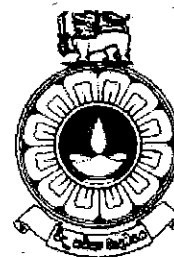


The Open University of Sri Lanka
Faculty of Natural Sciences
B.Sc/ B. Ed Degree Programme



Department	: Zoology
Level	: Level- 5
Name of the Examination	: Final Examination
Course Code and Title	: ZLU3181-Fish Biology & Fishery management
Academic Year	: 2019/2020
Date	: 2020.12.17
Time	: 9.30 am - 11.30 a.m
Duration	: Two hours (02hrs)
Index number	:

General Instructions

1. Read all instructions carefully before answering the questions.
2. This question paper consists of 06 questions in 02 pages.
3. Answer any 04 questions only. All questions carry equal marks.
4. Answer for each question should commence from a new page.
5. Draw fully labelled diagrams where necessary
5. Relevant log tables are provided where necessary.
6. Having any unauthorized documents/ mobile phones in your possession is a punishable offense
7. Use blue or black ink to answer the questions.
8. Circle the number of the questions you answered in the front cover of your answer script.
9. Clearly state your index number in your answer script

Answer any four (04) questions.

1. "Different body shapes and modifications of fins enable the bony fish to be highly adapted to their mode of life".

Comment on this statement. (100marks)

2. Describe the fishing methods used to catch small pelagic fishes in the western coastal waters of Sri Lanka (100 marks)

- 3.(a) Define the term "fish stock"?. (10marks)

(b) Explain the advantages of identifying fish stocks. (15 marks)

(c). Explain suitable methods that could be used to identify the fish stocks in a small reservoir. (75 marks)

4. (a) Briefly explain the factors that affect fish yield. (40 marks)

(b) Catch and effort data of the tuna fishery in the Western coastal waters of Sri Lanka for five fishing months are given below

Month	Effort (Number of Boats)	Catch (Mt)
January	10	600
February	25	1000
March	35	875
April	45	675
May	60	300

Construct a graph to show variations of catch per unit effort with the effort of this fishery.

- (a) Using Schaefer's model calculate the optimum effort and Maximum Sustainable Yield of this fishery (60 marks)

5. Describe the different reproductive adaptations shown by fishes to ensure maximum survival of their progeny. (100 marks)

6. Write short notes on **any two (02)** of the following (50 marks for each)

- (a) Air bladder of fish.
- (b) Modifications of the mouth apparatus in bony fishes.
- (c) Scale derivatives
- (d) Lung fishes

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