

## RAJARATA UNIVERSITY OF SRI LANKA FACULTY OF APPLIED SCIENCES

B.Sc. (Special) Degree in Applied Biology Fourth Year – Semester II Examination – April/May 2016

## **ZOO 4309 - FISH HEALTH MANAGEMENT**

Time: Three (03) hours

Answer **any six (06)** questions only.

- 1. Discuss the three interacting factors responsible for the occurrence of diseases in fish and how such situations should be prevented or controlled.
- 2. a) Differentiate between "infectious" and "non-infectious" diseases of fish.
  - b) What are the causative factors of non-infectious diseases and ill health condition in fish?
- 3. a) Give a brief description of stressors encountered in fish husbandry.
  - b) Briefly explain the different stages of stress that are manifested by fish when stress is present or intensified.
- 4. a) Name the different taxa of fish parasites, with suitable examples.
  - b) Give a brief description of the disease caused, symptoms and the life cycle of a named internal protozoan parasite of fish.
- 5. a) Describe briefly the different types of immersion / spray vaccination methods of fish.
  - b) State the general key rules considered in a fish vaccination program.

- 6. a) Write an account on the following shrimp and fish diseases.
  - i) Infectious pancreatic necrosis
  - ii) Bacterial gill disease
  - b) Describe briefly the following microbial diagnostic methods.
    - i) Motility test
    - ii) Staining methods
  - 7. Write short notes on **any three** of the following.
    - a) Effects of improper storage of fish feeds
    - b) Effects of red-tides on fish/fisheries
    - c) Objectives of Bio-security in aquaculture
    - d) Routes of pathogen transmission into aquaculture facilities