



**UNIVERSITY OF SWAZILAND**  
Faculty of Health Science

Department of Environmental Health  
Sciences

Final Examination 2007/2008

Title of paper: WATER QUALITY MANAGEMENT 11

Course code: EHS 583

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

Main Examination : 2008

EHS 583 II

Question 1.

Discuss the key issues to be observed in Water Standards (25)

Question 2.

A) Describe briefly Receiving Water Quality Objective (RWQO) approach in developing the pollution control standards. (15)

B) State the advantages and disadvantages of the RWQO approach. (10)

Question 3.

Discuss the impacts on public health and water environment under the following:

A) What are the responsibilities of a Surface Water Pollution Control organization? (15)

ii) How would you develop capacity building for a WPC organization? (10)

Question 4.

List and explain the different ways and techniques to reduce the point and non-point sources of pollution. (25)

Question 5.

A) The use of wastewater for agriculture is a very old practice and land disposal was the first wastewater treatment system:

i) What was the limiting factors for the rate of application for the wastewater? (6)

ii) Give and explain two (2) categories of risks associated with the re-use of wastewater for agriculture. (4)

**B) With regard to the mathematical approach adopted, water quality models can be classified as Empirical or Statistical, Stochastic and Deterministic.**

**Describe briefly the characteristics of each model.**

**(15)**