



# **MAASAI MARA UNIVERSITY**

**REGULAR UNIVERSITY EXAMINATIONS  
2018/2019 ACADEMIC YEAR  
FIRST YEAR SECOND SEMESTER**

**SCHOOL OF TOURISM & NATURAL RESOURCES  
MANAGEMENT  
CERTIFICATE IN TOURISM AND WILDLIFE  
MANAGEMENT**

**COURSE CODE: CTW 016  
COURSE TITLE: BIOLOGICAL SCIENCES II**

**DATE: 4<sup>TH</sup> DECEMBER, 2018**

**TIME: 8.30 – 10.30 AM**

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**INSTRUCTION TO CANDIDATES:**

- This paper has two sections A & B.
- Answer question **ONE** in section A and any **TWO** in section B.

This paper consists of 2 printed pages. Please turn over.

**SECTION A: QUESTION ONE IS COMPULSORY (30mks)**

**QUESTION 1**

- (i) Give meanings of the following terms (2mks)
  - (a) Animal biology
  - (b) Ethology
- (ii) Distinguish between the following terms: (6mks)
  - (a) Protostome and deuterostome
  - (b) Coelomate and pseudocoelomate
  - (c) Protozoa and metazoan
- (iii) State the distinguishing features between prokaryotes and eukaryotes. (5mks)
- (iv) Briefly explain the features used to classify animals. (3mks)
- (v) While giving examples explain the various sources of binomial names. (10mks)
- (vi) How does the segmentation of an annelid worm differ from the repeating units of the body of a tapeworm? (4mks)

**SECTION B: ANSWER ANY TWO QUESTIONS (40MKS).**

**QUESTION 2**

- 1. State **three** theories that explain the origin of metazoan. (3mks)
- 2. Using a flow diagram illustrate the levels of organization of metazoans. (10mks)
- 3. Highlight **four** importance of using binomial nomenclature system. (4mks)
- 4. Identify **three** domains of classification. (3mks)

**QUESTION 3**

- i. While giving examples in each case describe **three** main animal body plans. (6mks)
- ii. Differentiate between Archaeobacteria and Eubacteria. (4mks)
- iii. How does the animal's body size affect its energy requirements? (2mks)
- iv. State the rules of writing binomial names. (3mks)
- v. State the characteristics of birds. (5mks)

**QUESTION 4**

- i. Identify **three** kingdoms of life consisting of multicellular eukaryotic organisms. (3mks)
- ii. Explain **four** facts that support the classical colonial theory. (4mks)
- iii. Other than body size, explain two factors affecting animal's energy requirement. (4mks)
- iv. Describe the **two** major cavities found in vertebrate animals. (4mks)
- v. State **five** characteristics of animals. (5mks)

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