Seat No:_____ **Enrollment No:_____**

PARUL UNIVERSITY

FACULTY OF APPLIED SCIENCE

M.Sc. Summer 2018-19 Examination

Semester: 2 **Date: 08/04/2019**
Subject Code: 11203152 **Time: 10.30 am to 1.00 pm**
Subject Name: Enzyme Technology **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) List out significance of K_m. **(04)**
(b) Describe Fischer's theory for enzyme specificity. **(04)**

Q.2. B) Answer the following questions (Any two)
(a) Explain ping pong Mechanism with one example. **(03)**
(b) Write a note on irreversible 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) Brief note (2x2) (Each of 02 marks) **(04)**
1. Define: Holo enzyme, abzyme
2. Give an account on Lipoic acid.

(b) Explain the role of FAD as a coenzyme to undergo catalysis. **(04)**
(c) Discuss the mechanism of ribonuclease for catalysis. **(04)**

Q.4. A) Answer the following questions.
(a) Fill in the blanks. (Each of 02 marks) **(04)**
1. Enzymes change the _____ of a chemical reaction.
2. Enzymes that catalyze removal of groups from substrates without addition or removal of water are called _____.

(b) Derive kinetics for competitive inhibition **(04)**

Q.4. B) Answer the following questions (Any two)
(a) Short note. (Each of 01 marks) **(03)**
1. Define isoenzymes.
2. What are multifunctional enzymes?
3. What do you meant by feedback inhibition

(b) ATC_{ase} is an allosteric enzyme - explain it. **(03)**
c) Short note on mechanism of action and regulation of Pyruvate dehydrogenase **(03)**