

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

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

# C.U.SHAH UNIVERSITY

## Summer Examination-2016

Subject Name: Natural Products

Subject Code: 5SC04CHC2

Branch: M.Sc.(Chemistry)

Semester: 4

Date: 07/05/2016

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. What is called the Beriberi in Humans **01**
  - B. Write the definition of 'accessory dietary factors' **01**
  - C. Define Steroids **01**
  - D. Write an extraction of alkaloids **02**
  - E. Write the general properties of alkaloids **02**
- Q-2 Attempt all questions (14)**
- A Write the synthesis of Morphine and Nicotine **05**
  - B Write a note on Vitamins **05**
  - C Discuss steroids and its diels hydrocarbon **04**
- OR**
- Q-2 Attempt all questions (14)**
- A Write the synthesis of Colchicine and Strychnine **05**
  - B Write a note on spectral properties of porphyrins **05**
  - C What is starch? Write the synthesis of testosterone **04**
- Q-3 Attempt all questions (14)**
- A What is biosynthesis of terpenoids? Explain the synthesis of Ring II, V from the synthesis of Strychnine total synthesis. **08**
  - B Write short notes on **06**
    - 1. Synthesis of Progesterol
    - 2. Chlorophyll
- OR**
- Q-3 Attempt all questions (14)**
- A Discuss the general methods for determining structure of alkaloids **08**
  - B Write short notes on **06**



1. Gibberellic acid                      2.  $\beta$ -tocopherol and  $\delta$ -tocopherol

## SECTION – II

- Q-4                      Attempt the Following questions                      (07)**
- A.** Draw the structure of Gibberellic acid                      **01**
- B.** Write the general method of determining structure of Terpenoids (any one)                      **01**
- C.** What is squalene?                      **01**
- D.** Write the synthesis of porphyrins                      **02**
- E.** Discuss chemistry of atropine                      **02**
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- Q-5                      Attempt all questions                      (14)**
- A** Write a note on Abietic acid                      **05**
- B** Write a note on Zingiberene                      **05**
- C** Discuss the synthesis and properties of Nicotine.                      **04**
- OR**
- Q-5                      Attempt all questions                      (14)**
- A** Write a note on Farnesol                      **05**
- B** Write a stereochemistry of Abietic acid                      **05**
- C** Discuss the synthesis and properties of Colchicines                      **04**
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- Q-6                      Attempt all questions                      (14)**
- A** Write short notes on                      **08**
1. Monoterpenoids                      2. Triterpenoids
- B** What is alkaloids? Discuss the classification of alkaloids                      **06**
- OR**
- Q-6                      Attempt all Questions                      (14)**
- A** Write short notes on                      **08**
1. Sesquiterpenoids                      2. Diterpenoids
- B** What is biosynthesis of terpenoids? Discuss the degradation product of Hemoglobin                      **06**

