



KIBABII UNIVERSITY
UNIVERSITY EXAMINATION
ACADEMIC YEAR 2021 /2022
FOURTH YEAR SECOND SEMESTER
MAIN EXAMINATIONS
BACHELOR OF EDUCATION ARTS

COURSE CODE: GEO 421

COURSE TITLE: CLIMATOLOGY

DATE: SEPTEMBER 2, 2022

TIME: 9 – 11 AM

DURATION: 2HOURS

INSTRUCTIONS TO CANDIDATES

ANSWER **ALL** QUESTIONS IN SECTION (A) AND ANY OTHER TWO QUESTIONS IN SECTION (B)

▶ **KIBU OBSERVES ZERO TOLERANCE TO EXAMINATION CHEATING**

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Kibabii University ISO 9001:2015 Certified
Knowledge for Development

SECTION A (compulsory questions)

1. (a). Explain the following terms as applied in climate studies:
- i. Coriolis force (3 marks)
 - ii. Aridity (3 marks)
 - iii. Greenhouse effect (4 marks)
- (b). Explain the following atmospheric phenomena:
- i. Variation in atmospheric height from the equator to the poles. (6 marks)
 - ii. Change in temperature with change in height within the troposphere and stratosphere. (8 marks)
- (c). Explain any two roles of clouds in moderation of the earth's surface temperature. (6 marks)

SECTION B (Optional Questions)

2. Describe the three global latitudinal circulation cells. (20 marks)
3. (a). Citing examples from across the globe, discuss the contribution of the following to global climate change.
- (i). Plate tectonics (5 marks)
 - (ii). Urbanization (7 marks)
- (b). Explain the role of vegetation in mitigating climate change. (8 marks)
4. Highlight any five African traditional climate related beliefs and explain your present scientific interpretation. (20 marks)
5. Discuss the potential impact of climate change on ONE of the following sectors in Africa:
- Either
- Energy resources in Africa. (20 marks)
- Or**
- Agriculture in East Africa (20 marks)