

Enrollment No: _____ Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Heterocyclic Chemistry

Subject Code: 5SC03HTC1

Branch: M.Sc. (Chemistry)

Semester: 3

Date: 26/03/2018

Time: 2:30 To 5:30

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)**
- Define: Heterocyclic compounds. (1)
 - Define: Saturated heterocycles. (1)
 - Write the uses of heterocyclic compounds. (1)
 - Write the prefixes used for Se, O and Te heteroatoms. (1)
 - Write the structure of Benzo[b]furanheterocycle. (1)
 - Write the structure of Phthazine and Quinoxline heterocycle. (1)
 - Write the structure of 2,3-Benzopyrroleheterocycle. (1)
- Q-2 Answer the following questions (14)**
- Write a note on Quinoline. (5)
 - Explain nomenclature of heterocyclic compounds in details. (5)
 - Write Widman-Stoermer synthesis. (4)
- OR**
- Q-2 Answer the following questions (14)**
- Write a note on Furan. (5)
 - Explain various electrophilic and nucleophilic reactions of Pyrrole with exmples. (5)
 - Discuss any two methods of preparation of Thiophene. (4)
- Q-3 Answer the following questions (14)**
- Write a note on Pyridazine. (7)
 - Write Pomeranz-Fritsch and Bischler-Napieralski synthesis for Isoquinoline. (7)
- OR**
- Q-3 Answer the following questions (7)**
- Write a note on Benzothiophene. (7)



- b. Write different chemical and physical properties of Quinoxaline and Pthalazine. (7)

SECTION – II

- Q-4 Draw the structure of followings... (07)
- a. m-Diazine (1)
 - b. Azete (1)
 - c. Oxaziridine (1)
 - d. Pyrazine (1)
 - e. Indene (1)
 - f. Quinazolines (1)
 - g. Isothiazole (1)

- Q-5 Write notes on: (14)
- a. Thiazole. (7)
 - b. Cinnolines. (7)

OR

- Q-5 Answer the following questions (14)
- a. Discuss chemical and physical properties of Pyrazole. (7)
 - b. Write a brief note on Imidazole along with its any two methods preparation. (7)
- Q-6 Answer the following questions (14)
- a. Discuss the preparation and chemical properties of Oxetanes. (7)
 - b. Write a brief note on chemical and physical properties of Thiiranes. (7)

OR

- Q-6 Answer the following questions (7)
- a. Discuss any three methods of preparation of Azetidines. (7)
 - b. Write a note on Oxiranes. (7)

