

## Assignment 5

Choose/Fill-in the correct answer.

- Which of the following is not a property of metals?
  - They are good conductors of heat and electricity.
  - They do not react with air and water.
  - They have high densities.
  - They usually have high melting points.
- Which of the following elements is a metalloid?
  - Boron, B
  - Chlorine, Cl
  - Indium, In
  - Tantalum, Ta
- Arrange the following alkali metals, Li, Na, K, Rb, in order of increasing melting point.
  - Li, Na, K, Rb
  - Rb, K, Na, Li
  - Na, K, Rb, Li
  - K, Rb, Li, Na
- Which of the following statements about the periodic table is not correct?
  - Elements having the same number of outermost shell electrons belong to the same group.
  - Inert gases are Group VIII A elements.
  - Non-metals are placed on the right-hand side of the table.
  - Elements are arranged in an increasing order of mass number.
- Arrange the following elements in the order of increasing atomic radius:  

**Br, Ca, B, O.**

  - B, O, Ca, Br
  - B, O, Br, Ca
  - B, Ca, O, Br
  - O, B, Br, Ca
- Which property describes nonmetals?
  - Low electronegativities
  - High thermal and electrical conductivities
  - They have high densities
  - Have a tendency to form anions than cations
- How many moles are there in 49.3 g of magnesium sulfate,  $\text{MgSO}_4$ ?

- 0.410 mole
  - $5.93 \times 10^3$  moles
  - $8.19 \times 10^{-23}$  mole
  - $2.97 \times 10^{25}$  moles
- Both temperature and pressure affect the volumes and therefore, the densities of gases. It is convenient to choose some standard temperature and pressure as a reference point in discussing gases. The Standard Temperature and Pressure or STP are:
    - 298.15 K and 1 atmosphere
    - 273.15 K and 1 torr
    - 25°C and 760 torr
    - 0°C and 760 torr
  - Calculate the mass, in kilograms, of  $2.6 \times 10^{20}$  molecules of sulfur dioxide,  $\text{SO}_2$ .
    - $1.5 \times 10^2$  kg
    - $2.8 \times 10^{-5}$  kg
    - $2.8 \times 10^1$  kg
    - $1.7 \times 10^{19}$  kg
  - An unknown compound is analyzed. The empirical formula of the compound is determined to be  $\text{C}_3\text{O}_2\text{H}_5$ . What is the molecular formula of this compound?
    - $\text{C}_3\text{O}_2\text{H}_5$
    - I don't know, I need to know the percent composition data of the compound.
    - I don't know, I need to know the mass of the compound used in the analysis.
    - I don't know, I need to know the formula mass of this compound.

Send to obtain your score