



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF PURE AND APPLIED SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN FOOD TECHNOLOGY AND QUALITY ASSURANCE

BSFQ 12S

**AFS 4302: MICROBIOLOGICAL FOOD SAFETY &
CONTROL**

SPECIAL/SUPPLEMENTARY EXAMINATION

OCTOBER 2013 SERIES

2 HOURS

Instructions to candidates:

This paper consist of **FIVE** questions

Answer question **ONE** (compulsory) and any other **THREE** questions

Question ONE

- a) Define
 - (i) Dose-response assessment (3marks)
 - (ii) Hazard characterization (2marks)
 - (iii) Indicator organism (2marks)
- b) Describe the challenges facing food control authorities. (6marks)
- c) Name the specific concerns about food hazards (3marks)
- d) Explain the role of governments in application of code Alimentarius (4marks)
- e) Name the areas which should be avoided when sitting food establishments (4marks)

f) Discuss time and temperatures control as a key aspect of hygiene control systems.

(6marks)

Question TWO

- a) State the General principles of microbiological risk assessment **(10marks)**
- b) Describe the guidelines for application of microbiological risk assessment. **(10marks)**

Question THREE

Write the procedures for enumeration and confirmation of indicator bacteria under the following headline.

- (i) Presumptive test for coliform organisms **(7marks)**
- (ii) Confirmed test for coliform organisms **(6marks)**
- (iii) Confirmed test for esherichia coli **(7marks)**

Question FOUR

- a) Describe the task in application of HACCP principles as identified in the logic sequence for application of HACCP **(12marks)**
- b) (i) Define microbiological criterion **(2marks)**
- (ii) State the components of microbiological criteria for foods **(6marks)**

Question FIVE

State and explain how the elements of a national food control system are used to achieve the principal objectives of national food control system. **(20marks)**