



RAJARATA UNIVERSITY OF SRI LANKA  
FACULTY OF APPLIED SCIENCES, MIHINTALE

B.Sc. (Special) Degree in Applied Biology  
Fourth Year – Semester I Examination – April/May 2015

ZOO 4306 – AQUACULTURE ENGINEERING

Time: Three (03) hours

Answer question No.1 and five (05) more questions.  
Illustrate your answers with labeled diagrams where appropriate.

1. Write short notes on any **three** of the following;
  - a) water inlet design of recirculating aquaculture systems
  - b) packed column aerators
  - c) rotating biological contactor
  - d) biofloc-based aquaculture systems
2.
  - a) List the advantages and disadvantages of **series and parallel** pond designs.
  - b) Describe the different **methods of pond dike construction** and mention their importance in aquaculture.
3. Give a brief account on design and construction of different types of fish raceways.
4.
  - a) Briefly discuss the importance of Recirculating Aquaculture Systems (RAS).
  - b) Explain the solid waste removal mechanism associated with RAS.



5. Review the role of "Oxygenation of culture water".
6. Discuss the designing criteria and essential components of a freshwater aquaculture farm.
7. Write an account on the different methods used in the construction of **fish egg hatching units**.