

Code No. : B03/402(A)

Unit-IV

4. (A) What is supramolecular photochemistry ? 2
(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

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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 ? 2
(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 micro-organism.

(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 nucleic 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. **4**

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.

[3]

P. T. O.