

(i) Printed Pages : 4]

Roll No. ....

(ii) Questions : 9]

Sub. Code : 

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Exam. Code : 

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**B.A./B.Sc. (General) 4th Semester  
Examination**

**1047**

**CHEMISTRY**

**(Same for B.Sc. Microbial & Food Technology)**

**Paper : XIV Organic Chemistry-B**

**Time : 3 Hours]**

**[Max. Marks : 22**

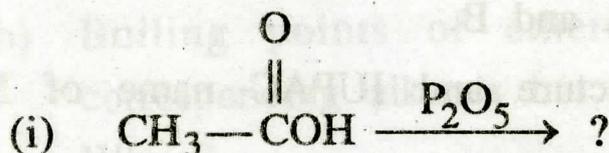
**Note :-** (i) Attempt *five* questions in all.

(ii) Attempt at least *one* question each from  
.Sections I, II, III and IV.

(iii) Q. No. 9 of Section V is compulsory.

**Section-I**

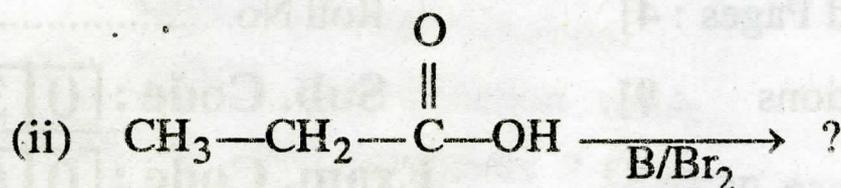
1. (a) Complete the following reactions :



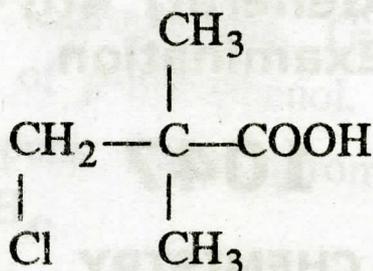
**N-74**

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Turn Over

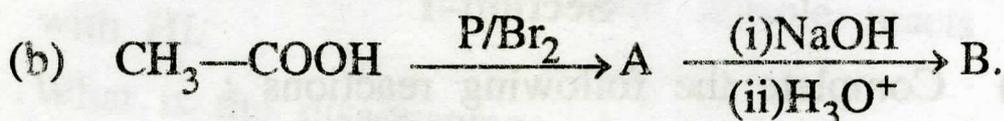
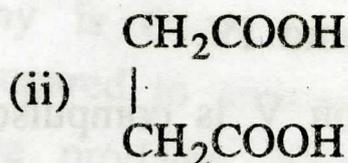
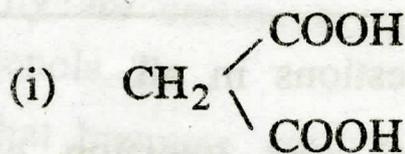


(b) Write IUPAC name of the following compound :



(c) Explain why formic acid is a stronger acid than acetic acid. 2,1,1

2. (a) What are products obtained when following carboxylic acids are strongly heated :

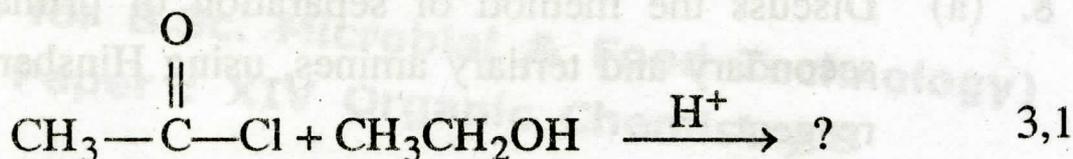


Identity A and B.

(c) Give structure and IUPAC name of Malic acid. 2,1,1

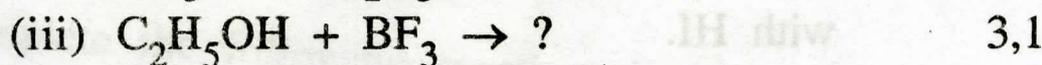
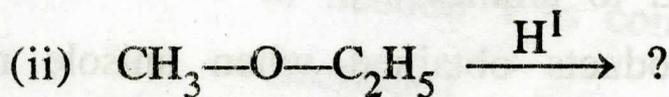
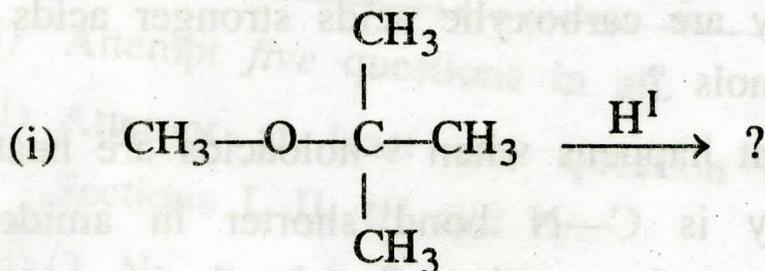
### Section-II

3. (a) What is the order of reactivity of acid chlorides, esters, amides and anhydrides towards nucleophilic substitution reactions? Justify your answer.
- (b) Give the chemical equation for reaction of ethanol chloride with two moles of Ammonia. 3,1
4. (a) Give the mechanism of acidic hydrolysis of esters. Give evidence for mechanism.
- (b) Complete the reaction :



### Section-III

5. (a) Complete the reactions : 1×4=4



- (b) Boiling points of ethers are similar to corresponding alkanes but less than alcohols. Why?

6. (a) (i) How are soaps prepared from oil or Fat ?  
Give chemical equation. 2,1  
(ii) Define Saponification value. 2,1  
(b) What are ionic detergents ? Give an example. 1

#### Section-IV

7. (a) Nitrobenzene when treated with NaOH yields O and P nitrophenols. Give mechanism of formation of *p*-nitrophenol.  
(b) What happens when nitromethane is treated with  $\text{LiAlH}_4$ . 3,1
8. (a) Discuss the method of separation of primary, secondary and tertiary amines, using Hinsberg's reagent.  
(b) Give the structure of N, N-Diethyl ethanamine. 3,1

#### Section-V

9. (a) Why are carboxylic acids stronger acids than phenols ?  
(b) What happens when  $\alpha$ -haloacids are heated ?  
(c) Why is C—N bond shorter in amides as compared to amines ?  
(d) Give products obtained when anisole reacts with HI.  
(e) What is the disadvantage of using soaps ?  
(f) Write the chemical equations for Hoffmann Bromamide reaction. 1×6=6