



*“Investing in Africa’s future”*

**COLLEGE OF HEALTH, AGRICULTURE & NATURAL SCIENCES**

**NACP 216: ECOLOGY**

**END OF FIRST SEMESTER FINAL EXAMINATIONS**

**NOVEMBER/ DECEMBER 2022**

**LECTURER: MR. MTAITA T A.**

**DURATION: 3 HOURS**

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### **INSTRUCTION**

**Choose and answer Four Questions**

### **Question One**

- a) How can humans rehabilitate and restore damaged ecosystems? [5]
- b) Discuss the determinants of savannah. [10]
- c) Unpack the impact of climate change in ecosystems and clarify what we can do as good stewards of the earth. [10]

### **Question Two**

- a) Differentiate between r and k in wildlife reproduction. [5]
- b) What are the three principles to guide people towards sustainable lifestyle. [5]
- c) Analyze different ways in which societies abuse nature and suggest workable solutions. [15]

### **Question three**

- a) Examine the determinants of savannah. [5]
- b) What can societies learn from nature about living sustainably? [5]
- c) With reference to energy flow in an ecosystem, discuss the concepts of food chain, food web and ecological pyramids. [15]

### **Question Four**

- a) Address the causes of ecological refugee and suggest how to ameliorate the challenge. [10]
- b) Discuss the applications of ecological knowledge in daily life. [15]

### **Question Five**

- a) Analyze the causes of disturbance in an ecosystem and suggest what people can do to reduce the impact of disturbances. [10]
- b) Discuss the causes, effects and solutions to the problem of veld fires. [15]

### **Question Six**

- a) Examine the factors influencing natality and mortality. [5]
- b) Differentiate between the following ecological concepts. [10]
  - i. Autotrophs and heterotrophs.
  - ii. Energy flow and nutrient flow in an ecosystem.
  - iii. Ecological habitat and Ecological Niche.
  - iv. Biotic and abiotic factors.
  - v. Population and community.
- c) Discuss the common relationships in an ecosystem. [10]

**END OF EXAMINATION PAPER**