

UNIVERSITY OF RUHUNA

First Examination in BSc Agricultural Resource Management & Technology

(Part- II) –November 2017

Agroecology & Sustainable Agriculture (CS1201) - Theory

Answer all questions (4)

Time: 2 Hours

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- 1.(i) What is an Agroecosystem? (10 marks)
- (ii) List out the abiotic and biotic factors of the Agroecosystem (20 marks)
- (iii) Explain main characteristics of a system by using an appropriate example (30 marks)
- (iv) “Yield reduction of the paddy farming systems in Sri Lanka is a complex problem”. Draw the “Mind Map” to identify possible reasons for the problem and their relationships. (40 marks)
- 2.(i) What are the principles of Agroecology? (20 marks)
- (ii) Briefly discuss the followings
- (a) Agroecosystem features (20 marks)
- (b) Interactions among plants and animals in the ecosystem/agroecosystem (30 marks)
- (c) Importance of sustainability in farming systems (30 marks)
- 3.(i) What are the main factors used in designing a sustainable Agroecosystem/farming system? (10 marks)
- (ii) List out the advantages of having high diversity in a farming system. (20 marks)
- (iii) Explain the various strategies used in restoring diversity of the agricultural systems.(30 marks)
- (iv) Using locally available resources develop a sustainable model for the Faculty farm to ensure more profit. (40 marks)

- 4.(i) List out main issues associated with organic farming sector in Sri Lanka. (10 marks)
- (ii) Briefly explain the importance of having certification program in Sri Lanka for organic products (20 marks)
- (iii) "Awareness of the concept of organic farming among producers and consumers are poor in Sri Lanka". Comment on the statement. (30 marks)
- (iv) Develop an action plan to strengthen the awareness of the people on organic farming concept within 5 year period. (40 marks)