



*(Knowledge for development)*  
**KIBABII UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**2017/2018 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**FOURTH YEAR FIRST SEMESTER**

**FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS**

**COURSE CODE:** GEO 421

**COURSE TITLE:** CLIMATOLOGY

**DATE:** 19<sup>TH</sup> October, 2018

**TIME:** 8:00AM – 10:00AM

**INSTRUCTIONS TO CANDIDATES**

1. Answer Question ONE (Q1) Compulsory
2. Answer any other TWO (2) Questions
3. Use illustration where appropriate

This paper consists of 2 printed pages. Please Turn Over.

### QUESTION ONE

- a. Explain the following atmospheric terminologies as applied in climate studies:
- i. Adiabatic lapse rate (4 marks)
  - ii. Coriolis effect (5 marks)
  - iii. Advection (4 marks)
- b. Distinguish between the following terms:
- i. Aridity and drought (4 marks)
  - ii. Dew and rainfall (4 marks)
- c. Describe the troposphere as a layer of the atmosphere (9 marks)

### QUESTION TWO

Discuss the potential impacts of climate change on pastoralism in Sub-Saharan Africa. (20 marks)

### QUESTION THREE

Discuss the different adaptation techniques Sub-Saharan African states can put in place in order to cope with the effects of global climate change. (20 marks)

### QUESTION FOUR

- a. Define climate classification and explain the two methods involved in it. (8 marks)
- b. Explain the four factors used in classifying climates (12 marks)

### QUESTION FIVE

- a. Examine any three causes of climatic seasons (6 marks)
- b. Describe the process of greenhouse effect and global warming over the earth's troposphere. (14 marks)