



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2018 TRIMESTER

FACULTY OF ARTS AND SOCIAL SCIENCES

DEPARTMENT OF HUMANITIES

REGULAR PROGRAMME

GEO 214: CLIMATOLOGY

Date: APRIL 2018

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Differentiate between the following concepts and terms
- i) Climatology and Meteorology (2marks)
 - ii) Climatic variability and Climate Change (2marks)
 - iii) Albedo and Insolation (2marks)
- b) Identify and explain any three causes of climate change (6marks)
- c) Examine the effect of ITCZ on the regional climates (4marks)
- d) Describe the global atmospheric circulations (4marks)
- e) Explain how the following factors affect regional climates
- i) Altitude (3marks)
 - ii) Continentality (3marks)
- f) Describe the thermal structure of the atmosphere. (4 marks)
- Q2. a) Assess any four terrestrial climate variables and their measurements (8 marks)
- b) Describe the processes involved in hydrological cycle. (12 marks)
- Q3. a) Discuss any two climate classifications (8 marks)

- b) Explain the effect of climate change on agriculture and food security **(12 marks)**
- Q4. a) Using illustration describe the energy radiation budget **(8 marks)**
- b) Discuss the interaction between solar radiation and the atmosphere **(12marks)**
- Q5. a) Discuss the chemical composition of the atmosphere **(12 marks)**
- b) Examine the important functions of the following in the atmosphere
- i) Carbon dioxide **(4marks)**
 - ii) Water vapour **(4marks)**

END