



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL, PHYSICAL, MATHEMATICS AND ACTUARIAL SCIENCES
UNIVERSITY SPECIAL EXAMINATIONS FOR THE DEGREE OF BACHELOR OF
BIOLOGICAL SCIENCES

FIRST YEAR SECOND SEMESTER ACADEMIC YEAR 2020/2021

MAIN CAMPUS - REGULAR

COURSE CODE: SBB 9106

COURSE TITLE: FUNDAMENTALS OF ECOLOGY AND CONSERVATION

EXAM VENUE: **STREAM: (BIO)**

DATE: **EXAM SESSION:**

TIME:

Instructions

- 1. Answer ALL questions in Section A (compulsory) and ANY TWO questions in Section B**
 - 2. Candidates are advised not to write on the question paper**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)

1. Explain your understanding of the following terms i) Ecology ii) Ecosystem iii) Biome (3 marks)
2. Briefly describe how edaphic factors affect plant community distribution. (3 marks)
3. Explain why trees in Kakamega forest never invests more resources in below ground biomass. (2 marks)
4. Differentiate between allelopathy and symbiotic interactions. (2 marks)
5. Explain the 2nd law of thermodynamics in relation to trophic levels. (3 marks)
6. State the effects of herbivores on Nitrogen cycling in an ecosystem (3 marks)
7. Differentiate between fundamental niche and realized niche. (3 marks)
8. List demographic factors that influence population size. (4 marks)
9. State the ways by which man affects plant communities. (4 marks)
10. Explain why tundra biome remains waterlogged despite the low levels of precipitation. (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Using illustrations, briefly describe hydrological and Nitrogen cycles. (20 marks)
12. Write an essay on east African aquatic ecosystems. (20 marks)
13. a) Briefly explain why tropical regions have high species diversity compared to temperate regions. (6 marks)
b) Giving examples, discuss three abiotic factors that determine distribution and abundance of plant communities. (14 marks)
14. Citing relevant bodies, discuss wildlife conservation and management in Kenya. (20 marks)