

**Test IV**  
**Chemistry 1151**

Multiple Choice (3 points each, place answers on the answer sheet)

- \_\_\_\_ 1. Hexane ( $C_6H_{14}$ ) is a nonpolar solvent. Which of the following is least soluble in hexane?  
a.  $CH_4$                       b.  $CCl_4$                       c.  $NaCl$                       d.  $C_4H_{10}$
- \_\_\_\_ 2. A solution which has more dissolved solute than it could have if it were at equilibrium is said to be  
a. concentrated                      b. saturated  
c. supersaturated                      d. dilute
- \_\_\_\_ 3. How many grams of pure  $Na_2SO_4$  are required to prepare 700 mL of 6.0 M solution?  
a. 140 g                      b. 99 g                      c. 596                      d. none of these
- \_\_\_\_ 4. What is the percent concentration (w/w) of a solution made by adding 56 g of  $KOH$  to 944 g of water?  
a. 1.0%                      b. 5.6%                      c. 56%                      d. none of these
- \_\_\_\_ 5. How many particles does one formula unit of  $KNO_3$  give in solution?  
a. 1                      b. 2                      c. 3                      d. 5
- \_\_\_\_ 6. Which of the following describes the process in which small solvent particles pass through a membrane from a dilute to a concentrated solution?  
a. osmosis                      b. Tyndall effect  
c. suspension                      d. precipitation
- \_\_\_\_ 7. A 5%(w/w) solution of sodium hydroxide is prepared by dissolving  
a. 50 g of  $NaOH$  in 1000 g of water.  
b. 50 g of  $NaOH$  in 950 g of water  
c. 5 moles of  $NaOH$  in 1000 g of water  
d. 5 moles of  $NaOH$  in 950 g of water
- \_\_\_\_ 8. What volume of 1.25M  $NaOH$  is required to make 250 mL of 0.12 M  $NaOH$ ?  
a. 24.0 mL                      b. 2.60 mL  
c. 0.600 mL                      d. none of these
- \_\_\_\_ 9. Which is not a characteristic of an aqueous acid?  
a. sour taste  
b. neutralizes bases  
c. turns red litmus paper blue  
d. reacts with active metals to form hydrogen gas.
- \_\_\_\_ 10. The ion responsible for the properties of aqueous acid is:  
a.  $Cl^-$                       b.  $H_3O^+$                       c.  $OH^-$                       d.  $H_2O^+$



