1. The concentration of a solution can be expressed in

   A) milliliters per minute
   B) parts per million
   C) grams per kelvin
   D) joules per gram

2. A 2400.-gram sample of an aqueous solution contains 0.012 gram of NH_3. What is the concentration of NH_3 in the solution, expressed as parts per million?

   A) 5.0 ppm B) 15 ppm
   C) 20. ppm D) 50. ppm

3. Which unit can be used to express the concentration of a solution?

   A) L/s B) J/g C) ppm D) kPa

4. If 0.025 gram of $Pb(NO_3)_2$ is dissolved in 100. grams of H_2O, what is the concentration of the resulting solution, in parts per million?

   A) 2.5×10^{-4} ppm B) 2.5 ppm
   C) 250 ppm D) 4.0×10^{3} ppm

5. What is the concentration of a solution, in parts per million, if 0.02 gram of Na_3PO_4 is dissolved in 1000 grams of water?

   A) 20 ppm B) 2 ppm
   C) 0.2 ppm D) 0.02 ppm

6. How many grams of $C_6H_{12}O_6$ are needed to be dissolved in water to make 100. grams of a 250. ppm solution?

   A) 4.00×10^{5} g B) 2.50×10^{4} g
   C) 4.00×10^{-1} g D) 2.50×10^{-2} g

7. How many grams of KOH should be dissolved in water to make 2000.0 grams of a 10.0 ppm solution?

   A) 2.00 g B) 2.0×10^{-1} g
   C) 2.0×10^{-2} g D) 2.0×10^{-3} g

8. What is the concentration expressed in parts per million of a solution containing 5.0 grams of NH_4Cl in 95.0 grams of H_2O?

   A) 5.0×10^{4} ppm B) 2.0×10^{7} ppm
   C) 5.3×10^{4} ppm D) 1.9×10^{7} ppm

9. An aqueous solution has a mass of 490 grams containing 8.5×10^{-3} gram of calcium ions. The concentration of calcium ions in this solution is

   A) 4.3 ppm B) 8.5 ppm
   C) 17 ppm D) 34 ppm

10. How many grams of NaCl are needed to be dissolved in water to make 1.0 gram of a 100.0 ppm solution?

    A) 1.0×10^{-4} g B) 1.0×10^{-3} g
    C) 1.0×10^{-2} g D) 1.0×10^{-1} g