52

RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (Special) Degree in Applied Biology
Fourth Year – Semester I Examination – September / October 2019

FAM 4203 – AQUAFARMING OF MACHROPHYTES

Time: Two (02) hours

Answer ALL questions.

1. "Habitat diversity is one of the major factors governing the high aquatic macrophyte diversity in Sri Lanka and this is further facilitated by the microhabitat diversity in Wewa and Villu ecosystems". Comment on the above statement. **(100 marks)**

2. Justify the following.

   a) "Certain characteristic traits of Invasive Alien Species (IAS) of plants are beneficial in industrial aquafarming of macrophytes." **(60 marks)**

   b) "Some adaptations in macrophytes are ornamentally precious". **(40 marks)**

3. a) A sudden outbreak of *Nelumbo nucifera* was reported recently in the Mihintale tank. The problem has been directed to you with the view of getting advice to control the situation and also to prevent such incidences in the future. Considering the modes of propagation and control utilization of this plant species, describe the strategies you would recommend achieving the above expectations. **(70 marks)**

   b) Design an integrated multi-trophic aquaculture system to grow aquatic macrophytes and fish under controlled conditions. **(30 marks)**

4. a) Sri Lanka is rich with potentially edible algae. Name **ten (10)** algal species that you could recommend for cultivating as a partial solution for food scarcity expected in the future. **(20 marks)**

   b) Cultivating seaweeds in Sri Lanka was attempted by several organizations but failed without much success. Discuss the possible reasons for this failure? **(30 marks)**

   c) Discuss **two (02)** methods for culturing of seaweeds. **(50 marks)**

--- END ---