2019-2020
STUDENT PRACTICE QUESTIONS ANSWER KEY
Practice 1. Hoping to discover why the water at school has a different taste than the water at home, Nico collects 2 samples from the kitchen sink at home and 2 samples from the water fountain at school and tests the pH of each sample using universal indicator. What is – (a) the independent variable and (b) the dependent variable in the experiment described? *Be sure to clearly label your responses as a and b.*

**Practice 1 Correct Answer:**
(a) The water source OR where the water samples were collected
(b) The pH of the water sample

Practice 2. Based on the portion of the periodic table shown below, what are 2 properties that will always be true about neutral pure samples of both of the elements pictured? *Only name 2 properties, responses with more than 2 properties listed will not be scored.*

![Periodic Table Image]

**Practice 2 Possible Correct Answers:**
- Metals
- 4 valence electrons
- Occur naturally as solids
- Luster/shininess
- Good conductors
- Malleability
- Ductility
- Tend to donate electrons

Practice 3. Draw the Lewis Structure for a chlorine ion with a -1 charge.

**Practice 3 Correct Answer:**

\[ \text{Cl}^- \]

Practice 4. An atom with the most common ionic charge of +1 is found in the sixth period on the periodic table and has a mass number of 133. If the atom is in its most common ionic form - (a) What is the chemical symbol for the element, (b) how many protons does it have, (c) how many neutrons does it have, and (d) how many electrons does it have? *Be sure to clearly label your responses with a, b, c, and d.*

**Practice 4 Correct Answer:**
(a) Cs
(b) 55 protons
(c) 78 n°
(d) 54 electrons