

P. P. SAVANI UNIVERSITY

Third Semester of M.Sc. Examination

December-2021

SSCH8010 Chemistry of Natural Products

13.12.2021, Monday Time: 12:30 p.m. to 3:00 p.m. Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Make suitable assumptions and draw neat figures wherever required.
3. Use of scientific calculator is allowed.

Section-I

- Q.1 Very Short Questions (Attempt any five) [10]**
- 1.1 Discuss the role of alkaloids in plants
 - 1.2 What is alkaloids? Give three names of alkaloids.
 - 1.3 What are prostaglandins?
 - 1.4 How do you define Vitamins? Draw the structure of tocopherol
 - 1.5 Define thromboxane's and their role.
 - 1.6 Describe the importance of vitamin B6.
- Q.2 Write Short Notes (Attempt any two) [06]**
- 2.1 Write a note on stereochemistry of alkaloids.
 - 2.2 What is Vitamin K? Explain its functions.
 - 2.3 Discuss any one synthetic approach for prostaglandin
- Q.3 Detail questions (Attempt any two) [14]**
- 3.1 Explain Corey's synthesis of prostaglandins E and F.
 - 3.2 Explain synthesis routes for nicotine and quinine
 - 3.3 Discuss about the synthesis of vitamin B12

Section-II

Q.1 Very Short Questions (Attempt any five) [10]

- 1.1 What is Isoprene rule?
- 1.2 Explain the importance of steroids.
- 1.3 Define the term terpenoids? Draw the structure of any two terpenoids.
- 1.4 Give the isolation method of bile acid.
- 1.5 What is natural pigment. Describe the porphyrin.
- 1.6 Draw the structure of cocaine.

Q.2 Write Short Notes (Attempt any two) [06]

- 2.1 Describe the synthesis of Cholesterol.
- 2.2 Explain the relation between Chlorophyll and haemin.
- 2.3 State the classification of terpenoids.

Q.3 Detail questions (Attempt any two) [14]

- 3.1 Give the synthesis of Cryptopyrrol and Opsopyrrol.
- 3.2 Explain any two general methods to determine the structure of terpenoids.
- 3.3 Describe in the brief: Carotenoids.