



# MACHAKOS UNIVERSITY

University Examinations for 2020/2021

SCHOOL OF HEALTH SCIENCES

DEPARTMENT OF PUBLIC AND COMMUNITY HEALTH

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (PUBLIC HEALTH)

HPH 302: FOOD SCIENCE AND TECHNOLOGY II

DATE: 17/8/2021

TIME: 2:00 – 4:00 PM

---

## INSTRUCTIONS:

This paper consists of two sections A and B

### SECTION A

#### Specific Instructions

- This section has one question
- The question is compulsory
- The question is 30 marks

#### QUESTION ONE (COMPULSORY) (30 MARKS)

- Outline the classification of food chemical contaminants. (3 marks)
- State the effects of consumption of toxic constituents and anti-nutrients. (3 marks)
- A butcher supplied chicken to restaurant X in Kenya. A large number of people who consumed chicken from the restaurant were hospitalized with salmonella poisoning. Explain the responsibilities of state authorities in addressing this food poisoning incident. (3 marks)
- Distinguish between dispersed common source and common event type of disease outbreak. (3 marks)
- State how the following practices contribute to food safety and quality (3 marks)
  - Good handling practices
  - Good manufacturing practices

- f) Outline the provisions of world trade organization on features of an effective food control system. (3 marks)
- g) State the factors to consider in determining a food plant location (3 marks)
- h) Explain the purposes for food analysis. (3 marks)
- i) State the provisions of Kenya Meat Control Act Cap 356. (3 marks)
- j) Explain the approaches you would use in creating awareness on food safety in your community. (3 marks)

## **SECTION B:**

### **Specific Instructions**

- **This section has four (4) questions**
- **Answer any two (2) questions**
- **Each question is 20 marks**

### **QUESTION TWO (20 MARKS)**

- a) As a training manager you have been invited to teach staff of company X on nature of microbial growth in food. Describe the content of your presentation. (10 marks)
- b) Explain factors to consider in handling food processing equipment. (10 marks)

### **QUESTION THREE (20 MARKS)**

- a) Company Y has requested you to test raw materials for developing a flour blend formulation meant for young children feeding. Explain the toxic constituents and anti-nutrients you are likely to find. (10 marks)
- b) Describe the Codex Alimentarius Commission provision on hygiene in food handling. (10 marks)

### **QUESTION FOUR (20 MARKS)**

- a) Explain the benefits that Kenya would accrue from ascribing to international food standards. (10 marks)
- b) You are the quality assurance manager of a dairy processing company, lately you have received many complaints on your products. Based on this you decide to implement HACCP. Discuss the challenges you are likely to face. (10 marks)

**QUESTION FIVE (20 MARKS)**

- a) As a public health officer, explain the steps you would take in investigating a cholera outbreak in your locality. (10 marks)
- b) You intend to analysis a range of food products from company X. Explain the factors that you would consider in the selection of appropriate food analysis techniques for the food products. (10 marks)