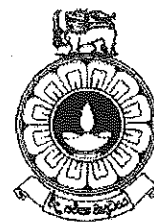


The Open University of Sri Lanka
Faculty of Natural Sciences
B.Sc/ B. Ed Degree Programme



Department	: Botany
Level	: Level 05
Name of the Examination	: Final Examination
Course Title and Code	: FOREST MANGEMENT AND ITS CONSERVATION-BYU5307
Academic Year	: 2021/2022
Date	: 23. 10.2022
Time	: 9.30 a.m. – 11.30 a.m.
Duration	: Two (02) Hours

General Instructions

1. Read all instructions carefully before answering the questions.
2. This paper contains six (06) questions divided into three (03) parts (A,B and C) on 02 pages. Each part has two (02) questions.
3. You are expected to **answer four (04) questions**, selecting at **least one (01) question from each part**. All questions carry equal marks.
4. Answer for each question should commence from a new page.
5. Draw fully labelled diagrams where necessary
6. Involvement in any activity that is considered as an exam offense will lead to punishment
7. Use blue or black ink to answer the questions.
8. Clearly state your index number in your answer script

Part A

1. a. What is meant by gap dynamic in a forest ecosystem?
 - b. Explain the process of gap colonization in a forest ecosystem.
 - c. Compare the special characteristics between first occupied (pioneer species) and climax species which are established in a forest gap of Lowland tropical forest of Sri Lanka. Describe your answer with appropriate examples.
 - d. What plant species will emerge if the gap is too large? Using suitable examples, briefly explain the special features of such tree species.
2. Write an essay on "Benefits of forest resources and their quantification and valuation techniques".

Part B

3. Write short notes on the following

- a. Remote sensing techniques used in Forest Resource Inventory processes and pattern recognition.
- b. Intergrated management of forest nursery pests.
- c. Silvicultural practices for even and uneven-aged forest stands.

4. *Increasing the durability of wood products is essential for sustainable forest management.*

- a. List major wood-destroying fungal and insect types.
- b. Explain different timber seasoning techniques.
- c. Explain the types of timber-preservatives and their applicability for enhancing the durability of commercial wood products.

Part C

5.

- a. Differentiate the concepts of forest conservation and protection.
- b. List major protected areas belong to Forest Department and Department of Wildlife Conservation and Management in Sri Lanka respectively. Indicate the number of sites and examples for each category.
- c. Describe how community involvement facilitate conservation of buffer zone management in Sinharaja Forest Reserve of Sri Lanka.

6.

- a. What do you understand by an "Agro-forestry system"?
- b. List the major benefits of an Agro-forestry system.
- c. Categorizes the major types of agroforestry systems in tropical region.
- d. Describe the tropical home garden system with reference to species composition, characteristics, structure, and benefits.

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