

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name : Organic Chemistry-I

Subject Code : 5SC01OCH1

Branch : M.Sc. (Chemistry)

Semester : 1

Date : 28/11/2018

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)**
- Explain Ambient Nucleophile with example. **01**
 - Explain t-Butyl chloride example by using heterolytic bond fission. **01**
 - Define: Coupling reaction **01**
 - Write chemical equation of Birch reduction with electron donating and electron withdrawing group products. **01**
 - Complete the following reaction. **01**
- f.** Complete the following reaction. **01**
- g.** Write the structure of flavones which is obtained from β -diketones. **01**
- Q-2** **Attempt all questions** **(14)**
- Describe the following reactions with mechanism and application. **07**
(i) Reformatsky reaction (ii) Apple reaction
 - Write a note on Knoevenagel condensation. **07**
- OR**
- Q-2** **Attempt all questions** **(14)**
- Describe the following reactions with mechanism and application. **07**
(i) Bouveault-Blanc reduction reaction (ii) Leuckart reaction
 - Write a brief note on Michael Addition reaction. **07**



- Q-3 Attempt all questions (14)**
a. Write a note on Wolff-Kishner reaction. **07**
b. Explain Vilesmeier - Haack reaction with mechanism and application. **07**

OR

- Q-3 Attempt all questions (14)**
a. Write a note on Mukaiyama aldol reaction. **07**
b. Explain Horner-Wadsworth-Emmons reaction with mechanism and application. **07**

SECTION – II

- Q-4 Attempt the following questions (07)**
a. Draw the structure of Dess-Martin periodinane. **01**
b. Draw the structure of Cyclen. **01**
c. Write the preparation of Lithium diisopropylamide (LDA). **01**
d. Write a full form of CAN. **01**
e. Draw the structure of DCU which is hydrated form of DCC. **01**
f. Write the structure of complex of H_3O^+ with 18-crown-6. **01**
g. Complete the following rearrangement. **01**

- Q-5 Attempt all questions (14)**
a. Describe the note on Neber rearrangement. **06**
b. Complete the following reaction with mechanism and application. **04**

- c. Explain briefly about *N, N'*- Dicyclohexylcarbodiimide (DCC) reagent. **04**

OR

- Q-5 Attempt all questions (14)**
a. Describe the note on Wagner-Meerwein rearrangement. **06**
b. Complete the following rearrangement with mechanism and application. **04**

- c. Explain briefly about Wilkinson's catalyst. **04**

- Q-6 Attempt all questions (14)**
a. Write a brief note on Suzuki coupling and Stille coupling reactions. **07**
b. Write a note on Crown ether. **07**

OR

- Q-6 Attempt all questions (14)**
a. Write a brief note on Sonogashira coupling and Glaser coupling reactions. **07**
b. Write a note on Dess-Martin Periodinane reagent. **07**

