

# 國立臺北科技大學 105 學年度碩士班招生考試

系所組別：3602 化學工程與生物科技系生化與生醫工程碩士班

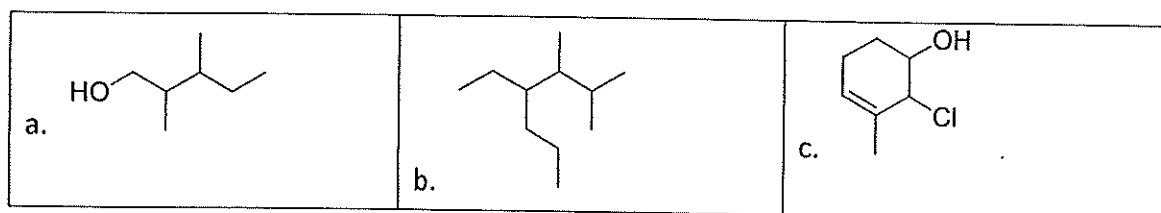
## 第三節 有機化學 試題 (選考)

第一頁 共一頁

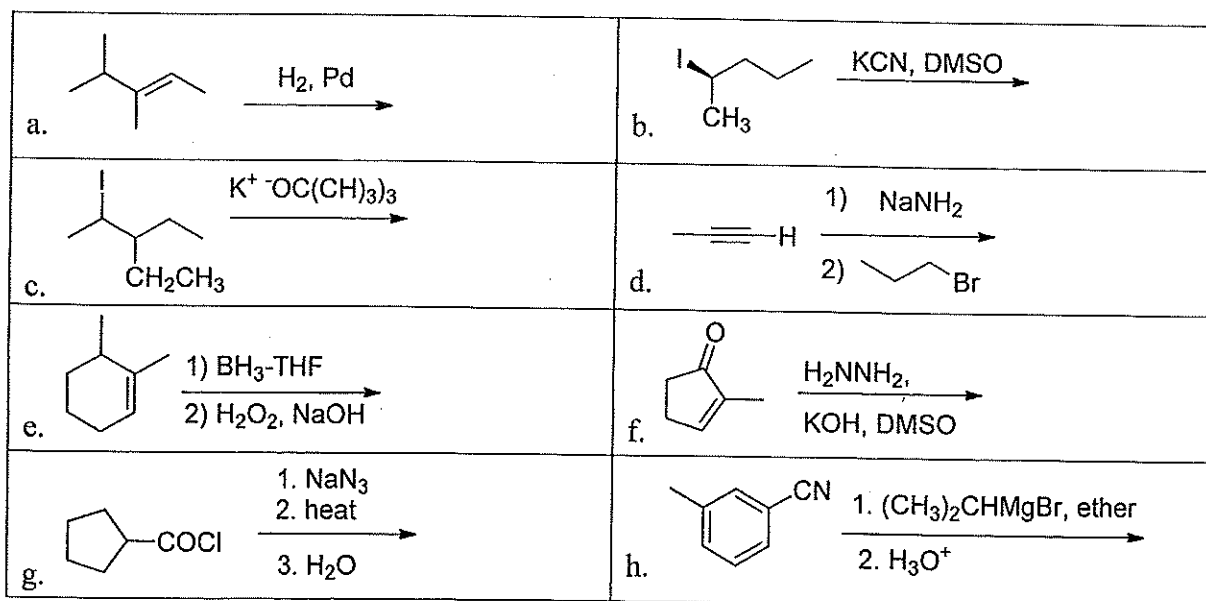
### 注意事項：

1. 本試題共 5 大題，共 100 分。
2. 請標明大題、子題編號作答，不必抄題。
3. 全部答案均須在答案卷之答案欄內作答，否則不予計分。

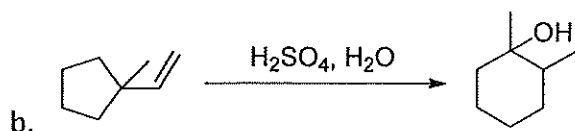
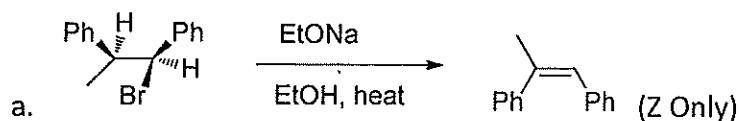
- I. Please give the systematic IUPAC names for each of the following: (5 points each; 15 points total)



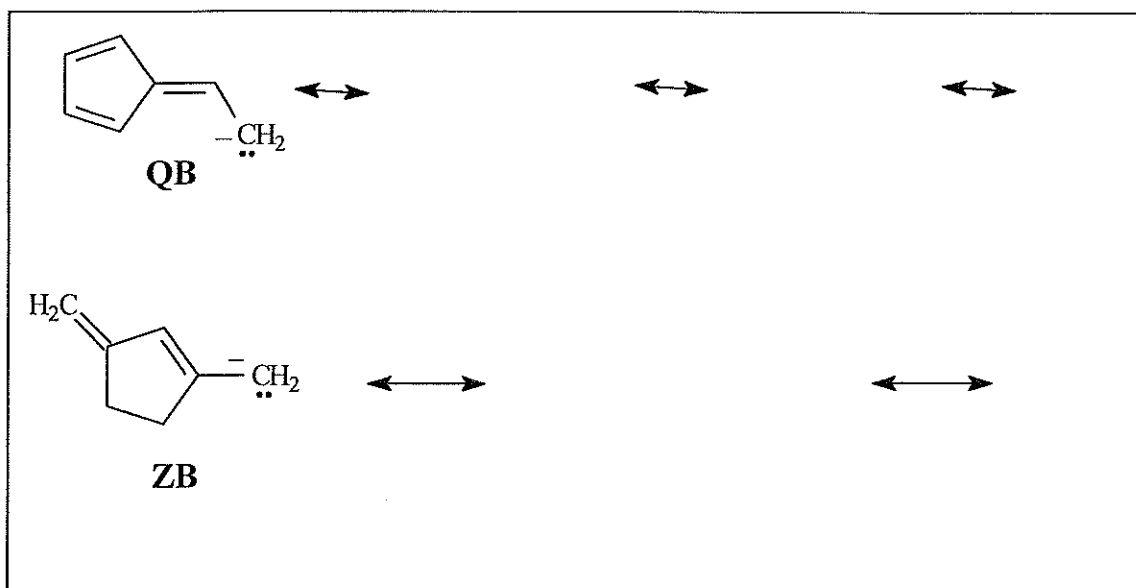
- II. Predict the product(s) of each reaction below. Be sure to indicate stereochemistry when appropriate (5 points each; 40 points total)



III. Please Provide the reaction mechanism for the following reaction(s) (10 points each; 20 points total)



IV. Conjugate bases QB and ZB are both resonance stabilized. Draw the indicated number of resonance forms for QB and ZB. Which of the compounds above, QB or ZB, would you predict to be most acidic? Explain your answer. (15 points)



V. Propose a synthesis of the anti-inflammatory drug Ibuprofen from benzene. Show all reagents and all intermediate structures. Assume that *ortho* and *para* isomers can be separated. (10 points)

