



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2015/2016

**FOURTH YEAR SECOND SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR SCIENCE IN CLIMATE CHANGE AND
DEVELOPMENT WITH INFORMATION TECHNOLOGY**

MAIN CAMPUS

NCA 411: WATER MANAGEMENT IN A CHANGING WORLD

20th April
Date: ~~6th~~ May, 2016

Time: 2.30 - 4.30 pm

INSTRUCTIONS:

- Answer question ONE and any other TWO questions.
- Sketch maps and diagrams should be used whenever appropriate.



NCA 411: Water management in changing climate

- Q1 a)** Explain the **Four** principles of Integrated Water Resource Management (IWRM) as outlined in Agenda 21 and incorporated in 1992 Dublin conference (12marks).
- b) Explain three objectives addressed in the ministry of water and irrigation strategic plan 2005-2009 to manage water situation in Kenya (6marks)
- c) Discuss the Global paradigm shift in water management (6marks)
- d) Explain the actors involved in water management in Kenya (6marks)
- Q2.** Global atmospheric temperature is predicted to rise by approximately 4°C by 2080 (IPCC,2007). Discuss how this change will impact on agricultural water resources in different parts of the world (20marks).
- Q3.** Discuss how climate change will intensify agricultural water challenges in African countries (20 marks)
- Q4.** Discuss the opportunities available to invest in water resource management in the face of climate change. (20 marks)
- Q5.** Discuss strategies for water management in Kenya in the face of climate change, as outlined in the National Water Resource Management Strategy (NWRMS, 2010-2015) (20marks)
- Q6.** Explain the main components of Catchment Management Strategies (CMS) in Kenya (20marks)