoms/Isotopes

1. What do we call two atoms that have the same number of protons but different numbers of neutrons?

2. If two atoms have the same number of protons and neutrons but different numbers of electrons, at least one of them is a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. An atom has 9 protons, 10 neutrons, and 8 electrons. What is its atomic mass?

4. Where, within an atom, can each of the following be found?

1. Electrons
2. Neutrons
3. Protons

5. On the periodic table, phosphorus has an atomic weight of 30.974. Why not 31? Why isn’t its atomic weight a nice, round number?

6. How many of each of the following would a Si2+ ion have?

1. Protons
2. Neutrons
3. Electrons

7. What ion has 36 electrons and a -1 charge?

8. Two atoms go into a bar. One goes to the bathroom. When the atom returns, it says “I realized in the bathroom that I’m missing an electron.” When the second atom asks, “are you sure?” the first atom replies, “yes, I’m \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.”

9. All atoms of a particular element have the same number of \_\_\_\_\_\_\_\_\_. *[Choose all that apply.]*

1. Electrons
2. Neutrons
3. Protons