



# **Technical University of Mombasa**

*Faculty of Applied and Health Sciences*

**DEPARTMENT OF ENVIRONMENT AND HEALTH SCIENCE**

DIPLOMA IN NUTRITION AND HEALTH  
(DNH 12J)

**AFS 2109: FOOD MICROBIOLOGY II**

**SPECIAL/SUPPLEMENTARY: EXAMINATIONS**

**SERIES: FEBRUARY 2013**

**TIME: 2 HOURS**

**INSTRUCTIONS:**

You should have the following for this paper

- *Answer booklet*

This paper consists of **FIVE** questions.

Answer Question **ONE (compulsory)** and any other **TWO** questions

This paper consists of 3 **PRINTED** pages

**Question ONE**

- a) Name the most common species of yeasts found on spoiled beef (2marks)
- b) State why bacteria are more competitive than molds in spoilage of meat cuts (2marks)
- c) State the primary reasons why poultry spoilage is mainly restricted to the surfaces (5marks)
- d) State the methods used to reduce the number and types of pathogens on dressed carcasses and finished products (4marks)
- e) Components other than meat contribute to spoilage of sausages. Explain (4marks)
- f) Distinguish between pasteurized milk and UHT milk based on heat treatment (4marks)
- g) Describe the following processes used in food preservation
  - (i) Quick freezing (5marks)
  - (ii) Sterilization (5marks)

**Question TWO**

- a) Discuss the primary sources of micro-organisms in meat (8marks)
- b) (i) Name TWO methods used for blanching foods before freezing (2marks)  
(ii) State the primary functions of blanching prior to freezing (5marks)

**Question THREE**

- a) Discuss the spoilage of;
  - (i) Vegetables (5marks)
  - (ii) Fruits (3marks)
- b) Discuss the occurrence of *Clostridium perfringens* food poisoning (7marks)

**Question FOUR**

- a) Discuss the microbial spoilage of milk (7marks)
- b) Discuss the occurrence of *Staphylococcal gastroenteritis* (8marks)

**Question FIVE**

- a) Explain how the following factors affect heat resistance of micro-organisms (6marks)
  - (i) Water
  - (ii) Fat
  - (iii) pH
- b) Discuss the principle behind food protection with low temperature (9marks)