



UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DEGREE IN WATER RESOURCES AND ENVIRONMENTAL
HEALTH MANAGEMENT

FINAL EXAMINATION PAPER 2015

TITLE OF PAPER : WATER RESOURCES MANAGEMENT II

COURSE CODE : EHM 321

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 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.

QUESTION ONE

- a) There is a growing perception that there is water resources scarcity in the SADC countries. Explain five reasons that may be the cause for water scarcity in Swaziland. **[Marks 20]**
- b) In a paragraph, explain the purpose of water resources management. **[Marks 5]**

QUESTION TWO

- a) In water resources management; explain two main components of a robust plan and mention three advantages of cyclic planning method over linear planning? **[Marks 11]**
- b) 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? **[Marks 10]**
- c) Mention two consumptive uses and two non-consumptive water uses. **[Marks 4]**

QUESTION THREE

- a. What are the five dimensions of water resources that are considered in Integrated Water Resources Management? **[Marks 5]**
- b. Explain the purpose of considering the five dimensions you have mentioned in (a) above in Integrated Water Resources Management. **[Marks 20]**

QUESTION FOUR

- a) What make water an important resource above all other natural resources? (Give four reasons). **[Marks 20]**
- b) What do you understand by the term ‘catchment area for a water course in relation to water resources management? **[Marks 5]**

QUESTION FIVE

- a) Describe five factors that contribute to global water shortage. **[Marks 10]**

- b) Describe the three guiding principles of the statement on water and sustainable development from the Dublin UNCEF Conference in 1992 with regards to water allocation disputing water as a free good? **[Marks 5]**
- c) List five factors that contribute to unsustainable water resources in development. **[Marks 10]**