UNIVERSITY OF SWAZILAND
Faculty of Health Sciences
DEGREE IN ENVIRONMENTAL HEALTH
SUPPLEMENTARY EXAMINATION PAPER 2005-6

TITLE OF PAPER	:	Occupational and Environmental Health
COURSE CODE	:	**EHS 302**
DURATION	:	**3 HOURS**
MARKS	:	**100**

INSTRUCTIONS : **READ THE QUESTIONS & INSTRUCTIONS CAREFULLY**

: **ANSWER ANY FIVE QUESTIONS**

: **EACH QUESTION CARRIES 20 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.

OCCUPATIONAL AND ENVIRONMENTAL HEALTH – SUPPLEMENTARY –2006

Question 1.

a) What are they?

i) Air pollutants
ii) Particulate
iii) Fumes
iv) Grit
v) CFCs

(10 marks)

b) What are the differences between primary and secondary pollutants?
(5marks).

c) What are PCBs? What are the products of incomplete incineration of PCBs?
(5marks)

d) What are the health effects of lead **(5 marks)**

(Total = 25 marks)

Question 2.

a) Discuss the costs which may be attributed to air pollution, including both damage and *control costs.* **(20 marks)**

b) How would you carry out an occupational health and safety evaluation for a small secondary lead smelter of 10 to 15 employees **(5 marks)**
(Total = 25 marks)

Question 3.

a) Describe the essential elements of an underfeed stoker and comment on the precautions which must be observed in order to minimise smoke emissions
(10 marks)

b) What are the objectives of air pollution monitoring?
(10 marks)

c) What are the disadvantages of deposit gauges when monitoring air pollutants?
(5 marks)

(Total = 25marks)

Question 4.

a) The protection against chemical hazards is a specialized field of activity in its own right. The promotion of safety rest on the basic policies of substitution, enclosure of process, controlled exposure, and personal protection. Discuss these principles in detail and give appropriate examples on each. **(20marks)**

b) What is the difference between a mutagen and a teratogen **(3marks)**
c) What is meant by LD_{50} **(2marks)**

(Total = 25marks)

Question 5.

a) Clearly explain what are TLVs, how they are derived, and their importance or uses in occupational health. (5marks)

b) What is the difference between hazard and toxicity (5 marks)

c) Differentiate between Sound power level and sound pressure level. (5 marks)

d) Clearly explain how you will determine the moisture content or humidity when undertaking environmental measurements? (5 marks)

e) Give any two examples of ionizing radiation and three of non-ionizing radiation. (5 marks)