



UNIVERSITY OF EMBU

2017/2018 ACADEMIC YEAR

SECOND SEMESTER EXAMINATIONS

FORTH YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION
GEG 401: CLIMATOLOGY

DATE: APRIL 9, 2018

TIME: 11:00AM-1:00PM

INSTRUCTIONS:

Answer Question ONE and ANY Other TWO Questions.

QUESTION ONE (30 MARKS)

- a) Differentiate between meteorology and climatology (5 marks)
- b) Briefly give the historical evolution of climatology as branch of Physical Geography (5 marks)
- c) Explain the term “urban heat island” (5 marks)
- d) Distinguish between climate change and global warming (5 marks)
- e) Explain how cyclonic precipitation occurs (5 marks)
- f) State Bergeron – Findeisen theory (5 marks)

QUESTION TWO (20 MARKS)

By aid of a well labelled diagram explain the vertical structure of the atmosphere (20 marks)

QUESTION THREE (20 MARKS)

- (a) Describe the characteristics of any two low level and two high level clouds (15 marks)
- (b) Explain two conditions that a thermometer screen must meet (5 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss the causes and impacts of global warming on the environment (15 marks)
- b) Distinguish between mountain breeze and valley breeze (5 marks)

QUESTION FIVE (20 MARKS)

By aid of a well-labelled diagram, explain the solar energy cascade (20 marks)

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