



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

**THIRD YEAR FIRST SEMESTER EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN EARTH SCIENCE WITH
INFORMATION TECHNOLOGY**

(MAIN CAMPUS)

**NGA 303: WATER RESOURCES DEVELOPMENT AND
MANAGEMENT**

Date: 7th April, 2014

Time 11.15 a.m. – 1.30 p.m.

INSTRUCTIONS:

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

**NGA 303: WATER RESOURCES DEVELOPMENT AND
MANAGEMENT**

1. (a) Discuss the role of Water Resources Management Authority (WRMA). 14 marks

(b) Examine the impacts that are associated with the development of an irrigation scheme. 8 marks
(c) Explain the benefits of effective water governance in a catchment area. 8 marks
2. Examine why the health of an aquatic ecosystem is important for sustainable development. 8 marks
3. Explain the divergent principles that are enshrined in the Water Act 2002 to ensure best management practices in the water sector. 20 marks
4. Examine strategies used in integrated flood management to mitigate against negative impacts of floods. 20 marks
5. Explain how the other four pillars of sustainable development are related to the water sector. 20 marks
6. Discuss the merits and demerits of the Integrated Water Resources Management (IWRM) approach. 20 marks