

Bms/15/16/0066
OLABISI ONABANJO UNIVERSITY, AGO-IWOYE
FACULTY OF BASIC MEDICAL SCIENCES
BIOCHEMISTRY DEPARTMENT
2017/2018 RAIN SEMESTER EXAMINATION

Course code: BCH 302

Time: 3 hours

Course Title: Enzymology

Instruction: Answer five (5) questions in all. Question one (1) and (2) are Compulsory and any other three (3)

SECTION A

1. (i). How does an enzyme work?
(ii). State three characteristics of enzymes
(iii). State the amino acid side chains which are important for enzyme catalysis at enzyme's active sites include
2. (a). Define the following (i) Reversible Inhibition (ii) Irreversible Inhibition (iii) Mixed Inhibition (iv) Feedback inhibition
(b). Inhibitors can be used for the benefit of mankind or its destruction. Explain
(c). Draw the graphical representations of the following ~~on the back page~~
(i) Competitive Inhibition (ii) Non-Competitive Inhibition (iii) Un-Competitive Inhibition (iv) Mixed Inhibition

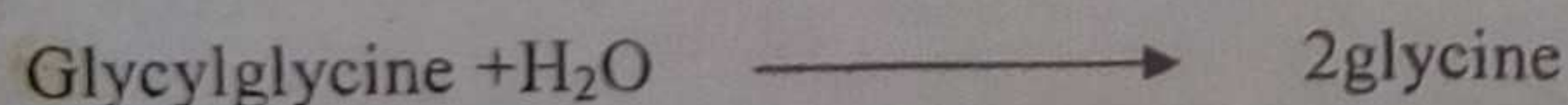
SECTION B

3. (a). Define the enzymes
b) Explain nomenclature and IUBMB classification of a ~~named~~ class of enzyme suitable example
4. Complete the Table

Co-enzyme	Name	Structure	source	Function(s)
NAD ⁺				
PLP				
Biotin				
TPP				

SECTION C

5. (a). Define the following terms (i). Enzyme kinetics (ii). K_m (iii). V_{max}
(b). The two important assumptions made by Michaelis and Mentens in the development of the general theory of enzyme action and kinetics are;
(c). Write the Michaelis-Mentens Equation.
4. The following experiment data were collected during a study of the catalytic activity of an intestinal peptidase capable of hydrolyzing the dipeptide glycylglycine.



[S]mM	1.5	2.0	3.0	4.0	8.0	16.0
V(mg/ml)	0.21	0.24	0.28	0.33	0.40	0.45

From these data, determine by graphical analysis the value of K_m and V_{max} for this enzyme.