



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

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

MAIN CAMPUS

NGA 404: IRRIGATION SYSTEMS MANAGEMENT

Date: 8th January, 2016

Time: 8.30 - 10.30 am

INSTRUCTIONS:

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



NGA 404: IRRIGATION SYSTEMS MANAGEMENT

1. a. Examine the need for optimization of water use. (6 marks)
b. Discuss the relative advantages and disadvantages of surface and subsurface drains. (8 marks)
c. Discuss water logging and how it can be managed. (6 marks)
d. Discuss the factors that affect crop water requirements. (10 marks)
2. Explain ways of planning and developing an irrigation project. (20 marks)
3. Examine the management strategies for any three irrigation methods. (20 marks)
4. Discuss any three types of dams meant for irrigation and how they can be managed. (20 marks)
5. a. Discuss any five components of irrigation water management. (10 marks)
b. Discuss the need for water user's association in an irrigation scheme. (10 marks)
6. Discuss on-farm development works in an irrigation scheme. (20 marks)