



UNIVERSITY OF EMBU

2016/2017 ACADEMIC YEAR

FIRST SEMESTER EXAMINATION

FIRST YEAR EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE IN

AGRICULTURAL EDUCATION AND EXTENSION

AEX 103: BIODIVERSITY OF VERTEBRATES AND INVERTEBRATES

DATE: NOVEMBER 29, 2016

TIME: 2:00-4:00

INSTRUCTIONS:

Answer Question ONE and ANY other TWO Questions

QUESTION ONE (30 MARKS)

- a) Distinguish between Paleozoic and Cenozoic eras of evolution (6 marks)
- b) Explain the importance of genetic diversity (4 marks)
- c) Explain ways of conserving diversity (3 marks)
- d) Briefly discuss the respiratory system in insects (6 marks)
- e) Explain the following terms as used in animal reproduction (6 marks)
 - i. Ametabolous
 - ii. Hemimetabolous
 - iii. holometabolous
- f) Explain the mechanisms that can be employed in Amphibians conservation (5 marks)

QUESTION TWO (20 MARKS)

- a) With a suitable illustration, explain the digestive system of insects (12 marks)
b) Explain the four categories of muscles in insects (8 marks)

QUESTION THREE (20 MARKS)

- a) Discuss the methods employed in fish conservation (10 marks)
b) Explain the causes of amphibian decline (10 marks)

QUESTION FOUR (20 MARKS)

- a) Explain the term adaptive radiation and the features used to identify it (8 marks)
b) Discuss the threats faced by birds and the conservation techniques used to protect them (12 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss the insect's sense organs and how they enhance their survival (10 marks)
b) Explain the endocrine system of insects (10 marks)

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