



**RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES**

**B.Sc. (Special) Degree in Applied Biology
Third year – Semester II Examination – February/ March 2019**

FAM 3303 - ORNAMENTAL FISH INDUSTRY

Time: Three (03) hours

Answer ALL questions.

1. a) With an appropriate diagram, illustrate the ornamental fish production network in Sri Lanka. **(10 marks)**
 b) Discuss the strengths, weaknesses, opportunities and threats (SWOT) of the ornamental fish industry in Sri Lanka. **(60 marks)**
 c) Give suggestions that could be used to overcome the weaknesses and threats in (b). **(30 marks)**

2. a) Discuss the sexual dimorphism in goldfish. **(12 marks)**
 b) Mention the **four (04)** criteria used to categorize goldfish varieties. **(08 marks)**
 c) Describe the available goldfish varieties under each category. **(80 marks)**

3. a) Differentiate marine angelfish from butterfly fish. **(20 marks)**
 b) Explain symbiotic mutualism observed between a marine invertebrate and clownfish and the importance of introducing them to a reef aquarium. **(50 marks)**
 c) Describe the characteristic features of surgeonfish. **(30 marks)**

4. Design breeding programs for a named **nest builder** and **egg depositor** from the selection of parents to nurturing of larvae. (100 marks)
5. a) Describe the different types of aquarium tanks that are commonly used in ornamental fish culture. (20 marks)
- b) "A mechanical filtration system could concurrently act as a biological filter in an aquarium tank." Analyse this statement. (30 marks)
- c) Discuss the benefits of using protein skimmers as a filtration system in a marine reef aquarium. (50 marks)
6. a) What are the criteria that should be used for selecting healthy ornamental fish. (30 marks)
- b) Briefly describe how to set up a glass aquarium tank which should be displayed adjacent to a wall. (70 marks)

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