

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF MASTER OF ENVIRONMENTAL SCIENCE

NARE 841: CLIMATE CHANGE AND ECOLOGICAL PROCESSES

STREAMS: MSC ENSC Y1S2

TIME: 3 HOURS

DAY/DATE: MONDAY 05/07/2021

11.30 A.M. – 2.30 P.M.

INSTRUCTIONS:

- **Answer ALL in section A and any other TWO in section B.**
- **Do not write anything on the question paper.**

SECTION A: (20 MARKS)

- Q1. What is the evidence that climate change is occurring? (3 marks)
- Q2. Briefly describe how extreme weather events impact on local ecosystem composition and dynamics. (6 marks)
- Q3. How does climate change influence the invasion process of non-native species in an ecosystem? (5 marks)
- Q4. Briefly describe the climate change threats to freshwater ecosystems. (6 marks)

SECTION B: 40 MARKS

- Q5. Discuss the approach for taking an inventory of the soil organic carbon in a grassland ecosystem. (20 marks)
- Q6. How does landscape heterogeneity influence the distribution and the fluctuations of essential resources like water and nutrients? (20 marks)
- Q7. Discuss ecosystem based approaches for adaptation to climate change in an ecosystem. (20 marks)
-