

UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

**BSc ENVIRONMENTAL HEALTH
SCIENCES-ENVIRONMENTAL
MANAGEMENT**

FINAL EXAMINATION PAPER: MAY 2008

**TITLE OF PAPER : ENVIRONMENTAL POLLUTION
ASSESSMENT**

COURSE CODE : EHS 551

DURATION : 2 HOURS

MARKS : 75

INSTRUCTIONS : ANSWER ANY THREE QUESTIONS

: EACH QUESTION CARRIES 25 MARKS

**: NO PAPER SHOULD BE BROUGHT
INTON OR 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**

EHS 551 P 2008 MAY

QUESTION ONE.

(a) Pollution prevention and pollution clean up are two important methods of dealing with pollution. Contrast one with the other and identify potential problems associated with each. [15]

(b) Pollution can have three types of unwanted effects. Give a short description of these effects [10]

QUESTION TWO

(a) What would be the dangers and advantages of too much reliance on the 'precautionary approach' [10]

(b) Grassroots environmental groups play an important role in pollution management and prevention. Outline their role in improving environmental quality and their attended setbacks [5]

(c) Compare and contrast debates around the two systems used in determining who to carry the burden of proof for environmental risk. How is this analysis related to ISO 14001? [10]

QUESTION THREE

(a) The Chadwick methodology remains one of the most useful approaches to environmental pollution evaluation, management and control. Outline what it entails [10]

(b) Assessment of pollution risk involves four tasks. Name these [4]

(c) The response of an organism to a pollutant depends on certain characterisation namely:

- 1) Threshold
- 2) Time versus dosage
- 3) Synergism
- 4) LC50 and LD 50
- 5) Bioaccumulation
- 6) Bio concentration

Define each and discuss how each helps in a dose response evaluation [11]

QUESTION FOUR

(a) Indicate to what extent each of the following statement is correct or incorrect and briefly explain why (three to five lines per statement)

1. A substance is considered a pollutant if it has been proved to have an adverse effect on human health.
2. Adverse effects on human health are sometimes difficult to identify and to determine [10]

(b) Consider the following equation $P+A+T=I$. in the three factor model for environmental quality. What are the arguments for and against this equation? [15]