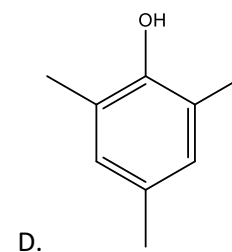
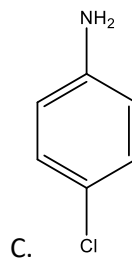
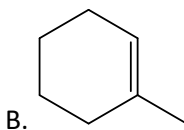
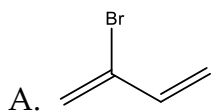


Homework 2 – CHEM 244

Name	
Student ID	

1. Name each of the following structures by the IUPAC system



2. Write the structural formula for the following:

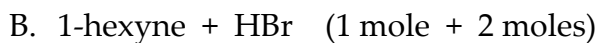
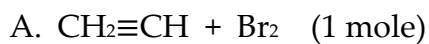
A. 3-hexyne

B. Allylcyclobutane

C. 2-bromo-1,3-pentadiene

3. Will 1-hexyne react with sodium amide? Explain

4. Write the equations for the following:

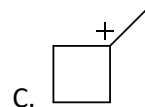
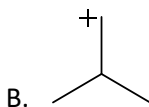
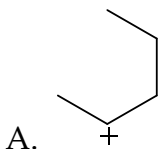


C. Bromine at room temperature with 4-methylcyclohexene

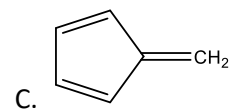
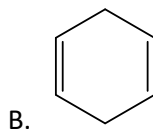
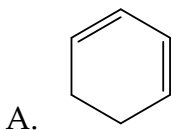
D. Acid-catalyzed addition of water to 4-methylcyclopentene



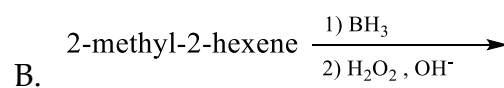
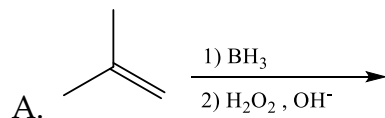
5. Classify each of the following carbocations as primary, secondary, or tertiary. And which carbocation is most stable and least stable?



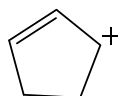
6. Which of the following compound have conjugated multiple bonds?



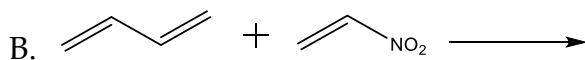
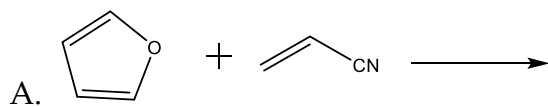
7. What kinds of alcohols will be obtained from the following and drawing them?



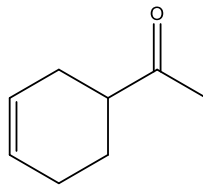
8. Draw the contributors to the resonance hybrid structure of 3-cyclopentenylcations



9. Draw the structure of the product for each of the following reaction



10. How could a Diels-Alder reaction be used to synthesize the following compound?



11. Draw the structure of the following:

A. *p*-vinylbenzaldehyde

B. *m*-nitrotoluene

C. *o*-dinitrobenzene

12. Write out the steps in mechanism for nitration of benzene