

C. U. SHAH UNIVERSITY

Summer Examination-2022

Subject Name: Organic Chemistry-I

Subject Code: 5SC01OCH1

Branch: M.Sc. (Chemistry)

Semester: 1

Date: 22/04/2022

Time: 11:00 To 02:00

Marks: 70

Instructions:

- (1) Use of Programmable calculator and any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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SECTION – I

- Q-1 Attempt the Following questions (07)**
- a. What is called Homolytic bond cleavage? **01**
 - b. What is reductive elimination reaction? **01**
 - c. Which type of bond cleavage results ions? **01**
 - d. Mention the arrow used to show different types of resonating structure **01**
 - e. Write one example of Knoevenagel reaction. **01**
 - f. Write one example of Wolff Kishner reaction. **01**
 - g. What do you mean by concerted reaction? **01**
- Q-2 Attempt all questions (14)**
- a. Write a note on Birch reaction with mechanism and three applications. **07**
 - b. Write a note on Vilsmeier-Haack reaction with mechanism and three applications. **07**
- OR**
- Q-2 Attempt all questions (14)**
- a. Discuss Stille coupling reaction with mechanism and its three examples. **07**
 - b. Explain Sonogashira reaction including mechanism and its applications. **07**
- Q-3 Attempt all questions (14)**
- a. Discuss Clemmensen reduction reaction with mechanism and applications. **07**
 - b. Discuss Reformatsky reaction with mechanism and applications. **07**
- OR**
- Q-3 Attempt all questions**
- a. Explain Ceric ammonium nitrate reagent with its uses. **07**
 - b. Explain Dess Martin Periodinane reagent with its uses. **07**



SECTION – II

- Q-4** **Attempt the Following questions** **(07)**
- a. What do you mean by reaction? **01**
 - b. Draw the structure of Wilkinson's catalyst **01**
 - c. Write only reaction of Neber reaction. **01**
 - d. What is migration aptitude of following groups in Baeyer-villiger reaction?
Ph-, H-, R- **01**
 - e. What is the full form of LDA reagent? **01**
 - f. Draw the structure of Dicyclohexylcarbodiimide **01**
 - g. What do you mean by non-concerted type of the reaction? **01**

- Q-5** **Attempt all questions** **(14)**
- a. Write a note on Wagner-Meerwein reduction including mechanism and its applications. **07**
 - b. Discuss Nazarov cyclization reaction with mechanism and its applications. **07**

OR

- Q-5** **Attempt all questions**
- a. Write a note on Baeyer-villiger oxidation reaction with mechanism and its applications. **07**
 - b. Discuss Demjanov rearrangement with mechanism and its applications. **07**

- Q-6** **Attempt all questions** **(14)**
- a. Explain Fukuyama coupling rearrangement with mechanism and its applications. **07**
 - b. Discuss Conjugation addition reaction with mechanism and its applications. **07**

OR

- Q-6** **Attempt all Questions**
- a. Discuss Mitsunobu reaction with mechanism and its applications. **07**
 - b. Explain Bouveault reaction with mechanism and its applications. **07**

