



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DEGREE IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2007/2008

Title of paper	:	WATER RESOURCES MANAGEMENT I
COURSE CODE	:	EHS 580
DURATION	:	2 HOURS
MARKS	:	100
INSTRUCTIONS	:	READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
	:	ANSWER ANY FOUR QUESTIONS
	:	EACH QUESTION CARRIES 25 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.

QUESTION ONE

- i. Why is water resources management said to be multi-disciplinary? (5 marks)
- ii. Mention and explain five components / aspects of sustainability in water resources management? (10 marks)
- iii. What do you understand by exchange of “virtual” water in water resources management and why it is so important in water management? (5 marks)
- iv. Mention the principles adopted in Dublin Conference on Water and the Environment in 1992. (5 marks)

QUESTION TWO

- i. Explain the key cross-sectoral water resources issues for the next century. (10 marks)
- ii. Explain five factors that distinguish supply versus demand in water resources management. (10 marks)
- iii. What is the disadvantage of supply oriented approach in water resources management? (5 marks)

QUESTION THREE

- i. Explain five factors that contribute to water scarcity in our environment. (10 marks)
- ii. Global water shortage is a recipe for international conflicts. Given an opportunity to work towards harmonizing different interest for the world water uses, what will you do to avoid international conflicts? (10 marks)
- iii. List five factors that contribute to unsustainable water resources development. (5 marks)

QUESTION FOUR

- i. Define demand management in water resource management and explain a situation that requires the water resources manager to create demand. (10 marks)
- ii. What are the factors influencing choice of supply and demand oriented measures in water resources management? (10 marks)
- iii. What is the main aim of demand management? (5 marks)

QUESTION FIVE

1. Define two types of planning in water resources management and say what the advantages of each are? (15 marks)
2. Give an estimate of the amount of “virtual” water that is equivalent with the production of 70kg of maize. If a ton of maize was exported to Mozambique how much virtual water is exported? (5 marks)
3. Mention two consumptive uses and three non-consumptive water uses. (5 marks)