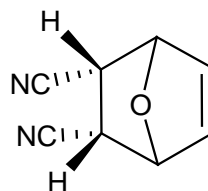
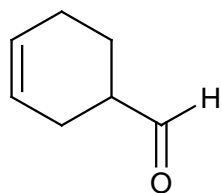
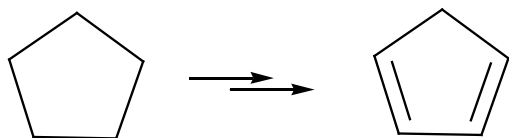


Homework/Problem Set
Chapter 13 (Conjugated Unsaturated Systems)

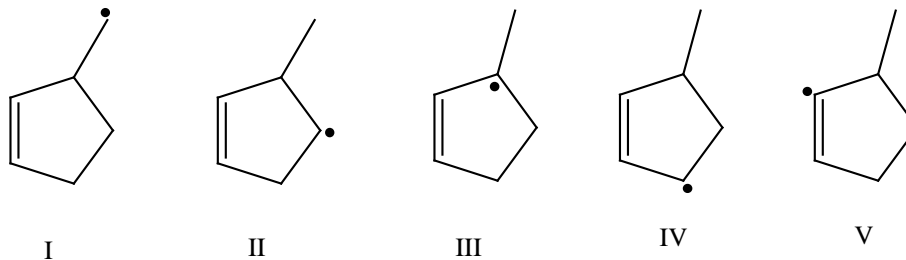
1. Show how Diels-Alder reactions might be used to synthesize the following compounds:



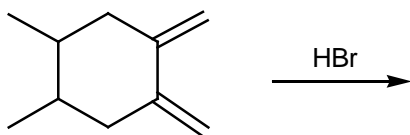
2. Provide reagents necessary for the following transformation: HINT. Several steps maybe necessary



3. Which free radical would be most stable and why?



4. Predict the product(s) of the following reaction? What would be the major product for this reaction at -20°C and what main product would you expect at 50°C ?



5. Please write ALL the products formed during reaction of 1-pentene with NBS? Consider also ALL stereoisomers