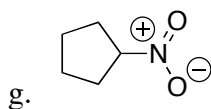
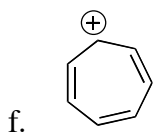
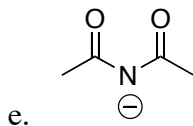
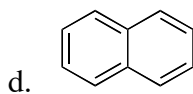
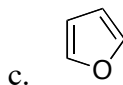
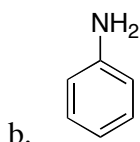
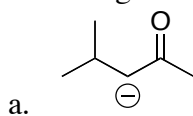


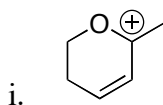
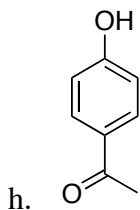
Name: _____

April 11, 2011

PEERS Workshop
Chemistry 30A
Worksheet 3

1. Resonance: Provide significant resonance contributors and the resonance hybrid for each of the following molecules:





2. Draw the sawhorse projection of ethane (CH_3CH_3). Draw the two Newman projections of ethane that show the staggered and eclipsed conformations.

3. Draw the sawhorse projection of propane ($\text{CH}_3\text{CH}_2\text{CH}_3$). Draw the two Newman projections of propane that show the staggered and eclipsed conformations.

4. Draw the sawhorse projection of butane ($\text{CH}_3(\text{CH}_2)_2\text{CH}_3$). Draw the four Newman projections of propane that show the staggered and eclipsed conformations. Identify the gauche and anti conformations.

5. Draw a free energy diagram for the rotation of butane about the C2-C3 bond for every 60°. Clearly show the structures and indicate special nomenclature.

6. Name the following structure with IUPAC rules:

