# Code No.: B03/402(A) Unit-IV

- **4.** (A) What is supramolecular photochemistry?
  - (B) Define the supramolecular switching devices.2
  - (C) Explain the electronic devices of supramolecular chemistry. 4

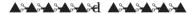
Or

Write note on ionic devices of supramolecular chemistry.

(D) Describe the Transport processes and carrier design in supramolecular chemistry. 12

Or

Explain the self assembly in supramolecular chemistry with suitable examples.



Roll No	Total No. of Sections: 4
	Total No. of Printed Pages: 4

# Code No.: B03/402(A)

# **III Semester Examination**

# M.Sc.

#### **CHEMISTRY**

Paper IV(A)

(Elective-A)

[Bioinorganic and Supramolecular Chemistry]

Time : Three Hours ] [ Maximum Marks : 80 [Min. Passing Marks : 16

Note: Part A and B of each question in each unit consists of Very Short Answer Type Questions which are to be answered in one or two sentences. Part C (Short Answer Type) of each question will be answered 200-250 words. Part D (Long Answer Type) of each question should be answered within the word limit 400-450.

#### Unit-I

- 1. (A) What is Transferrin?
  - (B) Define the Phosvitin. 2
  - (C) Explain the role of calcium in living cells. 4

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Or

Discuss the role of siderophores in microorganism.

- (D) Describe the following interaction of metal complexes with nucleic acids :
  - (a) Intercalation,
  - (b) Hydrogen bonding.

12

Or

Discuss the 'Redox Chemistry' of metal complexes with nucleie acids.

#### Unit-II

- 2. (A) What is the basic difference of Metalloenzymes and Metal-activated enzymes?2
  - (B) Write the two name of diseases resulting from metal deficiency.2
  - (C) Give the classification of cytochromes and discuss the structure of cytochrome p-450. 4

Or

Write name of the Anticancer drugs. Give the brief note on chemotherapy.

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(D) Explain the role of zinc, cobalt, platinum and gold. Mention also its toxicity. 12

Or

What are metalloenzymes? Discuss the structure and catalytic activity of zinc and copper enzymes.

#### Unit-III

- 3. (A) What are types of molecular receptors? 2
  - (B) What is supramolecular reactivity? 2
  - (C) Explain the Design and Synthesis of coreceptor molecules.

Or

Discuss the Supramolecular Catalysis with example.

(D) What is Supramolecular Chemistry? How it is different from Molecular chemistry? 12

Or

Explain the recognition, transformation and translocation with suitable examples.

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