



TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES
UNIVERSITY EXAMINATION FOR:
BACHELOR OF SCIENCE IN MARINE RESOURCE MANAGEMENT
BSMR 15S/YEAR 3/ SEMESTER 1
AES 4301: COASTAL CLIMATE AND DYNAMICS
SPECIAL/ SUPPLEMENTARY EXAMINATIONS
SERIES: SEPTEMBER 2018
TIME: 2 HOURS

Instructions to Candidates

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

This paper consists of two printed pages.

Mobile phones are NOT allowed in the examination room

QUESTION ONE. (30 MARKS)

- a) Define the following terms
- i. Paleoclimatology (2marks)
 - ii. Anthropogenic climate (2marks)
- b) Differentiate between climate change and climate variability (4marks)
- c) Briefly discuss FOUR potential impacts on coastal climate change (4marks)
- d) i. Describe briefly “MAINSTREAMING” in climate change. (2marks)
- ii Mention THREE roles played by the government and non-governmental sector in fostering successful mainstreaming (3marks)
- e) State FOUR greenhouse gases that contribute to the greenhouse effect (4marks)
- f) Outline FIVE main Köppen’s classification climatic types (5marks)
- g) Briefly explain the “earth’s sphere” and its significance to climate. (4marks)

QUESTION TWO. (20 MARKS)

- a. Discuss the different sub disciplines within climatology (10marks)
- b. Discuss the effects of greenhouse effect (10marks)

QUESTION THREE. (20 MARKS)

Discuss climate change adaptation measures (20marks)

QUESTION FOUR. (20 MARKS)

Discuss the abiotic change in coastal marine environments (20marks)

- a. Physically driven changes (10marks)
- b. Chemically driven changes (10marks)

QUESTION FIVE. (20 MARKS)

Discuss climate change threats to the coastal environment. (20marks)