

Enrollment No: _____

Exam Seat No: _____

C.U.SHAH UNIVERSITY

Summer Examination-2019

Subject Name: Natural Products

Subject Code: 5SC04NPC1

Branch: M.Sc. (Chemistry)

Semester: 4

Date: 18/04/2019

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)**
- a. Define: Alkaloids (1)
 - b. Draw the structure of strychnine. (1)
 - c. Write the structure of cellobiose unit and maltose unit present in cellulose. (1)
 - d. Define: Hormones (1)
 - e. Define: Steroids (1)
 - f. Define Diel's hydrocarbon with its synthesis. (2)
- Q-2 Answer the following questions (14)**
- a. Write a synthesis of (7)
 - 1. Colchicine 2. Nicotine
 - b. Write a note on tropine with Willstatter's synthesis. (7)

OR

- Q-2 Answer the following questions (14)**
- a. Write a note on the nature and position of side chain and position of angular methyl group in cholesterol. (7)
 - b. Prove the constitution of cellulose by various chemical reactions. (7)
- Q-3 Answer the following questions (14)**
- a. Describe a brief note on morphine. (10)
 - b. Prove the constitution of testosterone with synthesis. (4)

OR



- Q-3 Answer the following questions (14)**
- a. Write the following answers (5)
 - 1. Classification of alkaloids
 - 2. Write the synthesis of progesterone
 - b. Write a note on structure of nucleosides and nucleotides. (5)
 - c. Prove the constitution of ricinine with synthesis. (4)

SECTION – II

- Q-4 Attempt the Following questions (07)**
- a. Draw the structure of chlorophyll-a. (1)
 - b. Write the structure of porphyrin. (1)
 - c. Define: Vitamins (1)
 - d. Define the term nucleoside. (1)
 - e. Draw the Trans form structure of squalene. (1)
 - f. Define the term isoprene unit in terpenoid. (1)
 - g. Draw the structure of Thiamin. (1)

- Q-5 Answer the following questions (14)**
- a. Write the synthesis of heamin. (7)
 - b. Write the synthesis of Vitamin-C and Vitamin-E. (7)

OR

- Q-5 Answer the following questions (14)**
- a. Discuss the chemistry of chlorophyll. (7)
 - b. Write the synthesis of Vitamin-H. (7)

- Q-6 Answer the following questions (14)**
- a. Write a note on farnesol. (7)
 - b. Discuss the general method for determining the structure of terpinoids. (7)

OR

- Q-6 Answer the following questions**
- a. Write a brief note on zingiberene. (7)
 - b. Write a note on squalene. (7)

