



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE AND APPLIED SCIENCE

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN FOOD TECHNOLOGY AND QUALITY ASSURANCE

AFS 4307: Food Toxicology

END OF SEMESTER EXAMINATION

SERIES: APRIL/2016

TIME: 2 HOURS

DATE: MAY/2016

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **five** questions. Attempt Question One and any other TWO

Do not write on the question paper.

Question ONE

- a) Define the term toxicology, stating its importance to the modern society in general. (4mks)
- b) Describe three kinds of specific acting modes of toxic action. (6mks)
- c) Differentiate between the terms, biomagnification and bioaccumulation in regard to toxicity. (4m)
- d) (i) Explain the term LD_{50} in relation to the safety of a toxin. (4mks)
(ii) With a relevant illustration of a dose response curve for two chemicals, explain why LD_{50} alone may not be reliable in risk assessment of a chemical toxin. (6mks)
- e) Describe Aflatoxin, as an endotoxin in food poisoning. (6mks)

Question TWO

- a) State and explain any five factors that affect chemical toxicity. (10mks)
- b) Discuss the biotransformation process of toxins in the body (10mks)

Question THREE.

Discuss the following hazards in relation to food;

- a) Chemical hazards (10mks)
- b) Biological hazards (10mks)

Question FOUR

Describe the following types of poisoning resulting from consuming marine foodstuff.

- a) Paralytic shellfish poisoning (5mks)
- b) Ciguatera poisoning (5mks)
- c) Amnesic shellfish poisoning (5mks)
- d) Scombroid fish poisoning (5mks)

Question FIVE

- a) i) Define the term endogenous toxicants (1mk)
- ii) State and describe any five endogenous toxicants (10mks)
- b) Describe three species of mushrooms that are poisonous. (9mks)