UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2008

TITLE OF PAPER	:	**INTRODUCTION TO AIR POLLUTION**
COURSE CODE	:	**EHS 314**
DURATION	:	**2 HOURS**
MARKS	:	**100 MARKS**
INSTRUCTIONS	:	**READ THE QUESTIONS & INSTRUCTIONS CAREFULLY**
	:	**ANSWER ANY THREE (3) 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

Question 1:

What are the following? And what are their importance in air pollution control?

- PCBs (5 marks)
- Green house gases (5 marks)
- VOCs (5 marks)
- CFCs (5 marks)
- SO_x (5 marks)

(Total = 25 marks)

Question 2:

Discuss in detail the concept of atmospheric inversion. Your discussion should clearly explain the different types of terms used and types of inversions.

(25 marks)

Question 3:

a) What are the constituents of $PM_{2.5}$ *(5 marks)*

b) Discuss the different types of plume dispersion in different atmospheric stability. *(20 marks)*

Question 4:

a) What are the common sources of indoor air pollution? *(5 marks)*

b) What is radon? How can it be controlled? *(5 marks)*

c) What are the symptoms of a "sick Building" syndrome? *(5 marks)*

d) What are the three T's of good combustion? Briefly explain why each is important in the combustion process. (10 marks)

(Total = 25 marks)

Question 5:

a) When undertaking air pollution, what will be your objectives? *(10 marks)*

b) List the main physical principles on which fabric filters depend for removing particles from a flow of waste gases. *(10 marks)*

c) What are the health effects of lead (5 marks)