



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2013/2014**

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

**(MAIN CAMPUS)**

**NCA 103: CAUSES AND INDICATORS OF CLIMATE  
CHANGE**

*Date: 18<sup>th</sup> July 2014*

*Time: 2.30 – 4.30 pm*

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**INSTRUCTIONS:**

- Answer question ONE and ANY other TWO Questions
- Use scatch maps and diagrams wherever appropriate



### **NCA 103: CAUSES AND INDICATORS OF CLIMATE CHANGE**

- Q1.a) Explain why the oceans are important for climate? (5 marks)
- b) What is a feedback mechanism? Give examples of positive and negative feedback mechanisms for a warming planet? (10 marks)
- c) Explain the theory of nuclear winter (5 marks)
- d) With an illustration, explain the conceptual model of climate change indicators (10 marks)
- Q2. Discuss the different roles of aerosols in the troposphere and in the stratosphere (20 marks)
- Q3. Explain the role of human activities in changing the Earth's climate? (20 marks)
- Q4 Explain the theory of Milankovitch (20 marks)
- Q5. Describe the following natural causes for climate change.
- i. Plate tectonics (10 marks)
  - ii. Sunspot activity (10 marks)
- Q6. There is increasing evidence that the frequency and intensity of many extreme weather events are changing. Discuss. (20 marks)