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RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

B.Sc. (Special) Degree in Applied Biology
Fourth Year – Semester I Examinations – October/November 2015

ZOO 4211 – CULTURE AND PROPAGATION OF ORNAMENTAL AQUATIC PLANTS

Time: Two (02) hours

Answer all questions.

1. Fresh waters can be classified into two groups, viz., lentic waters and lotic waters.

   a) Citing at least one example for each type, briefly describe the types of **horizontal lotic waters** found in Sri Lanka. (30 marks)

   b) State what is meant by the **limit of effective light penetration** of a water body, and briefly describe a method to determine the **limit of effective light penetration** of an irrigation tank in the absence of a **Secchi Disk**. (20 marks)

   c) "The **zonation of the lentic waters** of Sri Lanka enhances the aquatic plant diversity of the country". Justify the statement. (50 marks)

2. Plants adapted to live in aquatic habitats are referred to as hydrophytes or aquatic plants.

   a) Explain what is meant by an **ornamental aquatic plant** and describe the characters that furnish ornamental properties of aquatic plants. (30 marks)

   b) Stating examples, briefly illustrate **five adaptations** found in the leaves of true aquatic plants. (30 marks)

   c) "Some adaptations possessed by aquatic plants are very significant for considering them as ornamental aquatic plants". Validate the statement highlighting at least five such characters. (40 marks)

3. a) "Over 80% of the Invasive Alien Species in any country are ornamental plants imported for their aesthetic value". Using **any five** appropriate examples, justify the above statement with respect to ornamental aquatic plants in Sri Lanka. (50 marks)

   b) Describe the features present in each plant you mentioned in part (a) that help them to become invasive. (40 marks)

   c) What could be the reason of ornamental aquatic plants becoming invasive easily in wet zone, especially Gampaha - Attanagalla area? (10 marks)

4. a) Sri Lanka is unable to meet demands of the ornamental aquatic plant industry with respect to the production of new and attractive varieties / hybrids in high numbers. Describe any new method of plant propagation you suggest to overcome this situation. (50 marks)

   b) Comment on the advantages and disadvantages of the method you described in part (a) when compared with seed propagation. (30 marks)

   c) Name any five endemic ornamental aquatic plants you could propagate using the method described in part (a). (20 marks)

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