

(i) Printed Pages: 3

Roll No. ....

(ii) Questions : 9

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Exam. Code :

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B.A./B.Sc. (General) 3<sup>rd</sup> Semester  
(2122)

**CHEMISTRY**

(Organic Chemistry—A)

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

**Paper—X**

**Time Allowed : Three Hours]**

**[Maximum Marks : 22**

**Note :—**Attempt five questions in all, selecting **one** question from each Unit including Unit V which is compulsory.

**UNIT-I**

1. (a) Why boiling points of alcohols are higher than corresponding alkanes ?  
(b) What is REIMER-TIEMANN reaction ? Give its mechanism. 2,2
2. (a) Give reaction of oxalic acid with glycerol at :  
(i) 383 K  
(ii) 503 K  
(b) Convert :  
(i) Phenol to Phenolphthalein.  
(ii) Which has higher dipole moment – Phenol or Ethanol ? 2,2



## UNIT-II

3. (a) Discuss difference in the structure of  $\text{>C=O}$  and  $\text{>C=C<}$
- (b) Convert :
- (i) 1,3 Dithiane to Propionaldehyde
- (ii) Acetylene chloride to Acetaldehyde 2,2
4. (a) Give STEPHEN'S reaction to prepare Acetaldehyde.
- (b) How will you prepare :
- (i) Propanal from 1-Butene by Ozonolysis
- (ii) Acetaldehyde by Ozonolysis. 2,2

## UNIT-III

5. (a) Give role of Acid catalysis in nucleophilic reactions.
- (b) Discuss acidity of  $\alpha$ -hydrogens. 2,2
6. (a) Give use of acetals as protecting groups.
- (b) Give reaction of aldehydes and ketones to prepare  $1^\circ$ ,  $2^\circ$  and  $3^\circ$  alcohols. 2,2

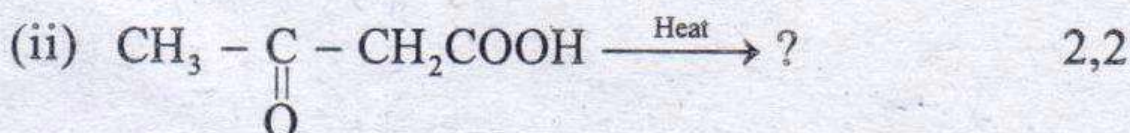
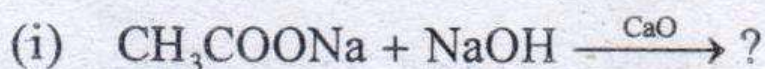
## UNIT-IV

7. (a) Comment on acidic nature of carboxylic acids.
- (b) Convert :
- (i) Toluene to Benzoic acid
- (ii) Grignard reagent to Carboxylic acid. 2,2



8. (a) Carboxylic acids have high boiling points. Explain.

(b) Complete :



### UNIT—V

#### (Compulsory)

9. (a) Give one reaction to show ALDOL condensation.

(b) What is Esterification ? Give mechanism.

(c) Give TOLLENS test.

(d) Give reaction of benzaldehyde and Phenylhydrazine.

$4 \times 1\frac{1}{2} = 6$