



UNIVERSITY OF ESWATINI  
Faculty of Health Sciences  
Department of Environmental Health Science

DEGREE IN ENVIRONMENTAL HEALTH AND FOOD  
SCIENCE

**FINAL EXAMINATION PAPER 2020**

TITLE OF PAPER : FOOD TOXICOLOGY  
COURSE CODE : EHS 450  
DURATION : 2 HOURS  
MARKS : 100

INSTRUCTIONS : READ THE QUESTIONS & INSTRUCTIONS CAREFULLY  
: ANSWER **ANY FOUR** QUESTIONS.  
: EACH QUESTION **CARRIES 25** MARKS.  
: WRITE NEATLY & CLEARLY  
:  
: BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.

**DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR.**

### QUESTION ONE

- (a) Define the following term;
- (i) Food toxicology, [1 Mark]
  - (ii) Xenobiotic, [1 Mark]
  - (iii) Toxicity, [1 Mark]
  - (iv) Toxic effects, [1 Mark]
  - (v) Toxic symptoms [1 Mark]
- (b) Briefly discuss the phenolic acids (Flavonoid) with respect to forms, sources and toxicity. [15 Marks]
- (c) What are cyanogenic glycosides [5 Marks]
- Total [25 Marks]**

### QUESTION TWO

- (a) Define; additive, synergistic, potentiation and antagonism interactions. [4 Marks]
- (b) Explain the meaning of dose make a poison. [3 Marks]
- (c) What are the components of dosage? [3 Marks]
- (d) Discuss the dose-response relationship (curves). [15 Marks]
- Total [25 Marks]**

### QUESTION THREE

- (a) Briefly outline variables influencing toxicity. [10 Marks]
- (b) Briefly elaborate on the character of toxic action. [10 marks]
- (c) Give an explanation on the site of damaging with respect to cell metabolism. [5 Marks]
- Total [25 Marks]**

### QUESTION FOUR

- (a) Outline the components of toxicokinetics. [5 marks]
- (b) Briefly illustrate on the transport of toxins across the membrane. [15 Marks]
- Total [25 marks]**

### QUESTION FIVE

- (a) Briefly elaborate on the metabolism of chemical substance. [15 Marks]
- (b) Explain physico-chemical properties of xenobiotic as factors affecting toxicity. [10 Marks]
- Total [25 Marks]**