



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DEGREE IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2007/2008

TITLE OF PAPER	:	INTRODUCTION TO TOXICOLOGY II
COURSE CODE	:	EHS 558 / 561
DURATION	:	2 HOURS
MARKS	:	100
INSTRUCTIONS	:	READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
	:	ANSWER ANY THREE QUESTIONS
	:	EACH QUESTION CARRIES 25 MARKS
	:	WRITE NEATLY & CLEARLY
	:	NO PAPER SHOULD BE BROUGHT INTO NOR OUT OF THE EXAMINATION ROOM
	:	BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER

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

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MAIN EXAM 2008

QUESTION 1

- a) Discuss in detail the toxicity of cadmium. (20 Marks)
- b) Why is the kidney system vulnerable to toxicants? (5 Marks)

QUESTION 2

Organophosphate are used for agricultural purposes and in chemical warfare.

- a) What is the basic structure organophosphate and the differences in structure and action between the agents used in chemical warfare versus common pesticides? (15 Marks)
- b) What is the mechanism of action of organophosphates that makes them toxic? (5 Marks)
- c) What is the story behind thalidomide (5 Marks)

QUESTION 3

- a) Discuss the unique vulnerability of the nervous system. (20 Marks)
- b) What are the functions of the following?
- Kupffer cells
 - Ito cells and
 - Endothelial cells
- (5 Marks)

QUESTION 4

a) Define the following terms regarding blood toxicity:

- Anaemic hypoxia
- Histotic hypoxia
- Cooperativity

(5 Marks)

b) With the aid of a graph discuss carbon dioxide poisoning

(20 Marks)