



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES**

**Bachelor of Science Honors in Applied Biology
Fourth Year – Semester I Examination –July/August 2023**

BDC4205 -ECONOMICS OF BIODIVERSITY

Time: Two (02) hours

Answer ALL questions

1. a) Briefly explain how economics helps biodiversity conservation. **(05 marks)**
 b) Explain **four (04)** basic assumptions of a rational consumer. **(10 marks)**
 c) What is meant by “Demand for Ecosystem Service?”. Compare and contrast the demand and supply curve for Traded goods vs. Ecosystem services. **(10 marks)**

2. a) Describe **four (04)** facts to show the nexus between biodiversity and economic activities. **(08 marks)**
 b) Using examples explain **three (03)** economic and environmental benefits of biodiversity. **(06 marks)**
 c) What is the role of biodiversity conservation in poverty alleviation? **(06 marks)**
 d) Explain why the ecosystem services are rarely detected by the current economic scope? **(06 marks)**

3. a) What do you understand by “Economic valuation of ecosystem services”? Explain why it is difficult to place a value on ecosystem services. **(10 marks)**
 b) Explain **four (04)** key principles of best practices on the valuation of ecosystem services. **(08 marks)**
 c) Compare and contrast public goods vs. private goods. **(07 marks)**

4. a) *“Economists and experts argue that climate change is the biggest market failure we face today.”*
 i. State whether you agree or disagree with the above statement.
 ii. Comment on your view on the above-mentioned statement.
 [Hint: Your answer should include 1) what is a market failure 2) your justification for climate change as a market failure or not]. **(12.5 marks)**

b) Consider the situation described in the following paragraph and answer the questions.

“As the global population continues to rise, the food supply needs to increase just as quickly. However, overhunting and overfishing have the potential to push many species into extinction. For example, overfishing of the Pacific bluefin tuna has caused an all-time population low of approximately three percent of their original population”.

- i. What is meant by “Tragedy of Commons”? Critically evaluate the situation mentioned in the paragraph to support your answer.
- ii. Propose and explain **three (03)** ways to regulate people’s actions in mitigating the tragedy of commons.

(12.5 marks)

---END---