

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY

FOST 465: SANITATION AND WASTE MANAGEMENT

STREAMS:FOST

TIME: 2 HOURS

DAY/DATE: FRIDAY 24/09/2021
A.M

8.30 A.M – 10.30

INSTRUCTIONS

- Answer all questions in section A and any two in section B
- Do not write anything in this question paper. All rough work to be done on the answer booklet and crossed through

SECTION A: ANSWER ALL QUESTIONS (30 MARKS)

QUESTION ONE

Discuss how a food plant layout should be designed in order to minimize non microbial contamination. [10 marks]

QUESTION TWO

Define the following acronyms and show their significance in treatment of food wastes.

- (a) BOD [4 marks]
- (b) COD [4 marks]
- (c) TOC [4 marks]

QUESTION THREE

Cleaning and sanitation are important routines in a food processing plant

- (a) Discuss the four key components of cleaning [4 marks]
- (b) Name four types of sanitizers and their applications. [4 marks]

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION FOUR

- (a) Personal hygiene is key to ensuring sanitary food production. Demonstrate your understanding of this requirement by highlighting how personnel should handle themselves before getting to work, when they get to work and while at work.

[10 marks]

- (b) Discuss the integrated pest management in a food production setting. [10 marks]

QUESTION FIVE

Environmental Management System (ISO 14000) requires that companies treat their waste water before releasing it to the environment. Describe the stages listed below in waste water treatment process.

- (a) Secondary treatment process [10 marks]
- (b) Tertiary treatment process [10 marks]

QUESTION SIX

Discuss the systems used to clean the following food facilities.

- (a) Milling plants [10 marks]
- (b) Dairy processing plants [10 marks]