

The Open University of Sri Lanka
Bachelor of Science Degree Programme
Final Examination : 2013/2014 – Level 5
Course Code : ZLU3181/ZLE5181
Course title : Fish Biology and Fishery management
Duration : Two hours



Date : 2014.12.01

Time : 1.30 p.m- 3.30 p.m

Answer any **four (04)** questions.

Wherever necessary illustrate your answers with clearly labeled diagrams

1. Write an account on the extinct fish groups .
2. “Air bladder is a unique organ in modern teleosts” . Comment on this statement .
3. Briefly explain the management strategies that could be used for sustainable utilization of marine fisheries
4. One of the undergraduate students wants to study the reproductive biology of the freshwater fish species , *Oreochromis mosambicus* for his /her research project. Explain the methods that he/ she should use in this study.
5. (a) Briefly explain the factors that affect the mortality of fish .
 (b) The catch and effort data for a population of *Lates calcarefes* in Negombo lagoon are as follows.

Fishing effort (No. hours of fishing)	Total catch in numbers
3	15
2 ½	8
3 ½	9
4	6
5	1

- (i) If catch per unit effort is proportional to population size, calculate the catchability coefficient and initial population size.
- (ii) Determine the fishing mortality coefficient, at the level of maximum fishing effort

P.T.O

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

- (i) Encircling nets.
- (ii) Yield models
- (iii) Mark and recapture method for identification of fish stocks
- (iv) Adaptations of fishes for aerial respiration