



MACHAKOS UNIVERSITY

UNIVERSITY EXAMINATIONS FOR 2021/2022 ACADEMIC YEAR

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

**FOURTH YEAR SUPPLEMENTARY/SPECIAL
EXAMINATION FOR BACHELOR OF ARTS/ BACHELOR OF EDUCATION ARTS /
BACHELOR OF EDUCATION ARTS WITH SPECIAL NEEDS**

AGE 409: APPLIED CLIMATOLOGY

DATE: 9/3/2023

TIME: 2.00 -4.00 PM

INSTRUCTIONS: Answer QUESTION ONE and any other TWO QUESTIONS.

QUESTION ONE (30 MARKS)

- a) Define the following concepts:
- i. Meteorology (2 marks)
 - ii. Applied climatology (2 marks)
 - iii. Micro-climate (2 marks)
- b) Distinguish between climate change and global warming. (4 marks)
- c) Describe any FIVE ways in which climate data can be collected (10 marks)
- c) Briefly explain the nature of climatology. (10 marks)

QUESTION TWO (20 MARKS)

Write an essay on the effects of climate change on agriculture. (20 marks)

QUESTION THREE (20 MARKS)

Assess the relationship between micro-climate and the following:

- i. Soil moisture (5 marks)

- ii. Air moisture (5 marks)
- iii. Air humidity (5 marks)
- iv. Wind (5 marks)

QUESTION FOUR (20 MARKS)

- a) Examine the human related climate change causes. (15 Marks)
- b) Recommend practical measures that can be adopted to mitigate climate change effects in Kenya. (5 marks)

QUESTION FIVE (20 MARKS)

- a) Citing specific examples discuss the factors that contribute to microclimates in urban areas. (20 Marks)