* J B E - B T - 0 2 *

JBE-BT-02

Seat No. _____

M. Sc. (Biotech) (Sem. I) (CBCS) Examination

December - 2019

BT - 102 : Enzyme Technology

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

1 Answer the following : (Any **Seven** out of Ten, each of 02 marks) **14**

(1) What is energy barrier?

(2) What is kinase reaction?

(3) What happens to Km and Vmax in non competitive inhibition?

(4) What is meant by enzyme specificity?

(5) Why energy-requiring reactions can occur in biological system?

(6) How does substrate concentration affect reaction rate?

(7) What are entrapment methods?

(8) Lactose free milk can be prepared by using which immobilized enzyme?

(9) Which enzyme is used to remove of turbidity (due to protein) in beer?

(10) Which bacterium is employed commercially for production of α amylase?

2 Answer the following : (Any **Two** out of Three, each of 07 marks) **14**

(a) Discuss different types of competitive inhibition. Derive a rate equation for competitive inhibition.

(b) What is double reciprocal plot? Describe with suitable example.

(c) Discuss the behaviour of Line - Weaver Burk plot for substrate inhibitory enzymatic reaction.

3 Answer the following : (each of 07 marks) **14**

(a) Discuss in brief, the coenzyme involved in hydrogen transfer reactions.

(b) Discuss briefly acid base catalysis.

OR

3 Answer the following : (each of 07 marks) **14**

(a) Write an account on asymmetric catalysis through enzyme.

(b) Write a note on biotransformation.

4 Answer the following : (each of 07 marks) **14**

(a) Discuss allosteric regulation inhibition with suitable example.

(b) What is non aqueous enzyme technology? Discuss various approaches enabling enzyme to function in organic solvent.

5 Answer the following : (Any **Two** out of four, each of 07 marks) **14**

(a) Discuss application. of enzyme in agricultural field.

(b) Discuss protein metabolizing enzyme in industry with suitable example.

(c) Give name of lipid metabolising enzymes and discuss their industrial applications.

(d) What are the uses of enzyme in environment?
