1.True or false

      A.  When water is added to a solution of an acid the pH changes.

      B.  Some nonmetal oxides react with water to form acidic solutions.

      C.  In the same size container at the same temperature 5.00g of O2 ha the same pressure as 5.00g of CO2.\

      D.  Agricultural fertilizers can be water pollutants.

      E.  All isotopes are radioactive.

      F.  The two major components of air are oxygen and argon.

      G   One function of auto catalytic converters is to convert

           CO to CO2.

      H. When an isotope emits gamma radiation it becomes

          A different element.

       I. As the [H+] in a solution increases the pH increases.

       J. As a radioactive isotope decomposes its half life changes.

  2.  0.0100 moles of HCl, a strong acid, is dissolved in 10.0L of solution
       A. What is the molarity of H+ ions in the solution?

       B. What is the pH of the solution?

       C. What is the [OH-] in the solution?

       D. Is the solution acidic or basic?

 3. What is the pressure in atmospheres of 2.50 grams of O2 gas in a 752mL container at 25.0oC

 4.  A. An isotope with atomic number 84 and mass number 212 emits an alpha

          particle. What are the atomic number and mass number of the product?

      B. An atom of atomic number 48 with a mass number of 113 emits a beta particle.

          what are the atomic number and mass number of the product?

  5. Considering the reaction:

                                2NaN3 → 2Na + 3N2

           How many liters of N2 gas result when 95.0 grams of NaN3reac at 25.0oC and 0.950 atmosphere?