

**THE OPEN UNIVERSITY OF SRI LANKA**  
**B.Sc. DEGREE PROGRAMME – BOTANY- LEVEL 05**  
**FINAL EXAMINATION – 2023/2024**  
**BYU5318/BYE5318 – Environmental Studies**  
**DURATION: Two (02) HOURS**



205

Date: 19<sup>th</sup> <sup>March</sup> 2024

Time: 01.30 p.m.- 03.30 pm

Answer any four (04) of the following questions.

1.
  - a. What is meant by “ecological succession”?
  - b. Differentiate between primary succession and secondary succession.
  - c. Write a concise account on energy flow within an ecosystem highlighting loss and storage of energy.
2.
  - a. Define the term “land degradation.”
  - b. Discuss how agricultural lands can be chemically degraded.
  - c. Briefly explain the different mining practices involved in mineral extraction and the environmental impacts associated with mining and processing of mineral resources.
3.
  - a. The Sun is considered as the ultimate renewable energy source on a human time scale. Discuss active and passive photothermal methods that convert solar radiant energy to useful heat energy.
  - b. The solar energy is stored as chemical energy in the living matter/biomass. Briefly explain how liquid and gaseous biofuels are made from living biomass with suitable examples.
4.
  - a. Define the term “global warming.”
  - b. Briefly explain the relationship between the “greenhouse effect” and the “global warming”
  - c. “Warming effect indicates both negative and positive feedback loops that can influence global temperature”. Giving examples justifies this statement.
5. Discuss different properties of hazardous materials that are used to categorize hazardous waste with examples and the techniques involved in hazardous and toxic waste disposal.

6. Write short notes on **any three (03)** of the following.
- a. Major characteristics of forests in Sri Lanka.
  - b. Depletion of stratospheric Ozone ( $O_3$ ) by Chlorofluorocarbons (CFCs) and its impacts on the environment.
  - c. The Nitrogen cycle indicating reservoirs and major events.
  - d. Agreements made at the Rio Earth Summit.

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