



FACULTY	AGRICULTURE, ENGINEERING & NATURAL SCIENCES		
SCHOOL	SCIENCE		
DEPARTMENT	ENVIRONMENTAL SCIENCE		
SUBJECT	FUNCTIONAL BIODIVERSITY OF AQUATIC ECOSYSTEMS		
SUBJECT CODE	EBB 5952		
DATE	NOVEMBER 2021		
DURATION	3 HOURS	MARKS	120

SUPPLEMENTARY/SPECIAL EXAMINATION

Examiner: Dr C. Hay (University of Namibia)
Ms C. Deelie (University of Namibia)

Moderator: Prof. C. Chimimba (University of Pretoria)

This memorandum consists of three **(3) pages** including the cover page

Instructions

- Candidates must answer ALL questions in Section A and TWO questions in Section B.

EXAMINATION

SECTION A

Answer ALL questions in this section.

Question 1. (5)

Explain the role pH play in the availability of phosphate minerals in freshwater lakes?

Question 2. (7)

Describe some of the adaptations exhibited by organisms inhabiting rocky coasts that help them survive wave action.

Question 3. (7)

Summarize the microbe processes in a pelagic environment.

Question 4. (5)

Explain the role of whales in nutrient cycling in the oceans?

Question 5: (15)

Discuss the benthic communities in estuaries and the environmental conditions that impact on their processes.

Question 6: (10)

Discuss the strategies used by clams to survive in the harsh physical conditions in intertidal zones?

Question 7: (7)

Briefly summarize the functional role of large marine mammals in a pelagic environment.

Question 8: (4)

Describe the four major growth forms of aquatic macrophytes?

Sub-total marks (Section A) = 60

SECTION B

Answer any TWO questions from this Section.

Question 1. **(30)**

Discuss vertical zonation of a rocky shore and a sandy beach.

Question 2. **(30)**

Discuss the dynamics of deep-sea communities around mid-Ocean ridges.

Question 3. **(30)**

With reference to upwelling and seasons, discuss how water becomes stratified and how that affects the availability of nutrients at the surface.

Sub-total marks (Section B) = 60

Grand Total Marks = 120

*****END OF QUESTION PAPER *****