

December 2023

B.Sc. (Life Science) Re-appear - I SEMESTER

Chemistry I - Conceptual Organic Chemistry (BLS-103)

Time: 3 Hours

Max. Marks:75

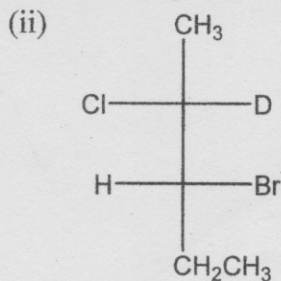
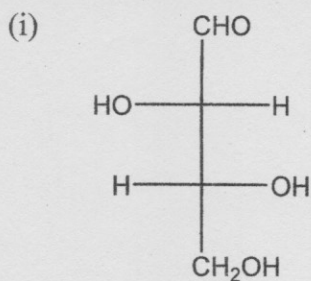
- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
 2. Answer any four questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.

PART -A

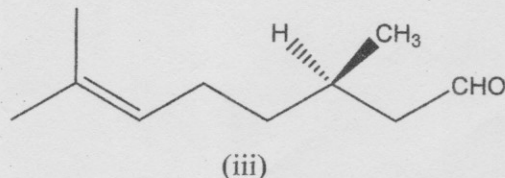
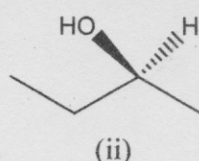
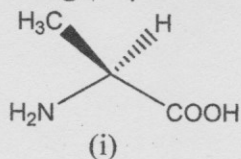
- Q1 (a) What are meso compounds? (1.5)
- (b) Describe Threo and Erythro isomers. (1.5)
- (c) What is ozonolysis? (1.5)
- (d) Write the Fischer projection formula of D and L-Glyceraldehyde. (1.5)
- (e) Write the product formed during reaction of acetone with hydrogen cyanide? (1.5)
- (f) What is the stability order of 1° , 2° , 3° free radicals? (1.5)
- (g) What is E/Z notation? Explain with example. (1.5)
- (h) What is difference between elimination and substitution? (1.5)
- (i) What is Tollen's reagent? (1.5)
- (j) What is dehydrohalogenation? (1.5)

PART -B

- Q2 (a) Explain the relative stability order of various conformations of cyclohexane. (5)
- (b) Differentiate between Enantiomer and Diastereomers. (5)
- (c) Define (i) Optical Activity (ii) Specific rotation (5)
- Q3 (a) Convert the following fisher molecule into Sawhorse and Newman representation and also determine R/S configuration of chiral carbons (8)



- (b) Assign R / S configuration of following (4.5)



- (c) What is Restricted rotation? Explain with example. (2.5)
- Q4 (a) What are substitution reactions? Explain SN^1 and SN^2 type of reactions with (9)