



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE

IN AGRICULTURAL EDUCATION AND EXTENSION

SCB 407: BIODIVERSITY AND CONSERVATION BIOLOGY

DATE:20/12/2017

TIME:2.00-4.00 PM

INSTRUCTIONS

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

SECTION A

1. a) Describe three ecosystem services supported by biodiversity (3 marks)
- b) Describe the following terminologies as used in conservation studies (3 marks)
 - i. Genetic diversity
 - ii. Ecosystem diversity
- c) Describe three factors leading to habitat loss. (3 marks)
- d) Explain three flavors of Ecosystem services (3 marks)
- e) Distinguish between Intraspecific and interspecific diversity (3 marks)
- f) Explain three ways through which biotechnology assists the conservation of plant and animal genetic resources (3 marks)
- g) Describe three features of wildlife sanctuary (3 marks)
- h) Explain the steps required to conserve forest cover in Kenya (3 marks)
- i) Describe three international agreements that commit countries to conserve biodiversity, develop resources for sustainability and share the benefits resulting from their use (3 marks)
- j) Explain the role of genetic pollution in threatening endemic species with extinction (3 marks)

SECTION B: CHOOSE AND ANSWER ANY TWO QUESTIONS.(40 MARKS)

2. Discuss the uses and values of biodiversity (20 marks)
3. Discuss five biodiversity –related conventions on biological diversity (20 marks)
4.
 - a) Citing appropriate examples explain how global warming is a major potential threat to biodiversity (10 marks)
 - b) Explain how biotechnology is applied to biodiversity describing its impacts (10 marks)
5.
 - a) Discuss the role of indigenous knowledge on biodiversity conservation (12 marks)
 - b) Explain how farmers can be excellent conservators of biodiversity (8 marks)