Student Name: _____	**Class:** _____
Student ID: _____	**Date:** {{DATE}}

Assessment Details

Duration: 2 hours	**Total Marks:** 100
Topics Covered:	• Ecosystems • Environmental Conservation • Biodiversity • Systems Thinking

Instructions to Students:

1. Read all questions carefully before attempting.
2. Show all working out - marks are awarded for method.
3. Calculator use is permitted except where stated otherwise.
4. Write your answers in the spaces provided.
5. If you need more space, use the additional pages at the end.
6. Time management is crucial - allocate approximately 1 minute per mark.

Section A: Multiple Choice [20 marks]

Question 1 **[2 marks]**

What is biodiversity?

A) The variety of different species of plants, animals, and microorganisms that live in an ecosystem

B) The number of individuals of a particular species in an ecosystem

C) The type of ecosystem found in a particular region

D) The process of conservation of natural resources

Question 2 **[2 marks]**

What is an ecosystem service?

A) A process that occurs within an ecosystem

B) A benefit that humans receive from an ecosystem

C) A type of conservation strategy

D) A type of ecosystem found in a particular region

Question 3 **[2 marks]**

What is the main cause of biodiversity loss?

A) Climate change

B) Deforestation

C) Pollution

D) Overfishing

Question 4 **[2 marks]**

What is conservation?

A) The protection and preservation of natural resources

B) The management of natural resources for human use

C) The restoration of damaged ecosystems

D) The study of ecosystems

Question 5 **[2 marks]**

What is systems thinking?

A) A way of thinking that considers the relationships between different components of a system

B) A way of thinking that focuses on individual components of a system

C) A way of thinking that ignores the relationships between different components of a system

D) A way of thinking that only considers the short-term effects of a decision

Section B: Short Answer Questions [30 marks]

Question 6 **[6 marks]**

Describe the importance of ecosystem services and provide examples of how they benefit humans.

Question 7 **[6 marks]**

Explain the impact of human activities on biodiversity and provide examples of how humans can reduce their impact.

Question 8 **[6 marks]**

Describe a conservation strategy and explain its effectiveness in protecting biodiversity.

Question 9 **[6 marks]**

Explain the concept of systems thinking and provide an example of how it can be applied to a real-world environmental issue.

Question 10 **[6 marks]**

Describe the role of humans in maintaining ecosystem balance and provide examples of how humans can promote ecosystem health.

Section C: Essay Question [30 marks]

Question 11 **[30 marks]**

Evaluate the effectiveness of a conservation strategy in protecting biodiversity and propose alternative solutions.

Section D: Case Study Analysis [40 marks]

Question 12 **[40 marks]**

Read the following case study and answer the questions that follow.

Case Study: The Amazon Rainforest is one of the most biodiverse ecosystems in the world, providing numerous ecosystem services including oxygen production, carbon sequestration, and habitat for a vast array of plant and animal species. However, the Amazon Rainforest is facing numerous threats including deforestation, climate change, and pollution.

a) What are the main threats to the Amazon Rainforest and how do they impact the ecosystem? [10 marks]

b) Describe the importance of the Amazon Rainforest and its ecosystem services. [10 marks]

c) Propose conservation strategies to protect the Amazon Rainforest and explain their effectiveness. [20 marks]

Marking Guide

The assessment will be marked based on the following criteria:

- Multiple Choice Questions: accuracy and completeness of answers (20 points)
- Short Answer Questions: clarity, accuracy, and completeness of answers (30 points)
- Essay Question: clarity, coherence, and depth of analysis (30 points)
- Case Study Analysis: clarity, coherence, and depth of analysis, as well as the ability to propose effective solutions (40 points)

Differentiation Options

To accommodate diverse learners, the following differentiation options can be considered:

- For students with learning difficulties:
  - Provide extra time to complete the assessment
  - Offer the use of assistive technology, such as text-to-speech software
  - Provide a reader or scribe to assist with the assessment
- For English language learners:
  - Provide a bilingual dictionary or glossary of key terms
  - Offer extra time to complete the assessment
  - Provide a language support person to assist with the assessment
- For gifted and talented students:
  - Provide additional challenges or extensions to the assessment
  - Offer the opportunity to complete a more complex case study or essay question
  - Provide feedback and guidance on how to improve their critical thinking and analysis skills