Exam.Code:0002
Sub. Code: 0161

2071

B.A./B.Sc. (General) Second Semester

Biochemistry

Paper - B: Enzymes and Bioenergetics

Time allowed: 3 Hours

Max. Marks: 45

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

x-x-x

I. Give the answer of following question in very brief:-

a) Write names of two cofactor.

b) What is the regulatory site?

c) Who has given induced model of enzyme and substrate?

d) Write name of two methods of enzyme isolation.

e) What is $NADH^{+}$?

f) Give name of two inhibitors.

g) What is the IUB system?

h) Give two functions of metal ions.

i) Give name of two energy rich compounds. (9x1)

UNIT - I

II. a) Write the differences between coenzymes and cofactors.

b) Write the role of enzymes in industry. (5,4)

III. a) Write a short note on TPP and NAD^{+}.

b) How to estimate enzyme activity by using assay method. (4,5)

UNIT - II

IV. a) What do you mean by enzymatic catalysis? Describe about the acid-base catalysis.

b) Write the roles of metals in enzyme catalysis. (5,4)

V. a) Write a short note on pro-enzymes.

b) Mentioned main characteristics of active sites. (4,5)

P.T.O.

UNIT - III

VI. a) What is the inhibitors? What is the non-competitive inhibitor and its mode of action?

b) Establish a relationship between pH on enzyme activity. (5,4)

VII. a) What is the regulation of enzyme activity? How enzyme activity regulated by covalent catalysis?

b) Write about the structure of allosteric enzymes and also mentioned their role in regulation of metabolic pathway. (5,4)

UNIT - IV

VIII. a) Explain two principles of thermodynamics and its application in biological sciences.

b) Describe about the role of acetyl-CoA in bioenergetics. (5,4)

IX. a) Write a short note on oxidative phosphorylation.

b) What is the structure ATP synthase? (4,5)

x-x-x