**Enrollment No: _____ Exam Seat No:_____**

# C.U.SHAH UNIVERSITY

## Winter Examination-2018

**Subject Name : Organic Chemistry-II**

**Subject Code : 4SC04OCH1** **Branch : B.Sc. (Chemistry,Physics)**

**Semester : 4** **Date : 23/10/2018** **Time : 10:30 To 01:30** **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: Isoprene rule | 01 |
| **b)** | Give one example of Curtius rearrangement. | 01 |
| **c)** | Define: Free radical | 01 |
| **d)** | Define: Alkaloids | 01 |
| **e)** | Draw the chemical structures of atenolol. | 01 |
| **f)** | Define the term drugs. | 01 |
| **g)** | Draw the chemical structures of Coniine. | 01 |
| **h)** | Define: Nucleophile with example | 01 |
| **i)** | Define: Dyes | 01 |
| **j)** | Draw the structures of Citral. | 01 |
| **k)** | Opium contains _____% of morphine and _____% of cinchona. | 01 |
| **l)** | Write the only reaction equation of Kolbe synthesis. | 01 |
| **m)** | Draw the structures of Congo red. | 01 |
| **n)** | How many isoprene units are present in tri-terpene? | 01 |

**Attempt any four questions from Q-2 to Q-8**

**Q-2** **Attempt all questions** **(14)**

| | | |
|---|---|---|
| **a)** | Discuss Beckmann rearrangement with mechanism and its applications. | 07 |
| **b)** | Write a note on Mannich reaction with mechanism and its applications. | 07 |

**Q-3** **Attempt all questions** **(14)**

| | | |
|---|---|---|
| **a)** | Explain Barbier-Wieland reaction with its application. | 07 |
| **b)** | Write a note on Fries rearrangement. | 07 |

**Q-4** **Attempt all questions** **(14)**

| | | |
|---|---|---|
| **a)** | Give the synthesis and uses of Alizarin. | 07 |
| **b)** | Give the synthesis and uses of Methyl Orange. | 07 |

| | | | |
|---|---|---|---|
| **Q-5** | | **Attempt all questions** | **(14)** |
| | **a)** | Explain the classification of dyes by structure and methods of application. | 07 |
| | **b)** | Write a note on Arndt-Eistert reaction. | 07 |
| **Q-6** | | **Attempt all questions** | **(14)** |
| | **a)** | Give the synthesis and applications of Ibuprofen. | 07 |
| | **b)** | Write synthesis and applications of Indigo dye. | 07 |
| **Q-7** | | **Attempt all questions** | **(14)** |
| | **a)** | Explain the classification of alkaloids on the basis of source and structure with appropriate examples. | 07 |
| | **b)** | Discuss the constitution of nicotine. | 07 |
| **Q-8** | | **Attempt all questions** | **(14)** |
| | **a)** | Prove the constitution and write the synthesis of Citral. | 07 |
| | **b)** | Write a note on general procedure for determining structure of terpenoids. | 07 |