



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**MAIN EXAMINATION**

**JANUARY – APRIL 2019 TRIMESTER**

**FACULTY OF SCIENCE**

**DEPARTMENT OF BIOLOGY**

**REGULAR PROGRAMME**

**BIO 403: MARINE BIOLOGY**

**Date: April 2019**

**Duration: 2 Hours**

**INSTRUCTIONS: Answer Question ONE and any other TWO Questions**

- Q1. a) i) Outline **three** economic importance of the oysters **(3 marks)**
- ii) Explain use of oil booms as a method of cleaning oil spill in the marine ecosystem **(2 marks)**
- iii) Describe briefly the effects of Sabaki River on the coastal ecosystem **(2 marks)**
- b) Outline the outstanding issues over the South China Sea Maritime border dispute **(3 marks)**
- c) i) What is a tide? **(2 marks)**
- ii) State **three** differences between a spring tide and a neap tide **(3 marks)**
- iii) Outline **four** examples of the marine fish that lands at the Kilifi beach along the Kenyan Coast **(4 marks)**
- d) i) Name **two** major places at the Kenyan Coast where mangroves are well represented in terms of distribution **(1 mark)**

- ii) State **three** species of the mangroves at the Mida Creek along the Kenya coast **(3 marks)**
  - iii) Explain **three** adaptation of white mangroves to variable salinity conditions **(3 marks)**
  - e)
    - i) Outline the community composition of the rocky shore habitat at Kijangwani along the Kenyan Coast **(2 marks)**
    - ii) Explain briefly the role of flippers and blubbers among the marine mammals **(2 marks)**
- Q2. Write an essay on the Arctic Ocean. **(20 marks)**
- Q3. Discuss the benthic divisions of the marine environment **(20 marks)**
- Q4. Discuss the economic importance of the sea grass beds and mangrove swamps along the Kenyan Coast **(20 marks)**
- Q5. Describe in details the degradation effects of land-based human activities to the marine environment **(20 marks)**

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