

**M.Sc.(Chem.) Semester - 3 (CBCS) Examination****Oct/Nov-2022 (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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**Q.1 Answer any **seven** of the following ten questions. [14]**

1. Provide classification of protein.
2. Enlist physiology of prostaglandins.
3. Provide the statement of Isoprene rule.
4. Show classification of alkaloid based on its nature.
5. Write structures and names of any four Nucleotides.
6. Draw the structure of Diels' hydrocarbon, chrysene, picene and progesterone.
7. Write synthesis of folic acid.
8. How Colchicine can be synthesized?
9. Give Classification of vitamins.
10. Define the terms steroid and provide its skeletal structure.

**Q.2 Answer any **two** of the following three questions. [14]**

1. Describe the properties and denaturation of Protein.
2. Derive the synthesis of Pantothenic acid.
3. Classify alkaloid according to chemical ring system.

**Q.3 Answer the following questions. [14]**

1. Discuss the chemistry of Vitamin A1 (5)
2. Give the synthesis of Vitamin C. (5)
3. Discuss the nature & structure of nucleus in the Cholesterol (4)

**OR****Q.3 Answer the following questions. [14]**

1. Explain the chemistry of Vitamin A2.
2. Give the synthesis of followings.
  - a) Hexosterol
  - b) 9H-Purine

**Q.4 Answer the following questions. [14]**Any **Two** of the following three questions

1. Provide synthesis of Stilbosterol. (5)
2. Give the evidence for position of double bond in Cholesterol. (5)
3. Give Synthesis of Farnesol. (5)

Any **one** of the following two questions (4)

4. Explain synthesis of Morphine.
5. Give the synthesis of ACTH.

**Q.5 Answer any **two** of the following four questions. [14]**

1. Describe occurrence, nomenclature and classification of Prostaglandins.
2. Give detail classification of Terpenoid with examples
3. Discuss the nature and position of side chain in Cholesterol.
4. Discuss Chemistry of Zingiberene.

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