



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 1**

AES 4203: MARINE BIOLOGICAL DIVERSITY

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 two printed pages.

Mobile phones are NOT allowed in the examination room

QUESTION ONE (30 MARKS)

1. (a) Define the following (2mks)
 - i) Biodiversity hotspot (1mk)
 - ii) Endemic species (1mk)
- (b) Outline the three types/levels of biodiversity (3mks)
2. State the problem with the common “species definition”? (4mks)
3. Distinguish between genetic materials and genetic resources. (4mks)
4. Is the collection of marine genetic resources sustainable? YES/NO? Briefly explain (5mks)
5. (a) Briefly explain the term phytoplankton (2mks)
- (b) Give three groups of phytoplankton (3mks)
6. Highlight the difference between bequest value and existence value of biodiversity (5mks)
7. What are Marine Natural Products? (2mks)

QUESTION TWO (20 MARKS)

The value of marine biodiversity to mankind and environment is immense. Discuss (20mks)

QUESTION THREE (20 MARKS)

- i) Define zooplankton and give four groups of zooplankton (5mks)
- ii) Discuss primary production and its role in the marine environment (15mks)

QUESTION FOUR (20 MARKS)

- i) What are the adaptations of a fish to living in aquatic environment (10mks)
- ii) Explain how marine invertebrates are important? (10mks)

QUESTION FIVE (20 MARKS)

- i) Define mangroves and give three species found in Kenya (5mks)
- ii) Mangroves have jointly suffered under the hands of man and climate change. Discuss (15mks)