MACHAKOS UNIVERSITY

University Examinations 2019/2020 academic Year

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

SCB 407: BIODIVERSITY AND CONSERVATION BIOLOGY

DATE: 20/1/2021 **TIME: 2.00-4.00 PM**

INSTRUCTIONS

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

SECTION A

QUESTION ONE (COMPULSORY) (30 MARKS)

a) Describe three ecosystem services supproted by biodiversity (3 marks)

b) Describe the following terminogoies as ussed in conservation studies (3 marks)

i. Biodiveristy hotspot

ii. Genetic diversity

iii. Ecosystem diversity

c) Describe three factors leading to habitat loss. (3 marks)

d) Explain three flavors of Ecosystem services (3 marks)

e) Distingish 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 santuary (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 threating endemic species with extinction (3 marks)

SECTION B: CHOOSE AND ANSWER ANY TWO QUESTIONS.

QUESTION TWO (20 MARKS)

Discuss five uses and values of biodiversity

QUESTION THREE (20 MARKS)

Discuss five biodiversity –related conventions on biological diversity

QUESTION FOUR (20 MARKS)

a) Giving 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)

QUESTION FIVE (20 MARKS)

a) Discuss the role of indegenous knowledge on biodiversity conservation (12 marks)

b) Explain how farmers can be excellent conservators of biodiversity (8 marks)