



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) Differentiate between environmental toxicology and occupational toxicology. (4mks)
- b) Explain the influence of the following factors on chemical toxicity.
 - i) Route of exposure (3mks)
 - ii) Ability to be absorbed (3mks)
- c) With the aid of a dose response curve, explain the term 'hormesis' in regard to a chemical agent. (6mks)
- d) Describe the following mode of action of toxins
 - i) Non-specific acting toxicants (2mks)
 - ii) Specific acting toxicants (2mks)
- e) With simplified chemical illustrations, describe phase1 biotransformation of toxins. (6mks)
- f) Describe two toxins found in land animal foodsuffs. (4mks)

Question TWO

Discuss dose-response assessment for non- carcinogenic and carcinogenic substances using relevant examples and curves, where possible. (20mks)

Question THREE

Discuss the effect of processing on food toxins. (20mks)

Question FOUR

Discuss toxic food contaminants from industrial wastes (20mks)

Question FIVE

- a) Discuss physical hazards in relation to food (8mks)
- b) Discuss the toxicological aspect of genetically modified Organisms (GMOs) (12mks)