

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Organic Chemistry - I

Subject Code: 4SC03OCH1

Branch: B.Sc. (Chemistry, Physics)

Semester: 3

Date: 22/03/2018

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & 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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- Q-1** **Attempt the following questions:** **(14)**
- a** Define: Hydrogen bond. **01**
- b** What do you mean by Electrophile? **01**
- c** Define: Hemolytic cleavage. **01**
- d** Define the Ambient Nucleophile. **01**
- e** Define: Resonance effect. **01**
- f** Define: Inductive effect. **01**
- g** What do you mean by tautomerism? **01**
- h** Write the reaction of generating nitronium ion for nitration. **01**
- i** Draw the structures of furan and thiophene. **01**
- j** Draw the reaction scheme of witting reaction. **01**
- k** Write any two examples of dicarboxylic acids with its IUPAC nomenclature. **01**
- l** Write the geometry of free radicals. **01**
- m** Draw the reaction scheme for Cannizaro reaction. **02**
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- Q-2** **Attempt any four questions from Q-2 to Q-8** **(14)**
- Attempt all questions**
- a** Explain Huckel's rule of aromaticity with suitable examples. **07**
- b** What is Carbocation? Write the stability order by using any one effect with examples. **07**



Q-3	Attempt all questions	(14)
a	Discuss aldol reaction with its mechanism and application.	07
b	Explain principle, mechanism and synthetic applications of Friedal-Crafts alkylation.	07
Q-4	Attempt all questions	(14)
a	Write a note Hell Volhard Zelinsky reaction.	07
b	Discuss the chemical reaction of aldehyde with HCN and R-OH groups with proper examples.	07
Q-5	Attempt all questions	(14)
a	Explain the Simmon-Smith reactions for thiophene.	07
b	Discuss various formation reaction of acid by using acid chloride and anhydride.	07
Q-6	Attempt all questions	(14)
a	Write a note on chemical reactions of furan.	07
b	Explain Knorr synthesis and Hantzsch synthesis methods for the synthesis of pyrrole.	07
Q-7	Attempt all questions	(14)
a	Write a note on Fiest Benary reaction.	05
b	Discuss the nomenclature of heterocyclic compound.	05
c	Explain Paal-knorr synthesis with proper mechanism.	04
Q-8	Attempt all questions	(14)
a	Write a note on thiophene.	07
b	Write chemical reactions of pyrrole.	07

