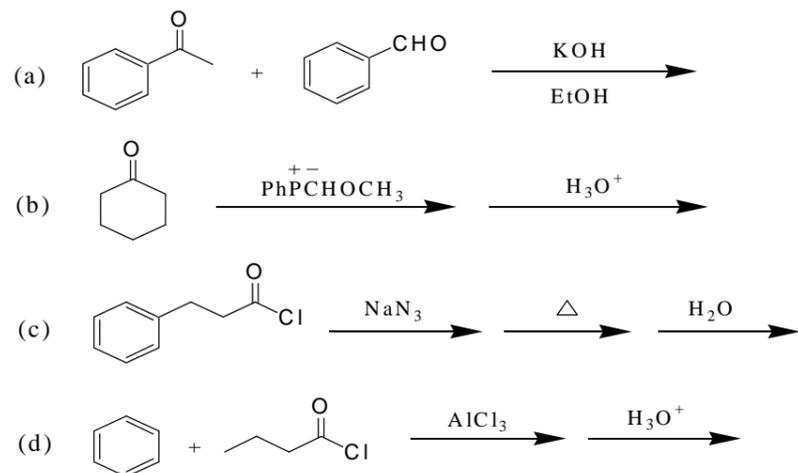


國立嘉義大學九十五學年度

生物藥學研究所碩士班招生考試試題

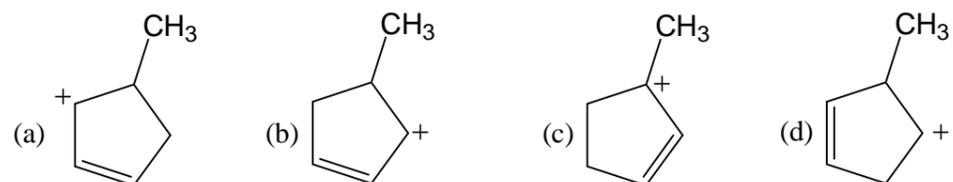
科目：有機化學

1. Write the expected major product(s) of each of the following reactions. (20%, 5% each)

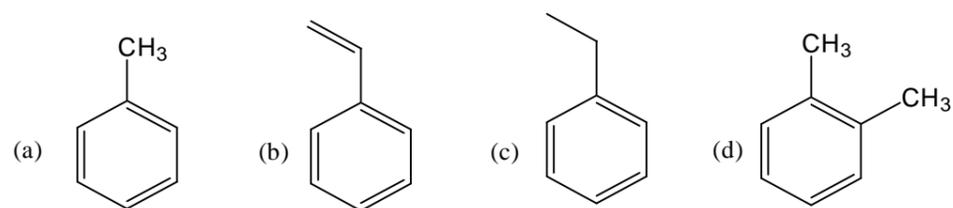


2. Select the best answer for the following questions. (10%, 2% each)

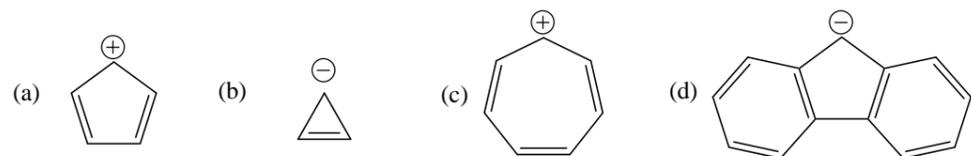
(1) Which carbocation would be the most stable?



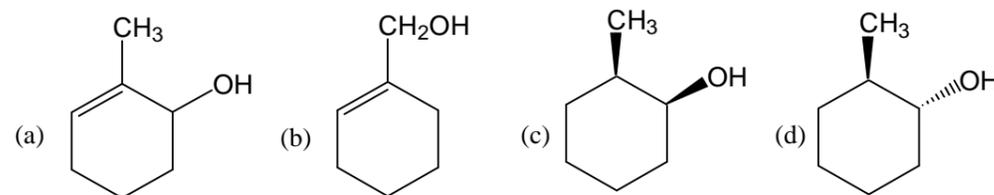
(2) What is the major product of Benzaldehyde with  $\text{Ph}_3\text{P}=\text{CH}_2$ ?



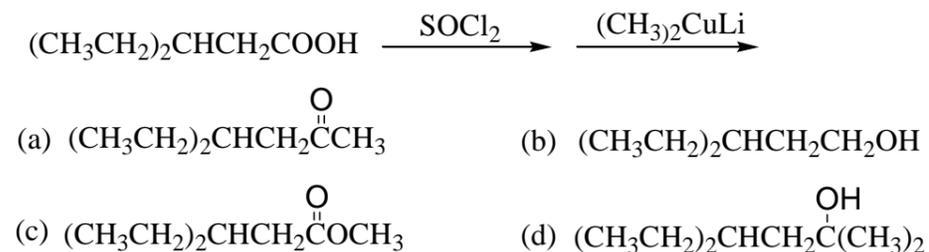
(3) Which is aromatic of the following species?



