



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

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

(MAIN CAMPUS)

NGA 407: GIS APPLIED TO WATER RESOURCES

Date: 2nd April, 2014

Time: 2.45 – 5.00pm

INSTRUCTIONS:

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

NGA 407: GIS APPLIED TO WATER RESOURCES

1. (a) Examine the stages of spatial data handling that are necessary for management of water resources. 20 marks
(b) Explain the advantages of using GIS in the management of water resources. 10 marks
2. (a) Explain the process of inputting spatial data into a GIS environment. 10 marks
(b) Examine the use of GIS in Water Catchment management. 10 marks
3. Explain how the GIS can be used in floodplain management. 20 marks
4. Examine the use of GIS for monitoring surface water quality. 20 marks
5. Taking into account water resources, discuss issues that should be considered when siting a landfill using GIS. 20 marks
6. Discuss important steps that should be undertaken to implement a GIS project by a water service provider. 20 marks