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JB-3103

Second Year B. Sc. (Microbiology) (Sem. III) Examination

March/April – 2013

MB-06 : Bioenergetics & Enzymology

Time : Hours] [Total Marks : **50**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ S. Y. B. SC. (MICROBIOLOGY) (SEM. 3)

Name of the Subject :

☛ MB-06 : Bioenergetics & Enzymology

☛ Subject Code No. : 3 1 0 3 ☛ Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks of the question.

(3) Draw neat diagrams wherever necessary.

1 Give specific answers : **10**

(a) What is multienzyme system ? Give suitable example of it ?

(b) Who discovered the nature of enzymes ? What is the definition of enzyme according to them ?

(c) Define : (i) Active site
(ii) Prosthetic group.

(d) What do you mean by oxidation - reduction reaction ? Give a generalized equation of it.

(e) Define : (i) Enthalpy.
(ii) Free energy change.

2 Answer any **two** of the following : **12**

(a) What are the different characteristics of enzymes ? Discuss colloidal nature and catalytic nature of enzymes.

(b) Justify, "Different patterns of enzyme specificity may be observed".

(c) What is the energy currency of the cell ? Why ? State its role in energy cycle.

3 Answer any **two** of the following in detail : **16**

(a) Explain any two types of enzyme inhibition.

(b) What are the six different classes of enzymes ? Explain them in detail.

(c) Justify, "Enzymes are important part of our daily life."

4 Write short notes on any **three** of the following : **12**

(a) Role of ATP in metabolism

(b) Isoenzymes

(c) Chemical nature of enzymes

(d) Laws of thermodynamics

(e) Allosteric enzymes.
