

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C. U. SHAH UNIVERSITY

## Winter Examination-2020

Subject Name : Organic Chemistry-I

Subject Code : 5SC01OCH1

Branch: M.Sc. (Chemistry)

Semester: 1

Date: 09/03/2021

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.

**SECTION – I****Q-1 Attempt the Following questions (07)**

- What do you mean by neutral nucleophiles? **01**
- What is oxidative addition reaction? **01**
- Free radical forms in ..... fission of the bond. **01**
- Assign an arrow in reactants and complete this process **01**  
Asymmetrical bond cleavage  
$$\text{H}_3\text{C}-\text{Cl} \xrightarrow{\hspace{2cm}} \text{?}$$
- Write one example of Noyari reaction. **01**
- What do you mean by reductive elimination reaction? **01**
- What is full form of DMF? **01**

**Q-2 Attempt all questions (14)**

- Write a note on Mukaiyama reaction with mechanism and three applications. **07**
- Write a note on Wolff Kishner reaction with mechanism and three applications. **07**

**OR****Q-2 Attempt all questions (14)**

- Discuss Suzuki coupling reaction with mechanism and its three examples. **07**
- Explain Baker Venkatraman reaction including mechanism and its applications. **07**

**Q-3 Attempt all questions (14)**

- Explain Vilesmeier – Haack reaction with mechanism and applications. **07**
- Discuss Fukuyama coupling reaction with mechanism and applications. **07**

**OR**

- Q-3      Attempt all questions**
- a. Explain Clemmensen reduction reaction in detail.      **07**  
b. Write a note on Mitsunobu reaction.      **07**

**SECTION – II**

- Q-4      Attempt the Following questions      (07)**
- a. What do you mean by reaction mechanism?      **01**  
b. What do you mean by rearrangements?      **01**  
c. Write only reaction of Hantzsch reaction.      **01**  
d. What is migration aptitude of following groups in Baeyer-villiger reaction?  
Ar-, H-, R-      **01**  
e. Complete the following reaction      **01**
- f. Complete the following reaction      **01**
- g. The reaction completes *via* formation of a reactive intermediate are called  
.....      **01**

- Q-5      Attempt all questions      (14)**
- a. Write a note on Birch reduction including mechanism and its applications.      **07**  
b. Discuss Reformatsky 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 Neber rearrangement with mechanism and its applications.      **07**

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

**OR**

- Q-6      Attempt all Questions**
- a. Discuss Barbier-Wieland reaction with mechanism and its applications.      **07**  
b. Explain Chan-Lam coupling reaction with mechanism and its applications.      **07**

