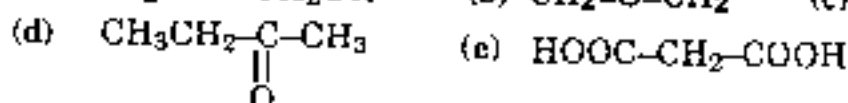
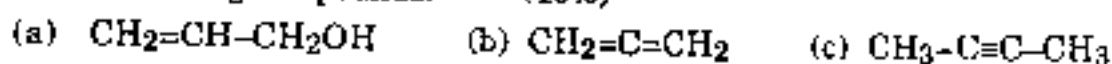


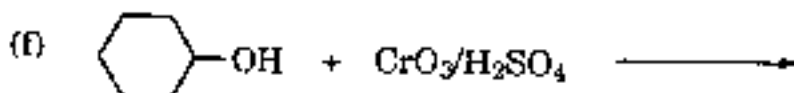
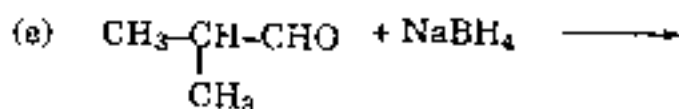
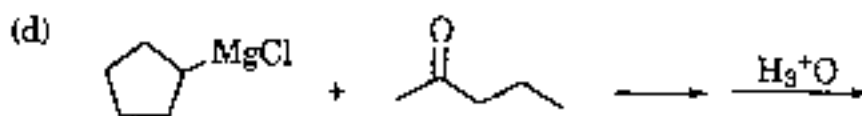
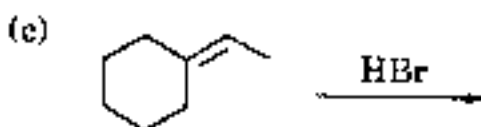
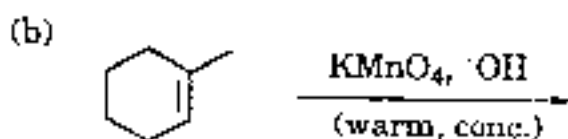
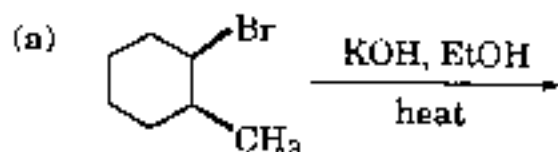
八十六學年度 材料科學工程研究所(系) 三組碩士班研究生入學考試

有機化學 科號 2303 共 5 頁第 1 頁 *請在試卷【答案卷】內作答

1. Give an acceptable English name (the IUPAC or common name) for each of the following compounds. (10%)

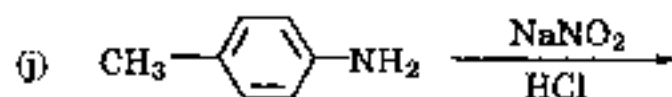
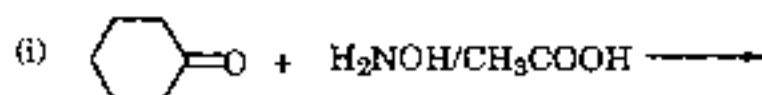
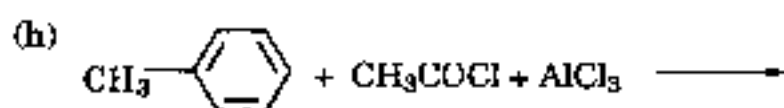
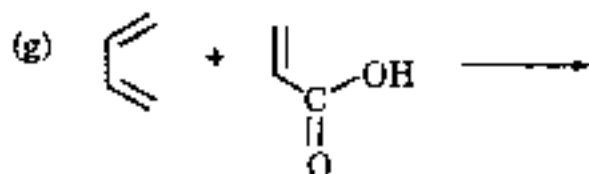


2. Predict the major products of the following reactions, including stereochemistry where appropriate. (20%)

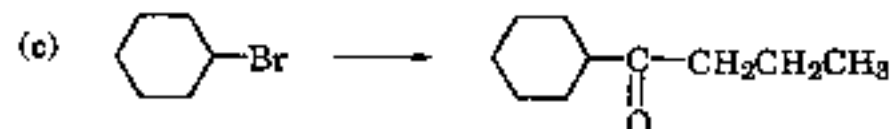
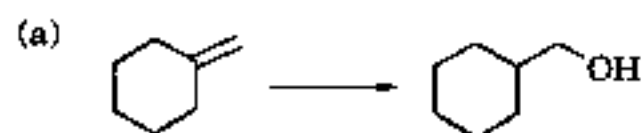


八十六學年 應用科學工程研究所(康)系(所) 甲三 組碩士班研究生入學者試

科目 有機化學 科號 2303 共 5 頁第 2 頁 請在試卷【答案卷】內作答

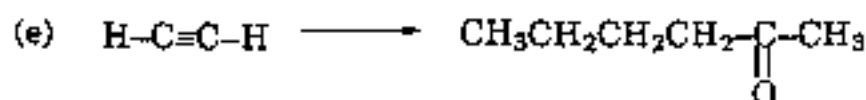
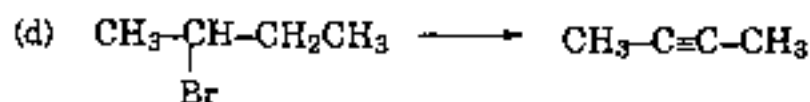


