

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

**DEGREE IN ENVIRONMENTAL HEALTH**

**MAIN EXAMINATION PAPER MAY 2018**

**TITLE OF PAPER : WATER RESOURCES MANAGEMENT I**

**COURSE CODE : EHM 321**

**DURATION : 2 HOURS**

**MARKS : 100 MARKS**

**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**
- THIS EXAMINATION CONSIST OF THREE PRINTED SHEETS INCLUDING THE COVER PAGE / INSTRUCTION PAGE**

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

**Question one**

- a) Define the term “water resources management”. (5 marks)
- b) Describe five problems that contribute to water resources scarcity in SADC region. (10 Marks)
- c) Using a sketch describe the hydrological cycle that avail water as resource in the SADC region. (10 marks)

**Question two**

- a) What is the main purpose of water resources management in Swaziland? (5 marks)
- b) You are employed to conduct a study on water resources use and management in one of a major irrigation dam in Botswana, describe the role of five professionals that will take part in you study. (10 marks)
- c) With an aid of a sketch, describe the catchment area of river basin. (10 marks)

**Question three**

- a) Describe five main dimensions of integrated water resources management (25 marks)

**Question four**

- a) What do you understand by river basin management? (5 marks)
- b) Describe the four key issues to be considered in water as an economic good and having value. (20 Marks)

**Question five**

- a) Describe five factors you will consider in the development of needs assessments using SWOT (cost and benefit) analysis for water resources development. (25 Marks)