**BIOLOGY 40A PLACEMENT SAMPLE QUESTIONS**

1. You need to know what 25% of 275 is. Which of the following equations will give you that information?
   a. \(25 \times 275\)
   b. \(.25 \times 275\)
   c. \(25 \times 27.5\)
   d. \(275 / 25\)

2. Magnesium has an atomic number of 12. How many electrons are in the outer shell of Mg++?
   a. 2
   b. 4
   c. 8
   d. 10

3. A molecule from which 2 hydrogen atoms have been removed has been
   a. hydrolyzed
   b. ionized
   c. oxidized
   d. reduced

4. One liter contains approximately the same volume as one:
   a. cup
   b. gallon
   c. pint
   d. quart

5. In the following oxidation-reduction reaction – \(2\text{FeCl}_2 + \text{Cl}_2 = 2\text{FeCl}_3\) - Iron (Fe) is
   a. oxidized  b. reduced

6. In simple diffusion
   a. the movement of the molecules is controlled by temperature and pressure
   b. the direction of movement is random
   c. the movement of molecules of one substance is independent of the movement of any other substance
   d. the net movement is away from the region of highest concentration
   e. all of the above

**Answers:**

1. b  4. d
2. d  5. a
3. c  6. e