PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech Mid Semester Exam

Semester: 4
Subject Code: (303144255)
Subject Name: Enzymology and Enzyme Technology

Date: (31/01/2024)
Time: (1hr: 30min)
Total Marks: 40

Sr. No.		Marks
Q.1	(A) One line Questions	05
	1. What is turn over number/kcat?	
	2. What is holoenzyme?	
	3. What do understand by enzyme denaturation?	
	4. Define Coenzyme.	
	5. Give an example of enzyme mediated reaction.	
	(B) Fill in the blanks	05
	1. Enzymes are polymers of ----------	
	2. An example of cofactor is -------- _____	
	3. The site responsible for binding with substrate is called ------	
	4. Enzyme alpha amylase can be categorized in the class -------	
	5. The graph for enzyme activity is ------------shaped.	
Q.2	Attempt any four (Short Questions)	12
	(1) What are the factors responsible for enzyme action.	
	(2) How is pH related to enzyme activity? Explain with the help of an enzyme.	
	(3) Draw the graph of enzyme activity labeling [S], [Vmax], Vo?	
	(4) Describe Lock and key model of enzyme action.	
	(5) Write the equation for Line Weaver Burg plot drawing the double reciprocal graph for enzyme kinetics.	
Q.3	Attempt any two questions	08
	(1) Derive the Michelis-Menten equation for Vmax calculation. Also, mention its assumption.	
	(2) Differentiate between Competitive and Uncompetitive Inhibition.	
	(3) Explain mixed inhibition concept showing enzyme reaction and deviation with respect to its kinetics graph.	
Q.4	(A) Describe all the categories of enzyme classification as given by enzyme commission. Also, cite an example for each category.	05
	(B) Discuss in detail about Allosteric inhibition. Also, cite an example for it.	05
	OR	
	(B) What are the different methods used for enzyme immobilization? Explain with the help of suitable diagrams.	05