



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN FISHERIES AND OCEANOGRAPHY

BSFO 16S/YEAR 2/SEMESTER 1

AFO 4201: PRINCIPLES OF AQUATIC ECOLOGY

SPECIAL/ SUPPLEMENTARY EXAMINATIONS

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

Instructions to Candidates

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

This paper consists of three printed pages.

Mobile phones are NOT allowed in the examination room

QUESTION ONE. (30 MARKS)

- a). Define the following terms? (2 marks)
- i. Population
 - ii. Community
- b). Explain the following terms? (2 marks)
- c). Define the following term? (2 marks)

- d). i. Explain K-selected organisms? (2 marks)
- ii). Name the different types of growth curves. (2 marks)
- e). Explain how abiotic factors affect living organisms? (2 marks)
- e). Explain how the Count and mark using permanent ink methods are used to estimate population of organisms? (2 marks)
- f). i. What are biotic factors? (2 marks)
- f). ii. State how the various biotic factors affect living organisms? (2 marks)
- g). Explain the following term Food Web giving suitable examples? (2 marks)
- h). Explain the following term Pyramid of biomass giving suitable examples? (2 marks)
- i). Account for the decrease of biomass in the successive trophic levels? (2 marks)
- j). Describe the three characteristics of a population growth? (2 marks)

QUESTION TWO (20 marks)

- a. Discuss the Carbon sequestration? (10 marks)
- b. Discuss how Human Activities have Disrupted and Degraded Marine Systems? (10 marks)

QUESTION THREE (20 marks)

Describe the types of Freshwater Ecosystems in the Watershed

QUESTION FOUR (20 marks)

Assume that you were teaching at Ukunda Secondary school and a student asks you a question “Why Should We Care about Coral Reefs?” How will you answer him?

QUESTION FIVE (20 marks)

- a. Explain how the Open Sea and the Ocean Floor Host a Variety of Species? (10 marks)

b. Assume that you went home to teach biology in a nearby Secondary school and a student asks you a question. "Freshwater Inland Wetlands Are Vital Sponges?" Explain how you will answer the question. (10 marks)