



(Knowledge for development)
KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2017/2018 ACADEMIC YEAR

MAIN EXAMINATION

FOURTH YEAR FIRST SEMESTER

FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS

COURSE CODE: GEO 421

COURSE TITLE: CLIMATOLOGY

DATE: DECEMBER 4, 2018

TIME: 11:30AM – 1:30PM

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 1

- a. Outline any three functions of atmospheric air (3 marks)
- b. Explain the following terms as applied in climate studies:
 - i. Insolation (3 marks)
 - ii. Adiabatic lapse rate (3 marks)
 - iii. albedo (3 marks)
- c. Highlight any three importance of greenhouse effect (3 marks)
- d. Describe the troposphere and the stratosphere as layers of the atmosphere (15 marks)

QUESTION 2

Describe the three global latitudinal circulation cells (20 marks)

QUESTION 3

- a. Describe the process involved in the earth's global warming (8 marks)
- b. Explain the contribution of the hydrosphere and the biosphere to the earth's greenhouse effect phenomena (12 marks)

QUESTION 4

Examine the potential impacts of climate change on pastoralism in East Africa (20 marks)

QUESTION 5

Discuss the major types of rainfall experienced over different parts of East Africa (20 marks)