



TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN FOOD TECHNOLOGY AND QUALITY AND  
ASSURANCE

AAB 4206 : GENERAL MICROBIOLOGY

END OF SEMESTER EXAMINATION

**SERIES:** JULY 2021

**TIME:** 2 HOURS

**DATE:** 23 Jul 2021

**Instructions to Candidates**

You should have the following for this examination

*-Answer Booklet, examination pass and student ID*

This paper consists of five questions. Attempt question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

**QUESTION ONE**

- a) Distinguish between;
- i. Selective and enrichment media (3mks)
  - ii. Simple and differential staining (3mks)
- b. Explain the role of the following in the food industry (6 marks)
- i) Freezing and refrigeration (3mks)
  - ii) Salting (3mks)
- c. Describe the aseptic technique (5mks)
- d. State four modes of action of chemicals used in sterilization. (4mks)

- e. Distinguish between simple and differential staining techniques (4mks)

## QUESTION TWO

- a. Explain the use of growth factors in culture media and give examples (5mks)
- b. Discuss the four stages of a normal bacteria growth curve. (15mks)

## QUESTION THREE

Describe the use of differential media in bacteriology. (5mks)

- b. (i). Describe the use of streak plate technique (8mks)
- (ii). Enumerate uses of culture in bacteriology (7mks)

## QUESTION FOUR

- a. Outline the functions of plasma membrane in a bacteria cell (6mks)
- b. Describe use of various categories of heat to eliminate potentially pathogenic microorganisms. (14 mks)

## QUESTION FIVE

- a) Explain the purpose of using each of the five categories of special media in identification of bacteria (20mks)
- b) Name the four descriptions given to bacteria growing in liquid media. (4mks)

