

(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

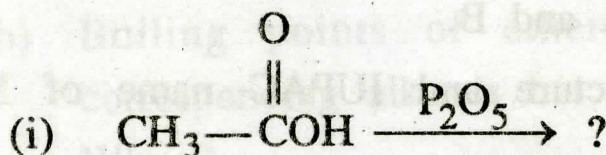
Note :- (i) Attempt *five* questions in all.

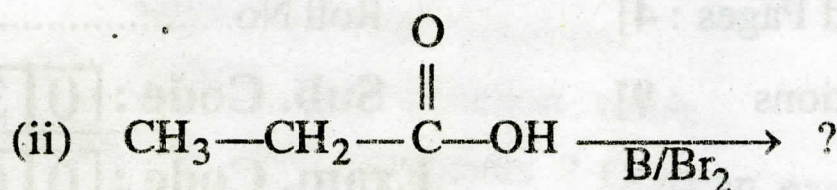
(ii) Attempt at least *one* question each from
.Sections I, II, III and IV.

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

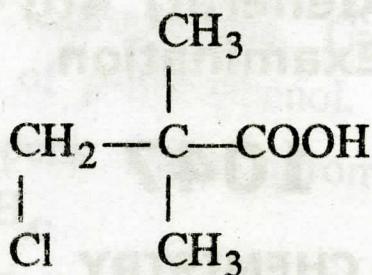
Section-I

1. (a) Complete the following reactions :



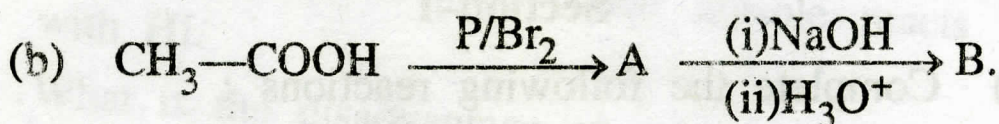
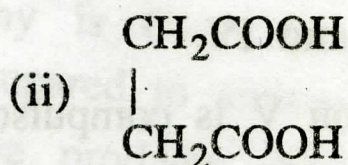
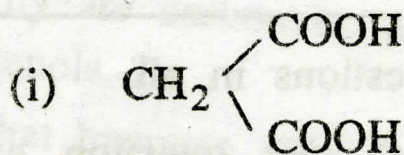


(b) Write IUPAC name of the following compound :



(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 :

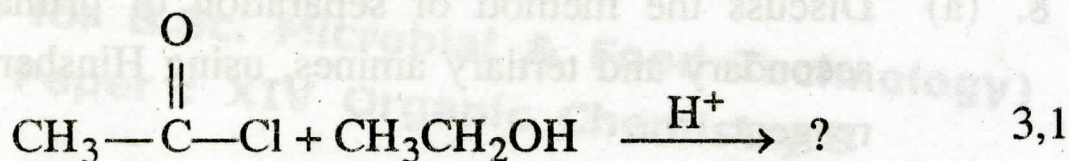


Identity A and B.

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

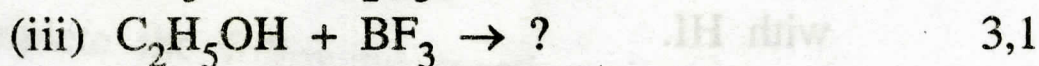
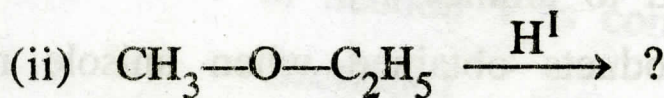
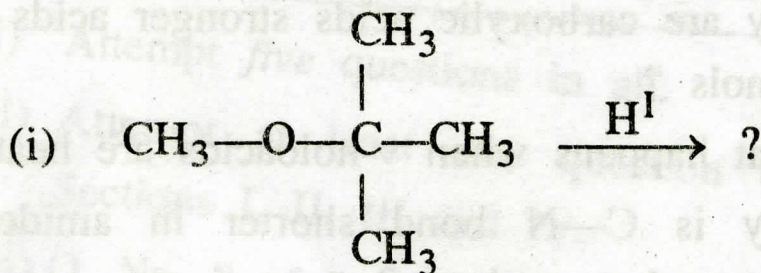
Section-II

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 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 α -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. $1 \times 6 = 6$