



MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN BIOLOGY

SCB 407: BIODIVERSITY AND CONSERVATION BIOLOGY

DATE: 22/7/2019

TIME: 2.00-4.00 PM

INSTRUCTIONS

1. Answer Question 1 (compulsory) and **any two** questions in Section B.
2. Use clean well labelled diagrams wherever appropriate.

SECTION A

QUESTION ONE

- a) Briefly explain the history of conservation biology. (3 marks)
- b) List atleast Three principles of conservation Biology (3 marks)
- c) Outline how umbrella species can be used as a tool for restoring biodiversity (3 marks)
- d) As a conservationist would you advocate for economic incentives to benefit both biodiversity and the human life? (3 marks)
- e) Give atleast THREE factors that make populations vulnerable to extinction (3 marks)
- f) Describe how loss of genetic diversity in species causes biodiversity loss (3 marks)
- g) Explain the mechanisms for implementation, monitoring and revision of biodiversity legislation (3 marks)
- h) Demonstrate how climate change affects coastal habitats (3 marks)
- i) Outline the social-economic benefits of a healthy ecosystem (3 marks)

- j) Human population is considered to be one of the major contributors to loss of biodiversity. However in the recent past there is optimism that the scenario might change. Explain (3 marks)

SECTION B

QUESTION TWO

Describe the major threats to biodiversity (20 marks)

QUESTION THREE

Demonstrate how the Response Strategy principles are applied to mitigate biodiversity loss (20 marks)

QUESTION FOUR

Giving examples, describe invasive species and how they impact biodiversity (20 marks)

QUESTION FIVE

As a legal representative of biodiversity conservation in your county, Describe the principles applicable to biodiversity law and National Biodiversity Strategies and Action Plans (NBSAP). (20 marks)