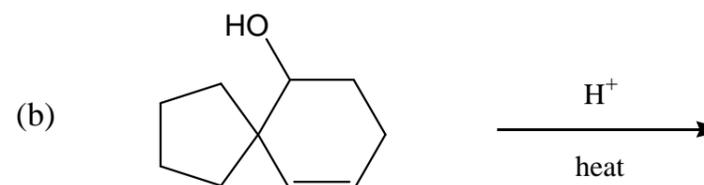
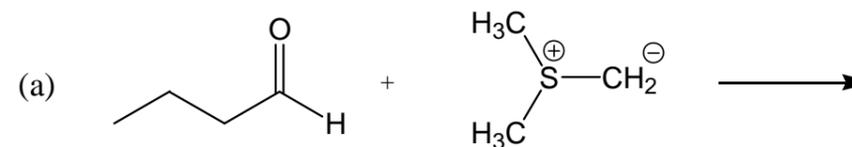
(4) Which will be the product of the reaction of 1-methylcyclohexene with  $\text{BH}_3$  and followed by  $\text{NaOH}/\text{H}_2\text{O}_2$ ?



(5) What is the product of the following reaction sequence?



3. Predict the organic product and propose a mechanism for each of the following reactions. (20%, 10% each)

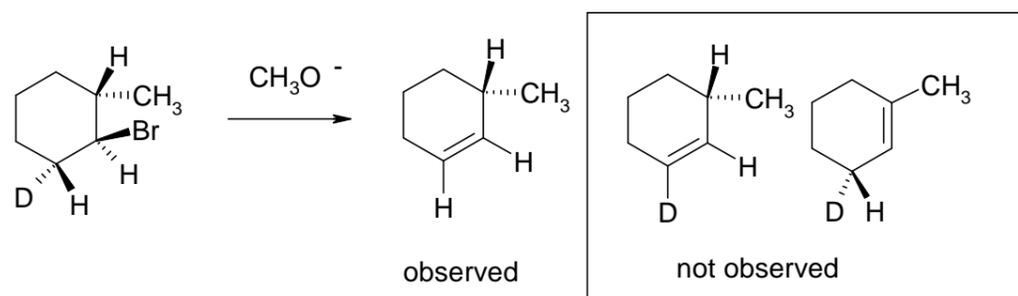


4. Briefly define the following terms and give examples. (20%, 5% each)

(1) Aglycone (2) Anomers (3)  $\text{S}_{\text{N}}2$  reaction (4) Lewis acids and bases

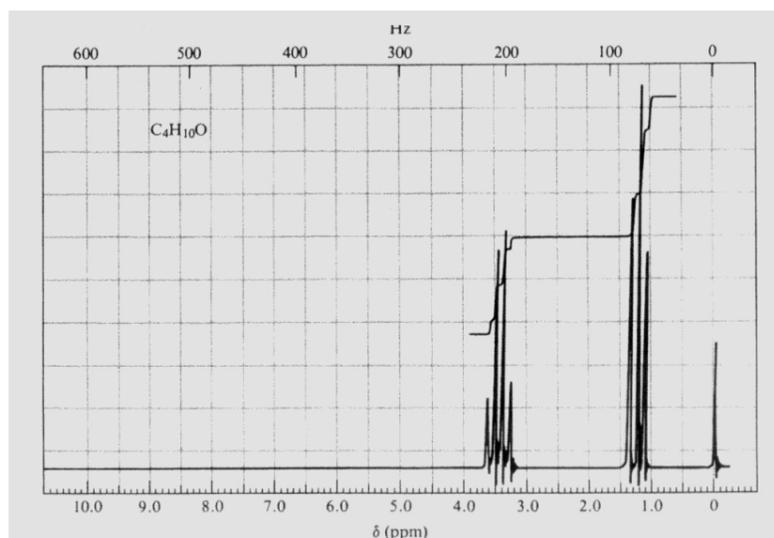
背面尚有試題

5. Explain why the following deuterated 1-bromo-2-methylcyclohexane undergoes dehydrohalogenation by the E2 mechanism to give only the indicated product. Two other alkenes are not observed. (10%)



6. The following proton NMR spectra are given together with the molecular formulas of the compounds they represent. In each case, propose a structure for the compound and give peak assignments. (20%, 10% each)

(a)



(b)

