

**General Chemistry 1**  
**Problem Set 10** (the last one!)  
**Due Wednesday, December 14, 2005** (note change from syllabus)

1. (4 points) Silberberg 18.24
2. (6 points) Silberberg 18.42. You should use the smallest set of whole number coefficients to balance each reaction.
3. (3 points) Silberberg 18.46
4. (5 points) Silberberg 18.64
5. (7 points) Which is the stronger acid, HOBr or HOBrO? Justify your answer. Your justification must include drawing Lewis structures of all reactants and products.
6. (4 points) Silberberg 18.87. You should use the smallest set of whole number coefficients to balance each reaction.
7. (8 points) Silberberg 18.93
8. (16 points) Silberberg 18.99
9. (6 points) Explain (with chemical equations, if appropriate) whether an aqueous solution of each of the following salts is acidic, basic, or neutral: (a)  $C_2H_5NH_3Cl$ ; (b)  $K_2S$ ; (c)  $CsI$ .

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Please also note the following:

- You are required to memorize the formulas of the seven common strong acids: HCl, HBr, HI,  $HClO_4$ ,  $HClO_3$ ,  $HNO_3$ , and  $H_2SO_4$ .
- This problem set does not cover material from the last two days of class, when I plan to cover polyprotic species and solubility equilibria. However, this material is “fair game” for your final exam on Wednesday, December 21. Here are suggested study problems on this material (see Appendix E for the answers):
  - A. Silberberg 19.66 (a) and (b)
  - B. Silberberg 19.74
  - C. Silberberg 19.82

Note that you will not turn in your solutions to these problems for a grade.