

C.U.SHAH UNIVERSITY

Summer Examination-2022

Subject Name: Natural Products

Subject Code: 5SC04NPC1

Branch: M.Sc. (Chemistry)

Semester: 4

Date: 04/05/2022

Time: 11:00 To 02:00

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. Draw the structure of Diel’s hydrocarbon. (1)
 - b. Draw the structure of cinchonine. (1)
 - c. What do you mean by sterols? (1)
 - d. Define: Terpenoids (1)
 - e. What is constitutional unit of animal body? (1)
 - f. What do you mean by amino acid and proteins? (2)

- Q-2 Answer the following questions (14)**
- a. Write a synthesis of (7)

1. Nicotine	2. Tropic acid
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 - b. Write the synthesis of Strychnine (7)

OR

- Q-2 Answer the following questions (14)**
- a. Prove the structure of Progesterone with its synthesis. (7)
 - b. Write a note on tropine with Willstatter’s synthesis. (7)

- Q-3 Answer the following questions (14)**
- a. Prove the structure of testosterone with its synthesis. (7)
 - b. Write a note on artificial hormones and ACTH (7)

OR



- Q-3 Answer the following questions (14)**
- a. Write a note on structure of nucleosides and nucleotides. (7)
 - b. Explain classification of alkaloids on the basis of their structure and sources with examples (7)

SECTION – II

- Q-4 Attempt the Following questions (07)**
- a. How do you prove presence of OH phenolic in alkaloid? (1)
 - b. What do you mean by water soluble and fat soluble vitamins (1)
 - c. What do you mean by guanosine (1)
 - d. Which sugar present in RNA (1)
 - e. The base which is not found in DNA is? (1)
 - f. What is special isoprene rule? (1)
 - g. Draw the structure of vitamin C. (1)

- Q-5 Answer the following questions (14)**
- a. Classify the vitamins and write the synthesis of vitamin-E (7)
 - b. Write the synthesis and uses of Vitamin-C (7)

OR

- Q-5 Answer the following questions (14)**
- a. Discuss the chemistry of rosinone. (10)
 - b. Write the classification of terpenoids. (4)

- Q-6 Answer the following questions (14)**
- a. Discuss the general method for determining the structure of alkaloids. (7)
 - b. Prove the structure of Farnesol (7)

OR

- Q-6 Answer the following questions**
- a. Write a brief note on zingiberene and synthesis of Squalene. (10)
 - b. How do you isolate an alkaloid? (04)

