Name: _____ Period: _____

Semester 1 Final Review Quiz: *Units 1 and 2*

1. What group of elements that form cations is the most reactive on the periodic table?
   a. **Alkali metals** c. Halogens
   b. Alkaline earth metals d. Nobel gases
2. What element has the following noble gas configuration: $[Kr]5s^2 4d^8$?
   a. Ag c. **Pd**
   b. Ni d. Cd
3. Which group of elements does not have an electronegativity value?
   a. Alkali metals c. Halogens
   b. Alkaline earth metals d. **Noble Gases**
4. What elements are most abundant in the universe?
   a. The most massive elements c. Elements that form anions
   b. The least massive elements d. Elements that form cations
5. What results from the fusion of 3 helium nuclei?
   a. A carbon nuclei c. 3 alpha particles
   b. 3 helium ions d. Not enough information
6. What results from the alpha decay of uranium – 238?
   a. $^{238}_{93}Np$ c. $^{242}_{95}Am$
   b. $^{234}_{92}U$ **d. $^{234}_{90}Th$**
7. What subatomic particle determines the identity of an atom?
   a. protons c. electrons
   b. neutrons d. quarks
8. How many neutrons does nitrogen – 15 have?
   a. 6 neutrons **c. 8 neutrons**
   b. 7 neutrons d. 15 neutrons
9. Which of the following has the greatest radius?
   a. K b. K^+ **c. Rb** d. Rb^+
10. Elements in the same group on the periodic table typically share:
    a. The same chemical properties c. The same number of energy levels
    b. The same number of electrons d. The same electron configuration
11. Which of the following is a correctly written electron configuration?
    a. $1s^2 2s^2 2p^5 3s^1$ **c. $1s^2 2s^2 2p^6 3s^2 3p^4$**
    b. $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 4d^{10} 5p^2$ d. $1s^2 2s^2 3p^6 4$
12. How many valence electrons does selenium (Se) have?
    a. 4 c. 14
    b. 6 d. 50
13. How many electrons can fit in a single orbital?
    a. 1 **b. 2** c. 3 d. 4
14. What type of charge would repel an alpha particle?
    a. Positive charge c. Neutral charge
    b. Negative charge d. Impossible to tell
15. Visible light arranged according wavelengths is called a…
    a. Nebula
    b. Main sequence
    c. Spectrum
    d. Constellation