

CHUKA



UNIVERSITY

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN  
FOST 413: FOOD TOXICOLOGY**

**STREAMS: DTHM Y1S1**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 30/03/2021**

**11.30 A.M – 1.30 P.M**

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**INSTRUCTIONS:**

**Answer all questions in section A and any two questions in section B**

**SECTION A : ANSWER ALL QUESTIONS (30 MARKS)**

1. Briefly explain the following terms as used in food toxicology. [6 marks]
  - (a) Margin of safety
  - (b) Hormesis
  - (c) Codosing
2. Describe the major types of toxicity related to foods. [4 marks]
3. Using a diagram explain dose-response relationship as it applies to food toxicology. [6 marks]
4. Explain three categories of hazards in foods. [6 marks]
5. Explain the methods used to reduce mycotoxin contamination along the food chain. [4 marks]
6. Explain how good manufacturing practices can be used to reduce contamination of food with toxins. [4 marks]

**SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)**

7. (a) Discuss how agricultural practices may contribute to contamination of food with chemical toxic contaminants and the underlying consequences of agricultural chemicals to human health. [10 marks]
- (b) Discuss the strategies that can be put in place to reduce the presence of specific toxic agricultural residues in foods in Kenya. [10 marks]
8. (a) Discuss HACCP as a control measure for the reduction of or elimination of toxins from a specific food of your choice. [14 marks]
- (b) Describe the phases of toxicological effects. [6 marks]
9. (a) Discuss the formation and toxic effects of each one of the following. [9 marks]
- (i) Ciguatoxin
  - (ii) Acrylamide
  - (iii) Nitrosamine
- (b) Describe the meaning and importance of risk assessment in the context of toxicological safety of foods. [11 marks]
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