



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BACHELOR
OF SCIENCE IN BIOLOGICAL SCIENCES
SECOND YEAR FIRST SEMESTER 2018/2019 ACADEMIC YEAR
MAIN CAMPUS - REGULAR

COURSE CODE: SBI 3217
COURSE TITLE: FUNDAMENTALS OF AQUATIC ECOLOGY
EXAM VENUE: **STREAM:** (BSC)
DATE: **EXAM SESSION:**
TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in Section A and Any two questions in Section B**
 - 2. Candidates are advised not to write on 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. Define the following terms: (i)Biosphere, (ii)Ecosystem (iii)Community (3 marks)
2. Differentiate between autecology and synecology. (3 marks)
3. Differentiate between a food chain and a food web. (3 marks)
4. Explain the characteristics of Lentic or standing waters. (3 marks)
5. State the two main forms of competition in an ecosystem and explain why competition occurs in ecosystems. (3 marks)
6. State any three adaptations of organisms in a lotic water habitat. (3 marks)
7. Construct three (3) food chains common in an aquatic habitat. (3 marks)
8. Outline categories of organisms which are primary producers in aquatic ecosystems. (3 marks)
9. List methods used in measuring primary productivity in an aquatic ecosystem. (3 marks)
10. Explain what is meant by stratification in aquatic habitat, giving two types of stratification. (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Describe the process of nitrogen cycle in an aquatic ecosystem. (20 marks)
12. Discuss the characteristics of water that are important for biological life in the water as a habitat. (20 marks)
13. Explain key environmental factors that affect the distribution and abundance of organisms in aquatic ecosystems. (20 marks)
14. Give an account of methods for measuring primary productivity of aquatic ecosystems. (20 marks)