1. Arrange the following in the order requested.

C A B
Least to most stable carbocation

2. Determine whether the following pairs of structures are actually different compounds or simply resonance forms of the same compound. Please circle those pairs that are resonance structures.

3. Classify the substituents (on an aromatic ring) below according to their directing and reactivity effects toward electrophilic aromatic substitution, using the following abbreviations:

A = o- and p- Directing Activating Group
D = o- and p- Directing Deactivating Group
M = m- Directing Deactivating Group

4. Assign R and S absolute configurations to each chiral center.

5. Draw the structure of the major organic products for the following reactions.
6. Indicate the relationship between the following pairs of molecules as enantiomers, diastereomers, identical, or meso compounds.

- **Meso Compound**
  - ![Meso Compound](image)

- **Identical**
  - ![Identical](image)

- **Identical**
  - ![Identical](image)

- **Diastereomers**
  - ![Diastereomers](image)

Don't forget the practice problems for stereochemistry on the course web site!

Additional end of chapter problems.

Chapter 4: 33, 34, 36, 37, 39, 42, 43, 47, 48, 50, 57, 64

Chapter 5: 26, 27, 31, 32, 33, 34, 35, 36, 40, 47, 58

Chapter 6: 29, 32, 36, 40, 47, 51, 55