



MAASAI MARA UNIVERSITY

**REGULAR UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER**

**SCHOOL OF TOURISM AND NATURAL RESOURCE
MANAGEMENT**

**DEPARTMENT OF ENVIRONMENTAL STUDIES,
FORESTRY AND AGRICULTURE**

BACHELOR OF ENVIRONMENTAL STUDIES

COURSE CODE: EBH 303

**COURSE TITLE: TROPICAL TERRESTRIAL
COMMUNITIES AND THEIR CONSERVATION**

DATE: 16TH APRIL, 2018

TIME: 0830 - 1030AM

INSTRUCTIONS TO CANDIDATES

- (a) Answer ALL the Questions in Section A
(b) Answer ANY THREE Questions in Section B

SECTION A (25 MARKS)

Attempt ALL questions in this section.

1. Explain the C₄ CO₂ metabolic pathway and point out how it differs from C₃. State why plants have evolved this metabolic pathway.
(5 MARKS)
2. State 4 ecosystem services Kakamega forest provides and how any of the ecosystem services can be harnessed for local community sustainable development.
(5 MARKS)
3. Write short notes on the Inter Tropical Convergence Zone (ITCZ) and its effects in the tropics
(5 MARKS)
4. Citing specific examples, explain why environmental impacts of climate change are expected to be more severe in the tropics
(5 MARKS)
5. Using a labelled diagram, describe the structure of a typical rain forest
(5 MARKS)

SECTION B

Attempt ANY THREE questions.

6. Discuss the physiological, behavioural and morphological adaptations plants and animals have evolved to live in water stressed environments.
(15 MARKS)
7. Discuss the ecological role of fire in the savanna **(15 MARKS)**
8. Discuss the theories advanced to explain the high species diversity in the tropics
(15MARKS)
9. Discuss the theory of Island Biogeography and its application in tropical biodiversity conservation
(15 MARKS)

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