



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

SBT 2380 : FERMENTATION TECHNOLOGY II

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) (i) State TWO industrial uses of enzymes **(2marks)**
(ii) Briefly describe the production of sweeteners using the enzyme glucose isomerase **(4marks)**
(iii) Define immobilized enzymes **(1mark)**
- b) (i) Define single cell protein **(1mark)**
(ii) State TWO food grade acids produced by microorganisms **(1mark)**
(iii) State FOUR organic products of the carbohydrate fermentations by clostridium acetobutylicum **(2marks)**
- c) Define

- (i) Proof
- (ii) Light beer
- (iii) Gin
- (iv) Tegnilla **(4marks)**
- d) (i) State TWO roles of cactic acid bacteria **(2marks)**
- (ii) Outline THREE types of food fermentations **(3marks)**
- (iii) List FOUR benefits of fermented foods to the consumer **(4marks)**
- e) (i) State FOUR roles of hops in beer **(4marks)**
- (ii) Explain the role of activated carbon in vodka manufacture **(2marks)**

Question TWO

- a) Briefly describe various **(4marks)**
- b) Explain THREE types of vaccines **(6marks)**
- c) Outline the production of vaccines **(10marks)**

Question THREE

Explain the beer brewing process **(20marks)**

Question FOUR

Explain the manufacture / production of desert wines from grapes **(20marks)**

Question FIVE

Discuss the production of

- a) Cheddar cheese **(10marks)**
- b) Pickles **(10marks)**