



University of Ruhuna- Faculty of Technology
Bachelor of Biosystems Technology Honours Degree
Level 1 (Semester II) Examination, November/December 2025
Academic year 2023/2024

Course Unit: BST 1242 Introduction to Environmental Science (Written)
Duration: 1.5 hours

- Use a separate book for answering the questions.
- Each question should start with a new page.
- Answer **Three (03)** questions only.

Question One

- A. List **five (5)** major effects or consequences of global warming. (20 Marks)
- B. Describe the main technological methods that can be used to mitigate or reduce global warming. (30 Marks)

Question Two

- A. Distinguish between Persistent and Non-persistent pollutants and provide **three (3)** examples for each. (20 Marks)
- B. Imagine you are an environmental officer in a city facing increasing land pollution due to overcrowded landfills and construction waste. Explain practical solutions to reduce land pollution and briefly justify how each would help to solve these problems. (30 marks)

Question Three

Imagine two forest communities, each with four tree species.

Community 1 has a perfectly even distribution: each of its four species makes up 25% of the total trees.

Community 2 has an uneven distribution: one species is very common (70% of trees), two species are moderately common (12% each), and one species is rare (6% of trees).

- A. Define the terms **Species Richness** and **Species Evenness**. Based on the description above, which community has greater species evenness? Explain your answer. (10 Marks)
- B. Simpson's Diversity Index (D) measures the probability that two randomly selected individuals belong to the *same* species. Using this concept, explain which of the two communities is likely to have a *higher* value of D. Justify your reasoning without calculation. (20 Marks)
- C. Which community (1 or 2) would have a *higher* H' value? Explain. (20 Marks)

Question Four

Discuss the critical role that environmental laws, national policies, and international conventions play in protecting the global environment. (50 Marks)

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