**Problem Set # 7 Separation of Ions, Ksp, and Molar Solubility**

*For the following questions, devise a procedure for separating the list of ions given in each case. You will need to use your solubility table for reference purposes.*

1. Ag+ Mg2+ Ba2+

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

2. Pb2+ Ba2+ Sr2+

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

3. Cu+ Ca2+ Sr2+

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

4. Be2+ Sr2+ Ag+

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

5. Be2+ Ca2+ Pb2+

i) Add: Filter Out: Net Ionic equation:

ii) Add: Filter Out: Net Ionic equation:

iii) Add: Filter Out: Net Ionic equation:

6. SO32- OH- I-

i) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. CO32- OH -

i) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Br- S2- PO43-

i) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. PO43- OH - S2-

i) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. OH - S2- SO42-

i) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. S2- SO42- Cl–

i) Add: \_\_\_\_\_\_\_Filter Out: \_\_\_\_\_\_\_ Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

iii) Add: Filter Out: Net Ionic equation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_