



MURANG'A UNIVERSITY OF TECHNOLOGY

SCHOOL OF PURE AND APPLIED SCIENCE

DEPARTMENT OF APPLIED SCIENCE

UNIVERSITY ORDINARY EXAMINATION

2017/2018 ACADEMIC YEAR

**THIRD YEAR SECOND SEMESTER EXAMINATION FOR DEGREE OF
BACHELOR OF SCIENCE IN HOSPITALITY MANAGEMENT**

HHM 306 – FOOD MICROBIOLOGY AND HAZARD CONTROL

DURATION: 2 HOURS

DATE: 23RD APRIL, 2018

TIME: 2.00 – 4.00 P.M.

Instructions to Candidates:

1. Answer **Question 1** and **Any Other Two** questions.
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

SECTION A – ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE

- a) i. Explain food poisoning (1 mark)
 - ii. State characteristics of bacteria species in food poisoning (3 marks)
- b) Explain reproduction in Bacteria (4 marks)
- c) Discuss the factors influencing multiplication of food microorganisms (4 marks)
- d) Relate three useful microorganisms to their corresponding foods (3 marks)
- e) The symptoms of food poisoning may be indicative of the type of toxin ingested. Justify the statement (3 marks)
- f) Describe three methods of detecting microorganisms in food (3 marks)
- g) Account for food contact surface materials that should be avoided in food processing operations (3 marks)
- h) Explain the following (6 marks)
 - i. Probiotics
 - ii. Bio-preservation
 - iii. Bioprocessing

SECTION B – ANSWER ANY TWO QUESTIONS IN THIS SECTION

QUESTION TWO

- a) Compare and contrast food borne infection and food intoxication (14 marks)
- b) Account for the sources of pathogens in foods (6 marks)

QUESTION THREE

Evaluate key practices and methods that prevent or delay food spoilage (20 marks)

QUESTION FOUR

Discuss the categories and characteristics of beneficial bacteria in food industry (20 marks)