

THE OPEN UNIVERSITY OF SRI LANKA FACULTY OF EDUCATION BACHELOR OF EDUCATION (HONOURS) IN PRIMARY EDUCATION – 2023/2024

LEVEL - 05

FINAL EXAMINATION

EPU5255- SCIENCE AND ENVIRONMENT FOR PRIMARY TEACHING

DURATION - TWO (02) HOURS

Date: 08.06.2025

Time: 1.30 p.m. – 03.30 p.m.

Answer All Questions in Part I and any three (03) questions from Part II.

PART - I

- 01. Why is it essential to introduce 'Science Education' to young learners? Provide three (03) reasons.
- 02. Explain **two (02)** ways in which human actions can disturb the balance of natural ecosystems. Briefly explain each impact.
- 03. List out and briefly explain five (05) characteristics that demonstrate a scientific mindset.
- 04. Describe **two (02)** classroom activities that can inspire environmental curiosity in primary students.
- 05. How would you introduce the concept of a food chain to young children? Include one (01) simple example.
- 06. Give **three** (03) real-life scenarios that can help primary students understand how energy changes from one form to another.
- 07. List **three (03)** key points a teacher can use to help children understand importance of solar energy.
- 08. Explain using three (03) supporting facts why conserving biodiversity is crucial for maintaining healthy ecosystems.

 $(5 \times 8 = 40 \text{ marks})$

PART – II

- 09. i. What are **three (03)** benefits of using energy wisely? (06 marks)
 - ii. Create a short role-play that teaches children practical ways to save energy during their daily routines. (06 marks)
 - iii. Mention **three (03)** energy-saving actions shown in your role-play and explain how each action contributes to protecting the environment. (08 marks)

- i. "Design an engaging classroom activity to help young learners understand the water cycle. Your activity should explain how water moves and changes on the earth's surface, underground and in the sky. (06 marks)
 - ii. List **three** (03) simple facts you would share to help children understand how human actions can negatively affect the natural water cycle. (06 marks)
 - iii. Suggest three (03) easy and appropriate actions that children can take to help protect and maintain a healthy water cycle. (08 marks)
- 11. i. Explain the importance of conducting an awareness programme on living and non-living things for primary school children. (08 marks)
 - ii. As a future primary teacher, discuss how you would encourage children to care for and protect the diversity of both living and non-living components in their environment. (06 marks)
 - Design a simple classroom-based activity or project that helps children understand the interdependence between living and non-living things. (06 marks)
- 12. i. Describe the key stages of the scientific method. (08 marks)
 - ii. suggest a classroom activity that helps young learners understand how to approach and solve simple problems using scientific thinking. (06 marks)
 - iii. Identify and explain **three (03)** scientific process skills that primary students can develop through regular use of the scientific method in science lessons. (06 marks)
- 13. i. Define the term "Ecosystem". Explain how biotic and abiotic components interact within an ecosystem to support the transfer of energy and the cycling of matter. Give examples to support your explanation. (08 marks)
 - ii. Describe how ecosystems are dynamic systems that constantly change. Briefly explain two (02) natural changes and two (02) human activities that can affect ecosystems. (06 marks)
 - iii. Suggest three (03) actions or technologies that people can adopt to protect the environment. Explain how each one helps reduce negative impacts on ecosystems.

(06 marks)

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