



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FOURTH YEAR SUPPLEMENTARY/SPECIAL EXAMINATION FOR

BACHELOR OF SCIENCE IN AGEDE

SCB 407: BIODIVERSITY AND CONSERVATION BIOLOGY

DATE: 16/3/2022

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 1. – Compulsory (30 marks)

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

SECTION B: choose and answer any two questions.

2. Discuss five uses and values of biodiversity (20 marks)
3. Discuss five biodiversity –related conventions on biological diversity (20 marks)

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- i. Giving appropriate examples explain how global warming is a major potential threat to biodiversity (10 marks).
- ii. Explain how biotechnology is applied to biodiversity describing its impacts (10 marks)

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- i. Discuss the role of indigenous knowledge on biodiversity conservation. (12 marks)
- ii. Explain how farmers can be excellent conservators of biodiversity (8 marks)