



**UNIVERSITY OF SWAZILAND**  
**Faculty of Health Sciences**

**DIPLOMA IN ENVIRONMENTAL HEALTH**

**FINAL EXAMINATION PAPER 2007/2008**

<b>TITLE OF PAPER</b>	<b>:</b>	<b>RURAL WATER SUPPLY TECHNOLOGY</b>
<b>COURSE CODE</b>	<b>:</b>	<b>EHS 212</b>
<b>DURATION</b>	<b>:</b>	<b>2 HOURS</b>
<b>MARKS</b>	<b>:</b>	<b>100</b>
<b>INSTRUCTIONS</b>	<b>:</b>	<b>READ THE QUESTIONS &amp; INSTRUCTIONS CAREFULLY</b>
	<b>:</b>	<b>ANSWER ANY FOUR (4) QUESTIONS</b>
	<b>:</b>	<b>EACH QUESTION CARRIES 25 MARKS.</b>
	<b>:</b>	<b>WRITE NEATLY &amp; CLEARLY</b>
	<b>:</b>	<b>NO PAPER SHOULD BE BROUGHT INTO NOR OUT OF THE EXAMINATION ROOM.</b>
	<b>:</b>	<b>BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.</b>

**DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR.**

QUESTION 1.

With an aid of a diagram, describe the Hydrological Cycle, paying attention to the five (5) main components or phases. (25)

QUESTION 2.

With an aid of a diagram, describe spring protection under the following headings:

- a) Definition of Seepage Spring. (3)
- b) Data necessary before protection is done, and the reasons why such data is necessary. (7)
- c) Protection details of the spring. (15)

QUESTION 3.

Physical water quality parameters define those characteristics of water that respond to the senses of sight, touch, taste and smell:

Discuss the sources and impacts of taste and odors in water supplies. (25)

QUESTION 4.

As an Environmental Health Officer, you are required to collect water samples from a river and from a tap for bacteriological and chemical analyses. What apparatus would you take with you and how would you proceed with the sampling in each case. (25)

QUESTION 5.

Describe water treatment on a small scale under the following:

- a) Boiling (5)
- b) Filtration (5)
- c) Addition of Chemicals (5)
- d) Storage (5)
- e) Sedimentation (5)