TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Applied and Health Sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF TECHNOLOGY IN INDUSTRIAL MICROBIOLOGY AND BIOTECHNOLOGY

BIMBT 11M

SBH 2201 : PROTEIN AND ENZYMES I

SPECIAL/SUPPLEMENTARY EXAMINATION

FEBRUARY 2013 SERIES 2 HOURS

Instructions to candidates:

This paper consist of **FIVE** questions
Answer question **ONE** (compulsory) and any other **TWO** questions

Question ONE

a) Differentiate between:

(i) Protein conformation and protein configuration **(4marks)**

(ii) α- helix and β-pleated sheets **(4marks)**

b) Outline changes that take place during protein denaturation **(4marks)**

c) Describe forces involved in maintaining tertiary protein structure. **(6marks)**

d) Outline features of a polypeptide chain **(4marks)**

e) Explain the effect of the following on enzyme catalysed reactions

(i) Temperature **(2marks)**

(ii) Ailosteric effector **(2marks)**

(iii) pH **(2marks)**

(iv) Substrate concentration **(2marks)**

Question TWO

a) Outline features of enzyme active site **(8marks)**

b) Describe architectural levels of protein conformation **(12marks)**

Question THREE

Describe models that account for enzyme specificity **(20marks)**

Question FOUR

a) Giving specific examples, describe enzyme classifications **(14marks)**

b) Explain disadvantages of Michaelis-menten equation. **(6marks)**

Question FIVE

Discuss non-competative enzyme inhibition. **(20marks)**