



“Investing in Africa’s future”
COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

PAPER ONE

COURSE TITLE: NACP 216: ECOLOGY
END OF FIRST SEMESTER EXAMINATIONS
DATE: November/December 2023
LECTURER: Mr. MTAITA T A.
DURATION: 3HRS

INSTRUCTION

ANSWER FOUR QUESTIONS

Question One

- a) Clearly distinguish between 'r' and 'k' species and indicate how ecologists can take advantage of this distinction. **[10]**
- b) Discuss the internal and external factors influencing wildlife reproduction. **[15]**

Question Two

- a) Examine the main causes of population dynamics. **[10]**
- a) Unpack the impact of climate change in ecosystems and clarify what we can do as good stewards of the earth. **[15]**

Question Three

- a) Examine the determinants of savannah. **[10]**
- b) Discuss the different ways in which humans abuse nature and suggest ways to ameliorate the problem. **[15]**

Question Four

- a) Discuss five modes of wild life conservation management **[10]**
- b). Analyse the causes, effects and remedies to the problem of veld fires worldwide **[15]**

Question Five

- a) Differentiate between the following: **[10]**
 - i. Autotrophs and heterotrophs
 - ii. Ecological Niche and Ecological habitat
 - iii. Ecotone and edge effect
 - iv. Food chain and food web
 - v. Population and community
 - vi. Energy flow and Nutrient flow in ecosystems
 - vii. Productivity and yield
 - viii. Pyramid of numbers and pyramid of energy
 - ix. Gross primary productivity and Net primary productivity
 - x. Biotic and abiotic factors
- b) Discuss the applications of ecological knowledge in our daily lives. **[15]**

Question Six

a) Discuss the main challenges as we become ecological leaders. **[10]**

b) Examine the importance of ecological knowledge in communities. **[15]**