

C.U.SHAH UNIVERSITY

Summer Examination-2019

Subject Name: Heterocyclic Chemistry

Subject Code: 5SC03HTC1

Branch: M.Sc. (Chemistry)

Semester: 3

Date: 15/03/2019

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)**
- Write the uses of heterocyclic compounds. (1)
 - Write the structure of quinoxaline heterocycle. (1)
 - Which is more acidic pyrrole or pyridine? (1)
 - Write the three isomeric structures of diazines. (1)
 - Write down the prefixes used for S and N hetero atoms. (1)
 - Write the structure of Cinnolines heterocycle. (1)
 - Draw the structure of dioxane. (1)
- Q-2 Answer the following questions (14)**
- Write Widman-Stoermer Synthesis. (5)
 - Write the nomenclature of heterocyclic compounds in details. (5)
 - Write the different ring opening reactions of Oxetane. (4)

OR

- Q-2 Answer the following questions (14)**
- Write a brief note on Azetidines. (7)
 - Write a note on Quinoline. (7)
- Q-3 Answer the following questions (14)**
- Explain Thiazole heterocycle briefly. (7)
 - Write a note on Pyrimidine. (7)

OR

- Q-3 Answer the following questions**
- Write a note on Furan. (5)
 - Write a note on α -Pyrone. (5)
 - Discuss the any two preparations of Thiophene. (4)



SECTION – II

- Q-4** Draw the following structures (07)
- a. oxazole (1)
 - b. Isoindole (1)
 - c. indene (1)
 - d. isothiazole (1)
 - e. isoquinoline (1)
 - f. imidazole (1)
 - g. thiiranes (1)
- Q-5** Answer the following questions (14)
- a. Write the various electrophilic and nucleophilic reactions of Pyrrole. (5)
 - b. Write a brief note on Pthalazine. (5)
 - c. Explain that thiophene is more aromatic compound than furan and pyrrole. (4)
- OR**
- Q-5** Answer the following questions
- a. Write Pomeranz-Fritsch and Bischler-Napieralski synthesis for Isoquinoline. (7)
 - b. Describe note on Benzimidazole. (7)
- Q-6** Answer the following questions (14)
- a. Write a short note on Oxiranes. (7)
 - b. Write brief note on Imidazole. (7)
- OR**
- Q-6** Answer the following questions
- a. Explain Cinnoline heterocycle briefly. (7)
 - b. Write a note on Benzothiophene. (7)

