



**MASEÑO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2016/2017**

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

**MAIN CAMPUS**

**NCA 201: ATMOSPHERIC CIRCULATION AND CLIMATE  
CLASSIFICATION**

Date: 9<sup>th</sup> December, 2016

Time: 12.00 - 3.00 pm

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**INSTRUCTIONS:**

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



- 1a) Define atmospheric circulations and explain any three factors causing it. (10 Marks)
- b) Explain the effect of inter tropical convergence zone (ITCZ) on climate. (10 Marks)
- c) Differentiate between land and sea breezes (10 Marks).
2. Explain any **five** effects of atmospheric circulations (20 Marks).
- 3a) . Explain the effect of Chinook on a region's climate (10 Marks)
- b) Differentiate between mountain and valley winds. (10 Marks).
4. Explain the effects of any **five** air masses on the weather of a region. (20 Marks).
- 5a) State the elements of weather used in Koppen's climate classification. (4 marks).
- b) Describe any **four** Koppen's climatic regions. (16 Marks)
- 6) State the climatic characteristics of the following climatic regions
- a) Semi arid climate (10 Marks)
- b) Polar climate (10Marks)