



TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

UNIVERSITY EXAMINATION FOR: BACHELOR OF SCIENCE IN MARINE RESOURCE MANAGEMENT

BSMR/16S/YEAR 2/ SEMESTER 2
AES 4106: INTRODUCTION TO MARINE ECOLOGY
SPECIAL SUPPLEMENTARY EXAMINATION
SERIES: SEPT. 2017
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 two printed pages.

Mobile phones are NOT allowed in the examination room

QUESTION ONE (30 MARKS)

a) Define the terms:-

- (i) Ecology (2 marks)
- (ii) Population ecology (2 marks)

b) Distinguish the following terms (4 marks)

- i) Plankton
- ii) Nekton
- iii) Epifauna
- iv) Infauna

c) i) What are coral reefs? (2 marks)

ii) List five characteristics of coral polyps (5 marks)

d) State two adaptations of radiolarians to floating in Ocean water (2 marks)

e) Highlight two biological differences between flora in terrestrial and marine environment. (4 marks)

f) An ecological field study was conducted along the intertidal zonation with the objective of identifying intertidal organisms, state any two (i) or any three (ii) organisms that you could expect at the:

i) Sublittoral zone: (2 marks)

ii) Low tide zone: (3 marks)

g) Briefly explain how high precipitation with huge runoffs entering an estuary influences species ecology in an estuarine ecosystem. (4 marks)

QUESTION TWO (20 MARKS)

Discuss ten abiotic factors that influence the composition, distribution and abundance of marine fauna.

QUESTION THREE (20 MARKS)

Discuss five characteristics of the deep ocean, suggesting how deep ocean fauna are adapted to this extreme environment.

QUESTION FOUR (20 MARKS)

Describe any five adaptations of pelagic organisms to life at sea.

QUESTION FIVE (20 MARKS)

Coral reef ecosystems are known to be marine hotspots of ecological importance; Discuss in detail any five causes of biodiversity decline in these ecosystems.