C341 Review 1

Nomenclature, Conformational analysis, and Halogenation Mechanism

1. Draw the monobromination products of 2-methylhexane. Indicate the major product.

Draw a Newman projection around carbons 2 and 3 for the most stable conformation of the major product of this reaction. (Methyl groups are more sterically bulky than bromine.)

2. Name the compounds below:



3. Draw a structure for 5-ethyl-2,2,4-trimethylheptane. Label each carbon atom as primary, secondary, tertiary, or quaternary.

4. Provide a mechanism for this reaction. Use it to explain why this reaction will continue for a short time even after light is removed.



5. Draw an energy diagram for the conformation analysis of the rotation of 2-methylpentane around the C2-C3 bond. Draw it to scale given these data: H/H eclipsing = 4 kJ/mol, methyl/H eclipsing = 6 kJ/mol, ethyl/H eclipsing = 7 kJ/mol, methyl/ethyl eclipsing = 12 kJ/mol, methyl/ethyl gauche = 5 kJ/mol.

