

UNIVERSITY OF RUHUNA
BACHELOR OF SCIENCE SPECIAL DEGREE LEVEL I (SEMESTER II)
EXAMINATION - NOVEMBER/DECEMBER 2016

SUBJECT : Zoology

Time: 02 hours

COURSE UNIT: ZOO 4203 - Fisheries Biology & Aquaculture

Answer **Question 1** and **Three (03)** other questions only.

Illegible handwriting would be penalized.

1. **Answer all parts.**

- (i). What are the assumptions made in estimating fish population size by Leslie's method?
- (ii). Briefly explain the principle of Leslie's method.
- (iii). Data given below provide number of fish caught from a reservoir fish population in consecutive days using the same gill net. Using the data given, explain how you would determine the size of the fish population. **Theoretical explanations are needed. Graphs drawn into scale are not needed.**

Day	Number of fish caught	Fishing effort (hours fished)
1	284	4
2	364	7
3	170	10
4	91	7

(30 minutes)

(25 marks)

2. Describe the internal mechanism that regulates the process of reproduction in fish and how hormones used in induced spawning affect this internal mechanism.

(30 minutes)

(25 marks)

3. Write an account on,

(i). Integrated Rice-fish culture system.

(ii). Poly-culture farming system

(30 minutes)

(25 marks)

4. "Occurrence of diseases in fish is a manifestation of complex interaction of three factors". Discuss this statement.

(30 minutes)

(25 marks)

5. **Either,**

Explain how "Anoxia" develop in fish ponds and discuss the methods available to control such conditions.

Or,

"Maintaining the water quality in ponds is the most important requirement in shrimp farming". Discuss this statement.

(30 minutes)

(25 marks)

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