



**UNIVERSITY OF SWAZILAND**  
Faculty of Health Science

Department of Environmental Health  
Sciences

**Final Examination 2008**

Title of paper: Introduction to Environmental Toxicology I

Course code: EHS 560

Time allowed: 2 hours

Marks allocation: 100 Marks

Instructions:

- 1) Read the questions and instructions carefully
- 2) Answer Four questions
- 3) Each question is weighted 25 marks
- 4) Write neatly and clearly

This paper is not to be opened until the invigilator has granted  
permission

## INTRODUCTION TO TOXICOLOGY EXAMINATION 2008

### Question 1:

1. What are the symptoms of cadmium poisoning? Discuss in detail the toxicity of cadmium. (25 marks)

### Question 2:

- a) What are the following? (3 marks)
- Toxicants (3 marks)
  - Poisons (3 marks)
  - Toxins (3 marks)
  - Idiocracy (3 marks)
  - Potentiation (3 marks)
- b) What is the blood brain barrier, explain. (10 marks)

### Question 3:

- a) What is a dose response curve? (5 marks)
- b) What are the assumptions of the dose/dose-response curve? (5 marks)
- c) Write short notes on the following: (15 marks)
- Mycotoxins
  - Thalidomide
  - Acetylation

**(Total = 25 marks)**

### Question 4:

- a) With the aid of graphs explain the following:
- i) LD<sub>50</sub>
  - ii) The margin of safety
  - iii) The effective dose
  - iv) The therapeutic index
  - v) The toxic dose
- (15 marks)

- b) What is meant by the "First Pass" (5 marks)
- c) What is the difference between exposure and absorb dose (5 marks)

***(Total = 25 marks)***

**Question 5:**

- a) In the fourth stage of the mechanism of toxicity there is a decision the cell has to make about repair or dysrepairs, what are the various levels of repair in the organism that could take place after damage or toxicity occurs? (10 marks)
- b) What is meant by disposition of a xenobiotic? (5 marks)
- c) Name five (5) phase 1 and five (5) phase 11 major biotransformation reactions. (10 marks)