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Total No. of Pages : 03

Total No. of Questions : 11

M.Sc. (Chemistry) (Sem.-2)

REACTIVE INTERMEDIATES-II

Subject Code : CHL-412-18

M.Code : 75982

Date of Examination: 14-12-2022

Time : 3 Hrs.

Max. Marks : 70

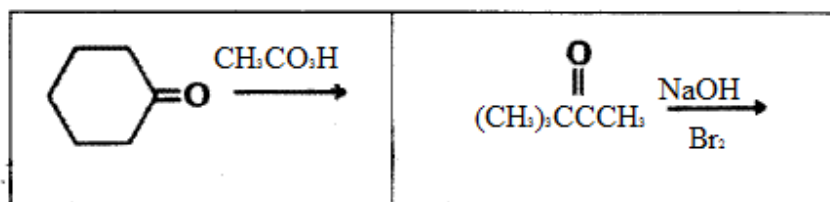
INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains EIGHT questions carrying FIVE marks each and students have to attempt any SIX questions.
3. SECTION-C will comprise of two compulsory questions with internal choice in both these questions. Each question carries TEN marks.

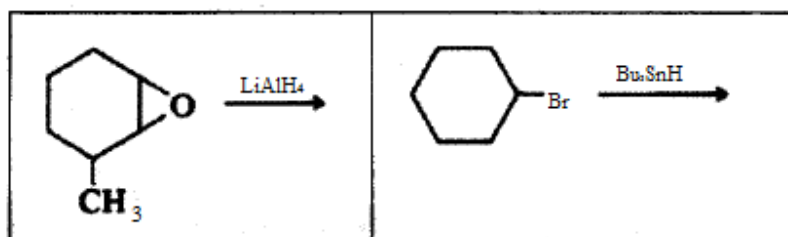
SECTION-A

1. Answer briefly :

a) Complete the following reactions



b) Complete the following



- c) What is Stobbe reactions?
- d) What is Oxymercuration reactions?
- e) Write the reaction of carbenes?
- f) What is Swern oxidation?
- g) What is Birch reduction?
- h) How trialkyl silane is helpful in reduction reaction?
- i) What is Neber reaction?
- j) What is Benzil-benzilic acid rearrangement?

SECTION-B

2.
 - a) How is the addition of alcohols to aldehydes performed? Write mechanism.
 - b) What is Grignard reaction? Write mechanism.
3.
 - a) What is reformatsky reactions? Write mechanism.
 - b) What is Mannich reaction?
4.
 - a) What is Baeyer Villiger oxidation?
 - b) What is allylic oxidation?
5. What is ozonolysis? Write mechanism?
6. What are hydrogenation reaction? Discuss various catalytic systems used for hydrogenation of different organic molecules.
7.
 - a) What is Damjanov reactions? Write mechanism?
 - b) What is Cope rearrangement?
8.
 - a) What is pinacol-Pinacolooe rearrangement? Write mechanism.

- b) What is Curtius reaction?
9. What are hydroboration reactions? Discuss their mechanism with examples.

SECTION-C

10. Discuss the following:
- a) Wolf rearrangement?
- b) What are Wittig reactions and their different types?

OR

- b) What is sharpless asymmetric epoxidation? Discuss with various examples.
11. a) What is hydration of olefins?
- b) What are hydride transfer reagents? Discuss with examples and their reactivity pattern.

OR

- a) What is Benzoin Condensation? Write mechanism.
- b) Backmann rearrangement.
- c) Explore the addition of organolithium reagent to unsymmetrical carbonyl compounds.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.