

(i) Printed Pages : 3

24/5/2023 (m)  
Roll No. ....

(ii) Questions : 9

Sub. Code : 

0	5	4	8
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Exam. Code : 

0	0	0	6
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B.A./B.Sc. (General) 6<sup>th</sup> Semester  
(2053)

**CHEMISTRY**

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

Paper : XXII : Organic Chemistry-B

Time Allowed : Three Hours]

[Maximum Marks : 22

**Note :—** Attempt any **five** questions in all including question No. 9 which is compulsory question and selecting **one** question from each Unit I-IV.

**UNIT—I**

1. (a) What are  $\alpha$ -amino acids ? Give evidence supporting dipolar ionic structures of these acids.
- (b) Give the concept of electrophoresis. What is its importance in protein chemistry ? 2,2
2. (a) Give a brief description of the solid-phase peptide synthesis.
- (b) Write down the structure and importance of Sanger's reagent in protein chemistry. 2,2

## UNIT—II

3. (a) Discuss free radical vinyl polymerization.  
(b) Explain the mechanism of anionic polymerization. Why does styrene undergo anionic polymerization ? 2,2
4. (a) What is condensation polymerization ? Discuss the preparation of Nylon-66.  
(b) How is Bakelite formed ? Explain the reactions with equations. 2,2

## UNIT—III

5. (a) Acetoacetic ester is an equilibrium mixture of keto and enol forms. Give evidence in support of the statement.  
(b) How can you convert cyclohexanone into 2-hexanoyl cyclohexanone through the intermediate formation of an enamine ? 2,2
6. (a) What are enolates ? Give two examples of their synthetic utility.  
(b) Write all resonating structures of carbanion of malonic ester. 2,2

## UNIT—IV

7. (a) What is the role of dry ether in the preparation of Grignard's reagents ?  
(b) Give the reaction of Grignard's reagents with  $\alpha, \beta$ -unsaturated carbonyl compounds. 2,2

8. (a) Give one method of preparation of Grignard's reagent and diethyl zinc.
- (b) Write the chemical equation for preparation of ethylmagnesium bromide. 2,2

**(Compulsory Question)**

9. (a) Define acid-base behaviour of amino acids.
- (b) What are epoxy resins ?
- (c) Define the term keto-enol tautomerism.
- (d) Define the term organolithium compounds. 4×1.5=6