

CH 223 Chapter Twenty-one Study Guide

- Be able to identify and name representative examples from the following organic classes:
 - * alkanes
 - * cycloalkanes
 - * alkyl halides
 - * alkenes
 - * alkynes
 - * aromatic compounds (especially benzene and toluene)
 - * alcohols
 - * ethers
 - * aldehydes
 - * ketones
 - * amines
 - * carboxylic acids
- Know the systematic name for a compound matching one of these functional groups.
- Be able to draw structural formulas for unbranched and branched-chain alkanes as well as cyclohexanes. Be able to name these compounds.
- Understand the bonding behavior of alkenes, alkynes, aromatic compounds, aldehydes and ketones.
- Be able to identify possible isomers given a formula.
- Be able to draw and name various cis and trans stereoisomers of alkenes.
- Recognize the importance of the carbonyl group in organic chemistry. Aldehydes, ketones, carboxylic acids, esters, etc. all contain a carbonyl group.
- Be able to solve and understand the assigned problems in problem set #6.