



**University of Ruhuna- Faculty of Technology**

**Bachelor of Biosystems Technology Honours**

**Level 1 (Semester II) Examination, November / December 2022**

**Academic year 2020 / 2021**

**Course Unit: BST 1272**

**Introduction to Fisheries Biology**

**Duration: 1 hour and 30 minutes**

**Student No: .....**

.....

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

- Answer All Two (02) questions in PART I in the given space.
- Answer Only Two (02) question in PART II.
- Use the separate book for answering the question in PART II.
- Each question should be started with new page.
- Calculators and mobile phones are not allowed

**Part I: Structured essay (02 questions each with five (v) parts)**

**Answer all questions**

**Question 1 (100 Marks)**

Migration behavior of fish is a kind of specialized behavior evolved for the displacement of the individual in space.

- I. Point out three (03) main reasons for the migration of fish (9 Marks).

.....  
.....  
.....

- II. Differentiate oceanodromy, potamodromy and diadromy (30 Marks).

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

- III. List out three (03) main migratory patterns under diadromous migration (12 Marks).

.....  
.....  
.....

IV. Briefly explain the differences among above three categories and give one (01) example for each category (24 Marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

V.

a). What is the main reason for the daily migration of fish? (5 Marks)

.....  
.....  
.....  
.....  
.....

b). Briefly explain the daily migration pattern of epipelagic and mesopelagic fish (20 Marks).

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**Question 2 (100 Marks)**

Fish, the member of the Kingdom Animalia is classified into Phylum Chordata and Subphylum Vertebrata.

- I. List out **five (05)** major characteristics of fish to become the member of the Phylum Chordata **(25 Marks)**.

.....  
.....  
.....  
.....  
.....

- II. Mention **three (03)** specific characters of sub phylum Vertebrata. **(15 Marks)**.

.....  
.....  
.....

- III. Write down **three (03)** taxonomic tools which are used in classification of fish **(15 Marks)**

.....  
.....  
.....

- IV. Illustrate the conventional classification of modern fish by giving **three (03)** characterized features of each category **(30 Marks)**.

.....  
.....  
.....  
.....  
.....

V. Point out the importance of given organs of fish for the survival in the aquatic environment (15 Marks)

a). Swim bladder

b). Lateral line

c). Gills

## **PART II – Essays**

**Answer two (02) questions only**

### **Question 1 (100 Marks)**

Write an essay on the methods available for fish stock assessment to identify the unit stock.

### **Question 2 (100 Marks)**

Write short notes on **any four (04)** of following topics.

- a) Non-guarder fish (**25 Marks**)
- b) Feeding adaptations of fish (**25 Marks**)
- c) Life cycle of fish (**25 Marks**)
- d) Fisheries co-management (**25 Marks**)
- e) Capture fishery Vs. Culture fishery (**25 Marks**)

### **Question 3 (100 Marks)**

Discuss the reproductive / breeding behaviors of fish.

@@@@@@@