



The Co-operative University of Kenya

END OF SEMESTER EXAMINATION DECEMBER-2019

**EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN DISASTER,
RISK MANAGEMENT AND SUSTAINABLE DEVELOPMENT**

UNIT CODE: CODM 2204

UNIT TITLE: PRINCIPLES OF ECOLOGY & BIODIVERSITY

DATE: DECEMBER, 2019

TIME:

INSTRUCTIONS:

- Answer question **ONE (compulsory)** and any other **TWO** questions

QUESTION ONE

- (a) Define the following terms (12 marks)
- Ecotone
 - Habitat fragmentation
 - Paper parks
 - Invasive engineer
 - The rivet-popper hypothesis
- (b) Discuss the impacts of light and noise pollution on ecosystems and biodiversity (10 marks)
- (c) Discuss the impacts of land-grabbing on African's natural environment (10 marks)

QUESTION TWO

- (a) How do the theories of Island biogeography and species- area relationship predict species extinction (5 marks)
- (b) Discuss edge effects (5 marks)
- (c) Discuss persecution of species and how it impacts biodiversity in Africa. Give examples (5 marks)

QUESTION THREE

- (a) Discuss the SEVEN methods used to estimate the market value ecosystem services (14 marks)
- (b) Distinguish between species diversity, genetic diversity and ecosystem diversity (6 marks)

QUESTION FOUR

- (a) What role do wetland plays in conserving soil and water quality (5 marks)
- (b) What is a keystone species. Give examples of their role in the ecosystem (4 marks)
- (c) Discuss the impacts of climate change on terrestrial ecosystem (10 marks)

QUESTION FIVE

- (a) Discuss the characteristics of threatened species (10 marks)
- (b) Discuss the impacts of habitat loss on African's ecosystem (10 marks)