



ALUPE UNIVERSITY
COLLEGE

... Bastion of Knowledge...

P. O.Box 845-50400 Busia(K)
principal@auc.ac.ke
Tel: +254 741 217 185
+254 736 044 469
off Busia-Malaba road

**OFFICE OF THE DEPUTY PRINCIPAL
ACADEMICS, RESEARCH AND STUDENT AFFAIRS**

UNIVERSITY EXAMINATIONS

2020/2021 ACADEMIC YEAR

**THIRD YEAR FIRST SEMESTER REGULAR MAIN
EXAMINATION**

**FOR THE DEGREE OF BACHELOR OF
EDUCATION (ARTS/B.STUDIES)**

COURSE CODE: GEO 310

COURSE TITLE: CLIMATOLOGY

DATE: 8TH MARCH, 2021

TIME: 9.00 AM – 12.00 NOON

INSTRUCTION TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 3 PRINTED PAGES

PLEASE TURN OVER

GEO 310: CLIMATOLOGY

STREAM: BED (Arts)

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer Question **ONE** and any other **TWO** questions.*
- ii. Maps, sketches and diagrams should be used whenever they serve to illustrate the answer.*
- iii. Do not write on the question paper*

Question One

- a) Define the following terms:
 - i. Climate variability (2 Marks)
 - ii. Dynamic climatology (2 Marks)
 - iii. Climate vulnerability (2 Marks)
 - iv. Mitigation (2 Marks)
- b) Explain how climatology relies on meteorology. (4 Marks)
- c) Highlight THREE evidence of global warming in Africa. (6 Marks)
- d) Adaptation is key in dealing with climate change and variability especially in developing countries like Kenya. Discuss appropriate strategies which the country can adopt toward adaption. (12 Marks)

Question Two

- a) Explain how any THREE of the following factors affect temperature:
 - (i) Cloud cover (4 Marks)
 - (ii) Characteristics of the surface (4 Marks)
 - (iii) Latitude (4 Marks)
 - (iv) Continentality (4 Marks)
- b) Describe any FOUR forms of precipitation. (8 Marks)

Question Three

- a) Define is urban heat island? (2 Marks)
- b) Highlight THREE main causes of urban heat island. (6 Marks)
- c) Explain SIX suggestions which you can recommend to the Nairobi County government in the efforts of dealing with the problem of urban heat island. (12 Marks)

Question Four

Discuss the historical development of climatology. (20 Marks)

Question Five

Discuss international policies and treaties related to climate change and environment. (20 Marks)
