

## M.Sc.(Chem.) Semester - 3 (CBCS) Examination

Nov/Dec-2023 (OLD COURSE)

## CHEMISTRY OF NATURAL PRODUCTS (ELECTIVE-1)

Time: 2:30 Hours

Marks: 70

## Instructions:

1. All questions are compulsory.
  2. Figures to the right indicate marks.
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Que.1 Answer **any seven** of the following ten questions. (14)

- 1) Give any four examples of drug derived from Natural products.
- 2) Define the terms steroid and provide its skeleton structure.
- 3) Write structures of any four Nucleotides with its names.
- 4) Give the characteristic of Alkaloids.
- 5) Provide Chemical tests for Sterols.
- 6) Provide the synthesis of Reserpine.
- 7) Give classification of Protein.
- 8) Give definition of True alkaloids and Protoalkaloids.
- 9) Classify vitamins according to their solubility.
- 10) What is the physiology of Prostaglandins?

Que.2 Answer **any two** of the following three questions. (14)

- 1) Derive the synthesis of Morphine.
- 2) Describe the properties and denaturation of Protein.
- 3) Define alkaloid and provide Physical and Chemical properties of it.

Que.3 Answer the following questions. (14)

- 1) Discuss the nature & structure of side chain in Cholesterol.
- 2) Give the synthesis of 9H-Purine.
- 3) Discuss the synthesis of Guanine.

OR

Que.3 Answer the following questions.

- 1) Give the synthesis of Longifolene.
- 2) Discuss the chemistry and Synthesis of Vitamin A1.

Que.4 Answer the following questions. (14)

**Any Two** of the following three questions.

- 1) Provide synthesis of Hexosterol.
- 2) Give Synthesis of Santonine.
- 3) Give the evidence for position of double bond in Cholesterol.

**Any one** of the following two questions.

- 1) Explain synthesis of Atropine.
- 2) Give the synthesis of Stilbosterol.

Que.5 Answer **any two** of the following four questions. (14)

- 1) Describe the synthesis of Uric acid.
- 2) Discuss Chemistry of Zingiberene.
- 3) Describe the synthesis of Caffeine.
- 4) Provide sources and discuss the synthesis of Vitamin C from D-Glucose.

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