

**PARUL UNIVERSITY**  
**PARUL INSTITUTE OF APPLIED SCIENCES**  
**MID SEMESTER INTERNAL EXAMINATION, Summer 2019**

**M. Sc. Semester II**

**Subject: Biotechnology/Biochemistry**

**Paper Code:** 11203152 **Title of the paper:** Enzyme technology

**Date:** 28/02/2019

**Time:** 11:30am-1:00pm

**Maximum Marks:** 40

**Instructions:**

1. All questions are compulsory and options are given in first and second question only.
2. Numbers to the right of question indicate the marks of respective question.

<b>Q. 1</b>	Attempt any one question of the following. (i) Explain acid-base catalysis and metal ion catalysis. (ii)	<b>(08)</b>
<b>Q. 2</b>	Attempt any three questions of the following. (I) Write a note on ATPase. (ii) Explain mechanism of reaction catalyzed by ribonuclease (iii) Give an account on flavin nucleotide (iv) (v)	<b>(12)</b>
<b>Q. 3</b>	Do as directed. Attempt all five questions. (i) Define electrophilic attack. (ii) What is biotin? (iii) (iv) (v)	<b>(05)</b>
<b>Q. 4</b>	Write correct option in your answer sheet for following 15 multiple choice questions.	<b>(15)</b>

MCQ 1	FAD stands for_____.			
	(A)	Flavin adipose dinucleotide	(B)	Folic adenine di-nuclear
	(C)	Folic adipose di-nuclear	(D)	Flavin adenine dinucleotide
MCQ 2	NAD <sup>+</sup> associates with the enzyme lactate dehydrogenase to catalyse the oxidation of malate, where NAD <sup>+</sup> is_____.			
	(A)	Prosthetic group	(B)	coenzyme
	(C)	Functional group	(D)	Intermediate
MCQ 3	A transition state is stabilized by_____interaction between its charged groups and charged groups on a catalyst.			
	(A)	Electrostatic	(B)	Hydrophillic
	(C)	Hydrophobic	(D)	None of the above
MCQ 4	Covalent catalysis is also known as_____catalyst.			

	(A)	Classical pathway	(B)	Alternative pathway
	(C)	Lectin pathway	(D)	All of the above
MCQ 5	Chymotrypsin is formed by the cleavage of peptide bonds of_____.			
	(A)	Chymotrypsinogen	(B)	Trypsinogen
	(C)	Both a and b	(D)	None of the above
MCQ 6	Muscle Triose phosphate isomerase is a _____enzyme.			
	(A)	Monomeric	(B)	Dimeric
	(C)	Trimeric	(D)	Tetrameric
MCQ 7	Pyruvate kinase requires_____for binding in the region of active site.			
	(A)	Alkali metal cations	(B)	Mn <sup>+2</sup>
	(C)	Mg <sup>+2</sup>	(D)	All of the above
MCQ 8				
	(A)		(B)	
	(C)		(D)	
MCQ 9				
	(A)		(B)	
	(C)		(D)	
MCQ 10				
	(A)		(B)	
	(C)		(D)	
MCQ 11				
	(A)		(B)	
	(C)		(D)	
MCQ 12				
	(A)		(B)	
	(C)		(D)	
MCQ 13				
	(A)		(B)	
	(C)		(D)	
MCQ 14				
	(A)		(B)	
	(C)		(D)	
MCQ 15				
	(A)		(B)	
	(C)		(D)	

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