TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Applied & Health Sciences

Department of Environment & Health Sciences

University Examination for the Degree of Bachelor of Science in Marine
Resource Management

BSMR 14S/YEAR 2/SEMESTER 2

Code: AES 4212: MARINE BIOLOGICAL COMPLEXITY PAPER 2

SEMESTER EXAMINATION

SERIES: MAY/2016

TIME: 2HRS

Instructions to Candidates

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions

This paper consists of one printed pages

QUESTION ONE (30 MARKS)

a) State the major elements associated with the occurrence of true mangroves   (5 marks)

b) Briefly state the main crustacean breathing adaptations in mangrove forests   (5 marks)

c) (i) State the main factors that determine bacterial production in coral reef systems (2 marks)

   (ii) High species diversity in coral reef systems is due to the existence of a variety of coral reef habitats. List the main habitats   (3 marks)

d) (i) List the common feeding types associated with crustacean species inhabiting mangrove swamps under extreme environmental conditions   (4 marks)

   (ii) Define the term mangrove associates   (1 mark)

e) Briefly state why sea grass beds are productive   (5 marks)

f) State the main sources of sedimentation on sea grasses   (5 marks)

QUESTION TWO (20 MARKS)

Fish is a product extracted directly from the oceans. Discuss the main factors which determine the annual fish yield or productivity   (20 marks)

QUESTION THREE (20 MARKS)

Explain the impacts of mangrove over harvesting in relation to ecosystem connectivity (20 marks)

QUESTION FOUR (20 MARKS)

Philippine Islands is situated in the Indo-Pacific region with the highest diversity of fish species in the world. Explain the factors that may have contributed to the highest species diversity in fish (20 marks)

QUESTION FIVE (20 MARKS)

Explain the limiting factors for distribution and species diversity of corals   (20 marks)