



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF ENVIRONMENTAL SCIENCE**

**DEPARTMENT OF ENVIRONMENTAL SCIENCE**

**BACHELOR OF SCIENCE HONOURS DEGREE IN ENVIRONMENTAL SCIENCE AND  
HEALTH**

**INTRODUCTION TO THE FRESHWATER ENVIRONMENT**

**ESH 1208**

**Final Examination Paper**

**March 2025**

This examination paper consists of 3 pages

**Time Allowed: 3 hours**

**Total Marks: 100**

**Special Requirements: None**

**Examiner's Name: Dr A Mabidi**

**INSTRUCTIONS**

1. Answer any FOUR (4) questions
2. Each question carries 25 marks

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	<b>25</b>
2.	<b>25</b>
3.	<b>25</b>
4.	<b>25</b>
5.	<b>25</b>
6.	<b>25</b>
<b>TOTAL</b>	<b>100</b>

**Question 1**

Describe the factors that determine the characteristics of a river system.

**Question 2**

Explain the characteristics of the five (5) ecological zones of a lake system.

**Question 3**

Describe how the following parameters are measured and explain their effect on freshwater ecosystems;

(a) Biological Oxygen Demand

(10 marks)

(b) Total Dissolved Solids

[15 marks]

**Question 4**

Explain the variations to the hydrologic cycle which can be induced by the following natural phenomena;

(a) Volcano

(12 marks)

(b) Earthquake

(13 marks)

**Question 5**

Discuss the importance of freshwater systems commonly referred to as wetlands.

**Question 6**

Give a critique of the Ramsar Convention on Wetlands.