

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2020

Subject Name : Organic Chemistry-I

Subject Code : 5SC01OCH1

Branch : M.Sc. (Chemistry)

Semester : 1

Date : 26/02/2020

Time : 02:30 To 05:30

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. Define: Coupling reaction **01**
 - b. Write the structure of chromone and flavones. **01**
 - c. Explain t-Butyl chloride example by using heterolytic bond fission. **01**
 - d. Write difference between Heterolytic and Homolytic bond fission. **01**
 - e. Write the full form of DEAD. **01**
 - f. Define: Nucleophile with example **01**
 - g. Complete the following reaction. **01**
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- Q-2 Attempt all questions (14)**
- a. Write a note on Vilsmeier- Haack reaction. **07**
 - b. Explain Wolff Kishner reduction with mechanism and application. **07**
- OR**
- Q-2 Attempt all questions (14)**
- a. Write a note on Hantsch Pyridine synthesis. **07**
 - b. Explain Michael Addition reaction with mechanism and application. **07**
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- Q-3 Attempt all questions (14)**
- a. Complete the following reaction with mechanism and application. **07**

 - b. Write a note on prins reaction and nazarov cyclization. **07**

OR

- Q-3** **Attempt all questions** **(14)**
a. Complete the following reaction with mechanism and application. **07**
- b. Write a note on Barbier-Wieland degradation reaction. **07**

SECTION – II

- Q-4** **Attempt the following questions** **(07)**
a. Draw the structure of Cyclen. **01**
b. Draw the structure of [2,2,2]-Cryptand. **01**
c. Write a full form of CAN **01**
d. Write an application of Lithium diisopropylamide (LDA). **01**
e. Draw the structure of DCU. **01**
f. Write a structure of dibenzo-18-crown-6. **01**
g. Draw the structure of Dess-Martin periodinane. **01**
- Q-5** **Attempt all questions** **(14)**
a. Describe the note on Wagner-Meerwein rearrangement. **07**
b. Complete the following reaction with mechanism and application. **07**

OR

- Q-5** **Attempt all questions** **(14)**
a. Describe the note on Baker-Venkatraman rearrangement. **07**
b. Explain briefly about followings **07**
 1) Wilkinson's catalyst
 2) *N, N'*-Dicyclohexylcarbodiimide (DCC)
- Q-6** **Attempt all questions** **(14)**
a. Write a brief note on Fukuyama coupling and Glaser coupling reactions. **07**
b. Write a note on Crown ether. **07**

OR

- Q-6** **Write notes on:** **(14)**
a. Stille and Hay coupling reactions. **07**
b. Sonogashira coupling reaction. **07**

