Exam code- 434
Sub. Code: 2969

1056

M.Sc. (Applied Chemistry/ Pharmaceutical) 4th Semester

Paper-401: Bio-Inorganic Chemistry

Time Allowed: 3 hours

Max. Marks: 60

*Note: Attempt **five** questions in all, including Question No. I which is compulsory and selecting one question from each Unit I-IV.*

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I. a) Write a note on Hemocyanins.
b) What accounts for high specificity of enzyme catalyzed reactions?
c) Explain in brief about biological nitrogen fixation.
d) Explain Chelate Therapy. (3x4)

UNIT-I

II. a) With the help of a neat sketch, discuss in detail bout Na^+/K^+ ion pump.
b) Tell any two trace elements with their biological importance. (8,4)

III. Discuss in detail about model complexes of Iron, Cobalt and Copper. (12)

UNIT-II

IV. a) Discuss the structure of Chlorophyll in detail. Tell functions also.
b) Write a short note on DNA polymerase. (7,5)

V. a) Explain Vitamin B_{12} Coenzyme. Discuss its structure, function and application in organic synthesis.
b) Write in brief about Phosphoglucomutase. (8,4)

UNIT-III

VI. Discuss in detail about structure and functioning of different types of Cytochromes. (12)

VII. a) What are Siderophores? Discuss their types, functions and structures in detail.
b) Explain Molybdenum nitrogenase. (8,4)

UNIT-IV

VIII. Discuss in detail about structure and mechanism of functioning of zinc enzyme carboxy peptidase. (12)

IX. a) Explain causes and consequences of various metal deficiency and diseases.
b) Tell Toxic effects of any two antibiotics and related compounds. (8,4)

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