

C.U.SHAH UNIVERSITY

Summer Examination-2020

Subject Name: Heterocyclic Chemistry

Subject Code: 5SC03HTC1

Branch: M.Sc. (Chemistry)

Semester :3

Date : 29/02/2020

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. Give the definition of heterocyclic compound. (1)
 - b. Write suffix for three membered unsaturated heterocyclic compounds. (1)
 - c. Write down the prefixes used for S and N hetero atoms. (1)
 - d. Draw the structure of thiazole. (1)
 - e. Which is more acidic pyrrole or pyridine? (1)
 - f. Give any two physical property of oxetane. (1)
 - g. Draw the structure of Quinoline. (1)
- Q-2 Answer the following questions (14)**
- a. Write a note on oxipine. (5)
 - b. Write the various electrophilic and nucleophilic reactions of Pyrrole. (5)
 - c. Write only chemical properties of indole. (4)
- OR**
- Q-2 Answer the following questions (14)**
- a. Write a note on Pyrimidine. (7)
 - b. Write a note on Benzothiophene. (7)
- Q-3 Answer the following questions (14)**
- a. Discuss synthesis and all chemical, physical properties of azirine. (7)
 - b. Write brief note on Imidazole. (7)
- OR**
- Q-3 Answer the following questions (5)**
- a. Write a note on α -Pyrone. (5)



- b. Write brief note on Isoindole. (5)
c. Discuss the any two preparations of Thiophene. (4)

SECTION – II

Q-4 Draw the following structures (07)

- a. Draw the structure of dibenzopyrrole. (1)
b. Draw the structure of dioxane. (1)
c. Give ring opening reaction of aziridine. (1)
d. Give any one difference between carbocyclic and heterocyclic compound. (1)
e. Write the uses of heterocyclic compounds. (1)
f. What is name of nitrogen having five membered unsaturated hetero cyclic compounds? (1)
g. Draw the structure of thiirane. (1)

Q-5 Answer the following questions (14)

- a. Discuss synthesis and all chemical properties of benzoxazole. (5)
b. Write the nomenclature of heterocyclic compounds in details. (5)
c. Write any two synthesis of oxazole. (4)

OR

Q-5 Answer the following questions

- a. Explain Cinnoline briefly. (7)
b. Explain Phthalazine briefly. (7)

Q-6 Answer the following questions (14)

- a. Write a short note on azepine. (7)
b. Write Pomeranz-Fritsch and Bischler-Napieralski synthesis for Isoquinoline. (7)

OR

Q-6 Answer the following questions

- a. Discuss synthesis and all chemical, physical properties of thietane. (7)
b. Write a short note on Oxiranes. (7)