3. Show how you would synthesize the following compounds from the indicated starting material and any other necessary reagents. (15%)



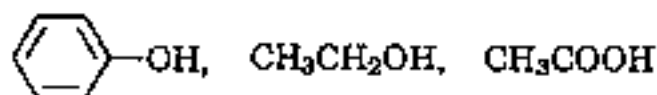
八十六學年度材料科學工程研究所(系) 甲三 組碩士班研究生入學考試

科目 有機化學 科號 2303 共 5 頁第 3 頁 *請在試卷【答案卷】內作答

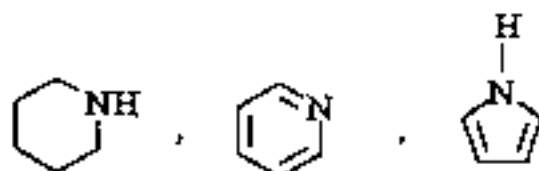


4. Arrange the following compounds (5%)

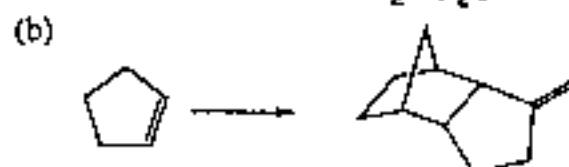
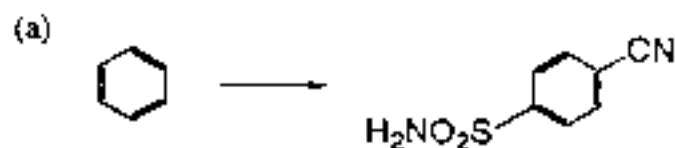
(a) in order of increasing acidity.



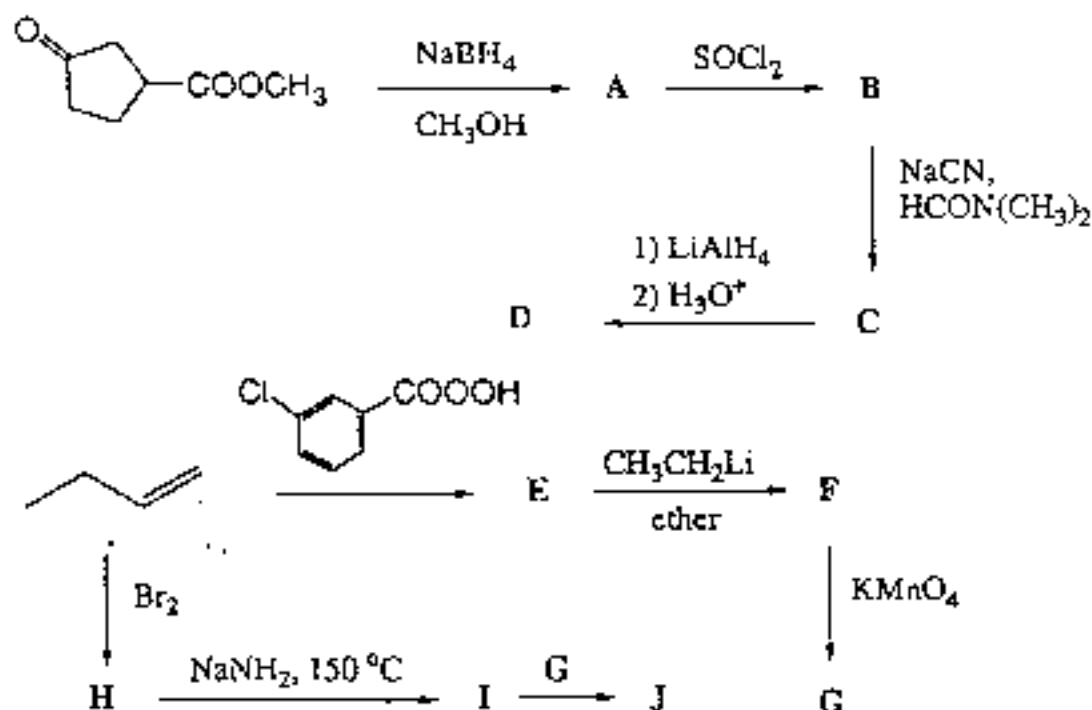
(b) in order of increasing basicity.



5. Provide necessary reagents to complete each of the following multistep synthetic transformations. Show the structure of synthetic intermediate for each synthetic step. (10%)



6. Provide the molecular structures for products A ~ J. (20%)



7. Explain each of the following terms and provide an example for each case. (10%)

- aromaticity
- Markovnikov's rule
- tautomer
- conformation

8. Deduce a molecular structure for the compound with the following spectral data. List the structural characteristics which you can determine from that spectrum. (10%)

八十六學年度材料科學工程研究所(系)(所) 甲三 組碩士班研究生入學考試

科目 有機化學 科號 2303 共 5 頁第 5 頁 *請在試卷【答案卷】內作答

