

Maseno University
School of Environment and Earth Sciences
Department of Climate Change and Development
NCA 203: Climate Change in the Tropics and Arid and Semi Arid Environments
Examination 2016

Instructions: Answer Questions ONE COMPULSORY and Any other TWO Questions

Q1.

- a. Explain the main characteristics of **Three** subtypes of tropical climate (12marks).
- b. Describe briefly the near-term projected changes for the following climatic phenomena:
 - i. Global mean surface air temperature (4marks)
 - ii. Changes in precipitation (4marks)
 - iii. Tropical circulation (4marks)
- c. Briefly discuss the concept of 'compensated reduction' as used in Kyoto Protocol of the UNFCCC (6marks)

Q2. Discuss how the following sectors in ASAL environment are vulnerable to Global Climate Change

- (a) Livestock (5marks)
- (b) Tourism (5marks)
- (c) Agriculture (5marks)
- (d) The dry lands as environmental resource (5marks)

Q3. (a) Describe the distribution of tropical climate over the globe by giving its main characteristics (10marks)

(b) Discuss how the position of Kenya on the Globe makes it more vulnerable to the predicted climate changes in the tropics. (10marks)

Q4. Discuss **Five** resources in ASAL environment and how they can be affected by projected climate changes. (20marks)

Q5. (a) Discuss the causes of deforestation in Kenya (10marks)

(b) Discuss the predicted impacts of climate change in the tropics (10marks).

- Q6.** (a) The climate of the Horn of East Africa is becoming more variable, less predictable and trends towards future changes are emerging. Explain **four** of these emerging trends by giving specific examples (10marks).
- (b) Briefly discuss how pastoralists in Kenya can be adapted to climate changes (10marks)