



**UNIVERSITY OF SWAZILAND**  
Faculty of Health Sciences

**Department of Environmental Health Science**

Supplementary Examination 2014

BSc. in Environmental Health Science

Title of paper: WATER QUALITY MANAGEMENT II

Course code: EHS 583

Time allowed: 2 HOURS

Marks allocation: 100 Marks

**Instructions:**

- 1) Answer **ANY FOUR** questions
- 2) Each question is weighted 25 marks
- 3) Write neatly and clearly
- 4) Begin each question on a separate sheet of paper

This paper is not to be opened until the invigilator has granted permission

EHS 583 II

**Question 1.**

Discuss the Public Health impacts of the following in water supply

- i) Oil Pollution (10)
- ii) Toxic Pollution (15)

**Question 2.**

What are the responsibilities of a Surface Water Pollution Control organization ? (25)

**Question 3.**

Discuss the Environmental impacts of the following pollutants in water.

- i) Re-use of sewage for agricultural purpose. (10)
- ii) Disinfection by-products (15)

**Question 4.**

Explain how Water Quality Management is applied under the following International Practice:

- i) Drinking Water Standards and Criteria (5)
- ii) World Health Organization (WHO) (5)
- iii) European Union (EU) (5)
- iv) South Africa (5)
- v) Surface Water Quality for Portable Abstraction (5)

**Question 5.**

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

Describe how each of these models can be used in prediction and simulation of Water Quality. **(25)**