

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc./IMSC Winter 2019-20 Examination

Semester: 2/8
Subject Code: 11203152
Subject Name: Enzyme Technology

Date: 13/12/2019
Time: 02:00 pm to 04:30 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
(a) Describe various factor which are affecting on Enzyme activity
- Q.1. B) Answer the following questions (Any two)**
(a) What is active site? List out features of active site. (04)
(b) What are the different Remarkable properties of an enzyme? (04)
(c) Write classification of an enzyme with each example. (04)
- Q.2. A) Answer the following questions.**
(a) Give significance of K_m . (04)
(b) Describe Lock and Key Model (04)
- Q.2. B) Answer the following questions (Any two)**
(a) Explain ping pong Mechanism with one example. (03)
(b) Write a note on reversible inhibitor. (03)
(c) Explain about the inhibitor where V_{max} and K_m both changes (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
(a) What is steady state kinetics? Derive M.M. equation with its plot.
- Q.3. B) Answer the following questions (Any two)**
(a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
1. Give an account on Lipoic acid.
2. What is ribozyme
(b) Discuss the mechanism of ribonuclease for catalysis. (04)
(c) Short note on mechanism of action and regulation of Pyruvate dehydrogenase (04)
- Q.4. A) Answer the following questions.**
(a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
1. Enzymes that catalyze removal of groups from substrates without addition or removal of water are called _____.
2. Enzymes change the _____ of a chemical reaction.
(b) Short note on noncompetitive inhibition (04)
- Q.4. B) Answer the following questions (Any two)**
(a) Short note on Feedback inhibition (03)
(b) What are the difference between metallo enzymes and metal activated enzymes (03)
(c) Explain the role of FAD as a coenzyme to undergo catalysis. (03)