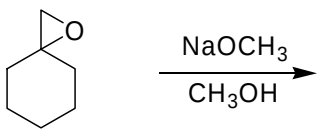
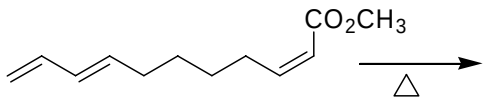
國立彰化師範大學九十六學年度碩士班招生考試試題

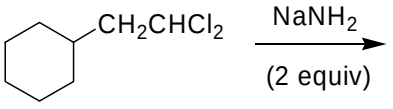
系所：化學系　　科目：有機化學

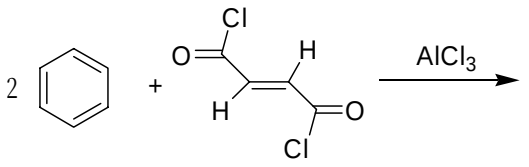
★★請在答案紙上作答★★　　

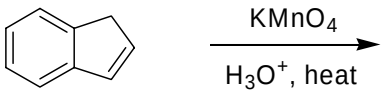
1. Give the major product of the following reactions. (each 4 point)

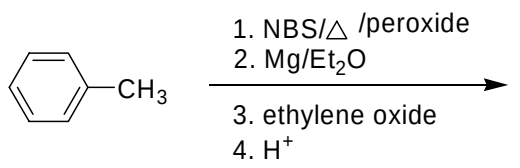
1) 

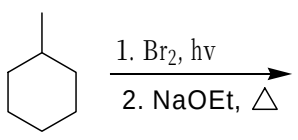
2) 

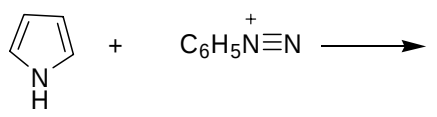
3) 

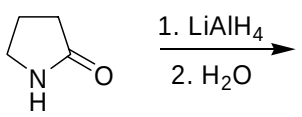
4) 

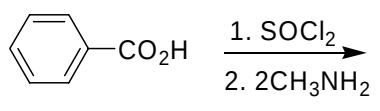
5) 

6) 

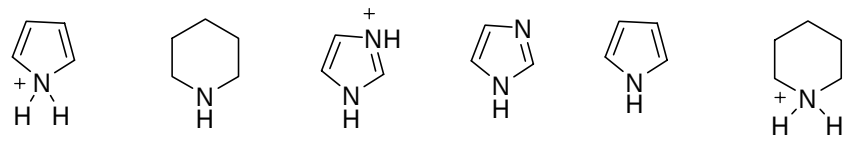
7) 

8) 

9) 

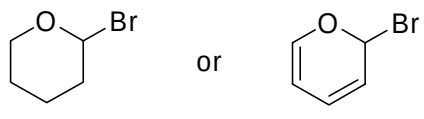
10) 

2. List the following compounds in order of decreasing acidity. (6%)



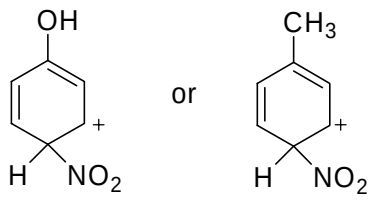
A　**B**　**C**　**D**　**E**　**F**

3. Which compound undergoes an S_N1 reaction more rapidly? Why? (6%)

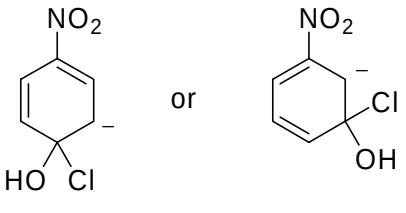


4. Which is a more stable intermediate in each pair? (6%)

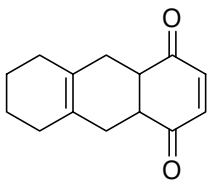
(1)



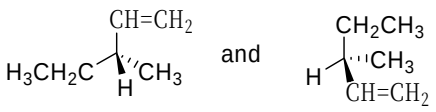
(2)

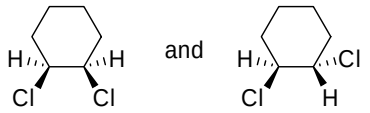


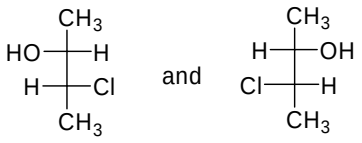
5. Give two different ways to prepare the following compound by the Diels-Alder reaction. Explain which method is preferred. (6%)

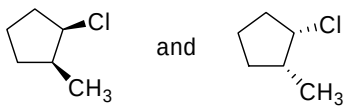


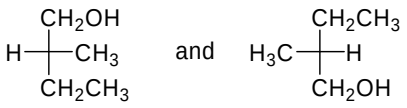
6. Indicate whether each of the following pairs of compounds are identical or are enantiomers, diastereomers, or constitutional isomers. (12%)

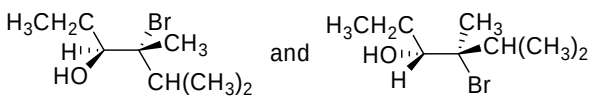
(1) 

(2) 

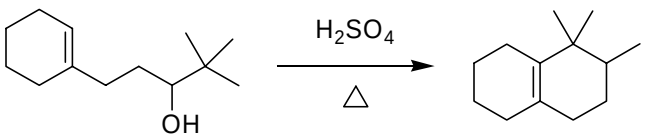
(3) 

(4) 

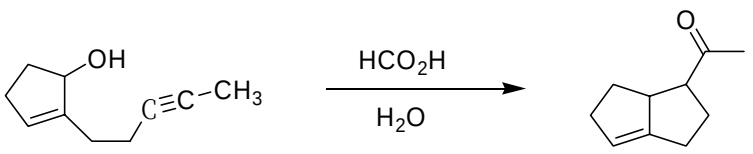
(5) 

(6) 

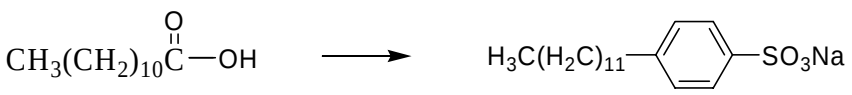
7. Propose a mechanism for the following reaction: (8%)



8. Draw a stepwise mechanism for the following intramolecular reaction. (8%)



9. Using the given starting materials and any necessary reagents to synthesis the following compound? (8 %)

(1) 

a detergent

(2)