

UNIVERSITY OF RUHUNA
FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY
Academic Year 2022/2023

Bachelor of Science Honours in Fisheries and Marine Sciences Degree

Level III Semester I Examinations –April/May 2024

(100 marks) **AQU 3132: Methods for Aquaculture I (for tropical fin fish species) Time: 1 hour & 30 minutes**

Answer any three (03) questions

- 1) a) List out the commercially farmed carp species. Provide the scientific names of each.
(20 marks)
- b) "Major carp varieties are considered as one of the most suitable and economically important food fish groups for achieving a sustainable production in culture practices" Justify the given statement by providing suitable examples.
(80 marks)
- 2) a) Write an essay on the importance of Integrated Multi Trophic Aquaculture (IMTA) as a better mechanism to reduce the environmental impacts of carp fish farming. Provide examples wherever necessary.
(60 marks)
- b) Describe the commonly existing problems and constraints identified in carp farming.
(40 marks)
- 3) a) Comment on the tolerable ranges of following parameters with respect to Tilapia.
- I) Temperature
 - II) pH
 - III) Dissolved Oxygen
 - IV) Salinity
 - V) Water Turbidity
- (20 marks)

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b) "Some of the Tilapia culture systems are better solutions for water and land scarcity".

Justify this statement. Provide examples wherever necessary.

(80 marks)

4) a) Compare the following

- I) Integrated farming of Tilapia in rural and urban areas
- II) Three types of pond fertilizers with respect to their advantages and disadvantages
- III) Androgenesis and Gynogenesis
- IV) Two methods used in hormonal sex reversal to produce mono-sex culture of Tilapia
- V) Indoor and outdoor culture systems used for freshwater ornamental fish

(50 marks)

b) Write an essay on "Do's and Don'ts to get the best use of fertilizers in a fishpond"

(50 marks)

5) Write short accounts on any four (04) of the following.

- a) Carp polyculture
- b) Use of Integrated Agri- Aquaculture systems (IAAS) in carp farming
- c) Benefits of pond liming
- d) Recirculating aquaculture system for Tilapia
- e) Aquaculture of Live rock

(100 marks)

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