

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C.U.SHAH UNIVERSITY

## Winter Examination-2015

Subject Name: Heterocyclic Chemistry

Subject Code : 5SC03CHC3

Branch : M.Sc. (Chemistry)

Semester : 3

Date :05/12/2015

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.

**SECTION – I**

- |            |   |             |
|------------|---|-------------|
| <b>Q-1</b> | <b>Attempt the Following questions</b>  | <b>(07)</b> |
|            | a. Define heterocyclic chemistry  | 1           |
|            | b. Define saturated heterocyclic compounds  | 1           |
|            | c. Define unsaturated heterocyclic compounds  | 1           |
|            | d. Write name of heterocyclic compounds having two heteroatoms and six member ring  | 2           |
|            | e. Write name of heterocyclic compounds having two heteroatoms and five member ring | 2           |
| <b>Q-2</b> | <b>Attempt all questions</b>  | <b>(14)</b> |
|            | A Write the Hassner synthesis with proper mechanism.                                | 5           |
|            | B Write the short note on Quinoline.  | 5           |
|            | C Write the synthesis of Indole   | 4           |
| <b>OR</b>  |   |             |
| <b>Q-2</b> | <b>Attempt all questions</b>  | <b>(14)</b> |
|            | A Write the methods of synthesis for Oxitane and Thietane                           | 7           |
|            | B Write a note on the nomenclature of heterocyclic compounds.                       | 7           |
| <b>Q-3</b> | <b>Attempt all questions</b>  | <b>(14)</b> |
|            | A Write a note on Pyridazine.   | 7           |
|            | B Write a note on Benzothiophene.   | 7           |
| <b>OR</b>  |   |             |
| <b>Q-3</b> | <b>Attempt all questions</b>  | <b>(14)</b> |
|            | A Write the total synthesis of paal-knorr for Thiophene                             | 7           |
|            | B Write short note on Cinnoline.  | 7           |



## SECTION – II

<b>Q-4</b>	<b>Draw the structures of :</b>	<b>(07)</b>
	a. Chloroquine	1
	b. Indole	1
	c. Azete	1
	d. Oxirene	1
	e. Chlorophyll	1
	f. Oxaziridine	1
	g. Isoquinoline	1

<b>Q-5</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	Explain the preparation and properties of Azirine and Isoxazole	7
<b>B</b>	Discuss the preparation and properties of 1, 3 diazonaphthalene and Diazirine	7

**OR**

<b>Q-5</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	Discuss the preparation and chemical properties of Pyrrole and Pyrazole	7
<b>B</b>	Describe the preparation and chemical properties of Pyridazine and Pyrazine	7

<b>Q-6</b>	<b>Attempt all questions</b>	<b>(14)</b>
<b>A</b>	Complete the reactions with proper mechanism	7

1

2

<b>B</b>	Complete the reactions with proper mechanism	7
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1

2



**OR**

**Q-6**

**Attempt all Questions**

**(14)**

**A**

Write a note on Dibenzopyrrole

**5**

**B**

Discuss the properties of Isoindole and Indolizine

**5**

**C**

Write notes on

**4**

1. Nenitzescu synthesis

2. Reissert synthesis

