



MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF AGRICULTURE, ENVIRONMENT AND HEALTH SCIENCES

DEPARTMENT OF HEALTH SCIENCES

THIRD YEAR FIRST SEMESTER EXAMINATION FOR

BACHELOR OF SCIENCE (PUBLIC HEALTH)

HPH 302: FOOD SAFETY AND SANITATION

DATE: 26/8/2022

TIME: 8.30-10.30 AM

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 (30 MARKS)

- a) Highlight measures towards successful implementation of HACCP procedures in a food establishment. (3 marks)
 - b) Outline the elements of risk management for food safety (3 marks)
 - c) Explain the importance of investigating disease outbreaks. (3 marks)
 - d) State the effects of anti-nutrients on human health. (3 marks)
 - e) Identify six (6) challenges in implementation of food safety education programmes in Kenya. (3 marks)
 - f) State sources of physical contaminants in food. (3 marks)
 - g) Highlight the steps towards development of international food safety standards. (3 marks)
 - h) State the provisions of Kenya Public Health Act Cap 242. (3 marks)
 - i) Outline properties of food that are commonly analyzed. (3 marks)
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- j) State factors to consider in the design of a food establishment to prevent cross-contamination. (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 factors that influence microbial growth in food. Describe the content of your presentation. (10 marks)
- b) Discuss factors to consider in site identification for a food industry establishment. (10 marks)

QUESTION THREE (20 MARKS)

- a) Company Y has requested you to test raw materials for developing a cereal based flour meant for feeding young children. Discuss the toxic constituents and anti-nutrients you are likely to find. (10 marks)
- b) Discuss strategies that can be used in implementation of health education programs in the food industry to ensure food safety. (10 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the challenges facing Kenya in the implementation of international food standards. (10 marks)
- b) You are stationed in a health facility where children within the locality are presenting with symptoms of abdominal pain, diarrhea and fever. You suspect *Clostridium perfringens* enteritis outbreak. Describe the steps you would take to confirm the outbreak. (10 marks)

QUESTION FIVE (20 MARKS)

- a) 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)

- b) Peter has been employed as a Quality Assurance Manager of a company that deals with dairy products. He is preparing a proposal to senior management on the importance of adoption of a total quality management system in the company. Describe the content of his proposal. (10 marks)