

University of Ruhuna- Faculty of Technology
Bachelor of Biosystems Technology Honours Degree
Level 1 (Semester II) Examination, November / December - 2023
Academic year 2021/2022

Course Unit: BST 1272 - Introduction to Fisheries Biology (Theory)

Duration: 1 hour and 30 minutes

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Please read and follow the given **instruction** carefully before answering the questions.

- Answer **All Two (2)** questions in **PART 1 in the given space**.
- Answer **Only Two (2)** questions in **PART 2**.
- Use separate book for answering the questions in **PART 2**.
- Each question should be started with a new page.
- Calculators and mobile phones are not allowed

PART 1 – Answer All questions

Question 01

I. Differentiate fish shoal and fish school **(10 Marks)**.

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II. Mention the **two (02)** main categories of fish shoalers and give **one (01)** example for each category **(20 Marks)**.

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III. Name **four (04)** sensory systems that are used by fish for shoaling behavior **(20 Marks)**

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IV. Mention **four (04)** major reasons for shoaling behavior of fish **(20 marks)**.

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V. What is the importance of fish shoaling behavior in capture fisheries **(30 Marks)**.

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Question 02

I. Define the term "Embryology" **(5 Marks)**.

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II. What are the **five (05)** development stages of fish life cycle **(15 Marks)**.

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III. Fill the following table with **one (01)** identifiable characteristic of each development stage, which facilitates to differentiate the respective development stage from other development stages. **(25 Marks)**.

Development stage	Characteristics

IV. Point out main three **(03) types** of fish based on way by which fish protect their embryos and young **(15 Marks)**.

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V. Differentiate three types of fish mentioned in **part (IV)** mentioning **two (02)** examples of fish in each type **(40 Marks)**.

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PART 2 – Answer two (02) questions only

Question 01 (100 Marks)

- I. Differentiate “fish population” and “fish stock” (10 Marks).
- II. Point out the main **four (04)** factors that determine the variation in fish population size (20 Marks).
- III. Mention **five (05)** methods available for fish stock assessment to differentiate the fish stocks (10 Marks)
- IV. Briefly explain above-mentioned (question 01, Part III) methods in identification of unit stocks (60 Marks).

Question 02 (100 Marks)

- I. Point out the main difference between daily migration and seasonal migration with their main purposes (10 Marks).
- II. Illustrate the classification of seasonal migration (30 marks).
- III. Briefly explain the above-mentioned seasonal migration patterns by providing labelled diagram with one example for each category (60 Marks).

Question 03 (100 Marks)

Write short notes on **any four (04)** of followings

- I. External brooder fish (25 Marks)
- II. Capture fishery Vs. Culture fishery (25 Marks)
- III. Chondrichthyes Vs. Osteichthyes (25 Marks)
- IV. Fisheries Co-management (25 Marks)
- V. Mesopelagic fish Vs. Epipelagic fish (25 marks)

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