



(Knowledge for development)

20

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2016/2017 ACADEMIC YEAR

SPECIAL/SUPP EXAMINATION

FOURTH YEAR FIRST SEMESTER

FOR THE DEGREE OF BACHELOR OF EDUCATION ARTS

COURSE CODE: GEO 421

COURSE TITLE: CLIMATOLOGY

DATE: September 15, 2017

TIME: 3 – 5 PM

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. Define the following atmospheric terminologies
 - i. Vapour pressure (2 marks)
 - ii. Absolute humidity (2 marks)
 - iii. Dew point (2 marks)
- b. 100g of vapour is contained in 30m^3 at 20°C . At the same temperature, 30m^3 would reach saturation point when vapour of 600g is added. What would be the relative humidity of that air? (4 marks)
- c. Describe the process of greenhouse effect and global warming over the earth's troposphere. (15 marks)
- d. Highlight the importance of greenhouse effect (5 marks)

QUESTION TWO

Examine the effects of tropospheric boundary layer formation in the context of vertical energy transfer, atmospheric pollution, turbulence and precipitation formation. (20 marks)

QUESTION THREE

- Discuss any three mechanisms responsible for cloud formation. (12 marks)
- Discuss any two types of fogs. (8 marks)

QUESTION FOUR

Discuss the major natural causes of global climate change. (20 marks)

QUESTION FIVE

- a. Discuss any three types of local winds. (15 marks)
- b. Discuss the importance of the ITCZ in climate moderation (5 marks)