

The Open University of Sri Lanka

Bachelor of Science Degree Programme

Final Examination : 2017/ 2018 - Level 5

Course Code : ZLU3181

Course title : Fish Biology & Fishery management

Duration : Two hours (2 hrs)



Date : 2019.04.20

Time : 1.30 pm - 3.30 pm

Answer any four (04) questions.

Wherever necessary illustrate your answers with clearly labeled diagrams

1. Write an account on evolutionary history of modern teleostei fishes.
2. Discuss reproductive adaptations shown by fish to ensure highest fertilization and maximum survival of their eggs , larvae and young.
3. " Fish scales are very important for fishery biological studies ". Comment on this statement.
4. (a) Describe fishing methods used in inland reservoirs in Sri Lanka.
(b) Briefly explain the management practices used to control over-exploitations in inland reservoirs in Sri Lanka
5. (a) What are the factors that influence the mortality of fish ?
(b) Briefly explain methods used to estimate the total mortality coefficient of a fish population?
(c) Total mortality coefficient and fishing effort data for a population of *Catla catla* in

Uda-Walawe reservoir in Sri Lanka are given below;

Effort (No.of boats/day)	Total mortality coefficient
05	0.28
10	0.30
15	0.37
20	0.43
25	0.48
35	0.54
40	0.56
48	0.61
60	0.70

P.T.O

Calculate the catchability coefficient and natural mortality coefficient of this population .

6. Write short notes on any **two (02)** of the following.

- (i) Lung fishes
- (ii) Air bladder of fish
- (iii) Osmotic balance in bony fishes
- (iv) Ornamental fish industry in Sri Lanka