

2053

M.Sc. (Applied Chemistry/Pharmaceutical) Fourth Semester
Paper – 401: Bioinorganic Chemistry

Max. Marks: 60

Time allowed: 3 Hours

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

x-x-x

I. Attempt the following:-

- a) Write in brief about cooperativity.
- b) Write a note on phosphoglucomutase.
- c) Discuss biological nitrogen fixation.
- d) Explain Chelate therapy.

(4x3)

UNIT – I

II. a) With help of a neat sketches, discuss in detail about Na^+/K^+ ion pump.

b) Write a complete note on Hemerythrin.

(7,5)

III. Explain completely model complexes of Iron, Cobalt and Copper.

(12)

UNIT – II

IV. Write complete notes on the following:-

a) DNA polymerase

b) Structure and functions of Chlorophyll

(2x6)

V. Discuss in detail structure and functioning of Vitamin B_{12} Coenzyme. Also write its application in organic synthesis.

(12)

UNIT – III

VI. Explain the following:-

a) Ferredoxin and Rubredoxin

b) Molybdenum nitrogenase

(7,5)

VII. Discuss completely about Sioerophores,

(12)

P.T.O.

(2)

UNIT - IV

VIII. Discuss in detail about structure and mechanism of functioning of copper enzyme superoxide dismutase. (12)

IX. Explain the following:-

a) Structure and working of Zinc enzyme carboxy peptidase.

b) Toxic effects of antibiotics and related compounds

(7,5)

x-x-x

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