

UNIVERSITY OF RUHUNA
BACHELOR OF SCIENCE IN FISHERIES AND MARINE SCIENCES DEGREE
Level II Semester I - July/August 2015

FAQ 2113 - Fish Physiology and Biochemistry

Time: 02 hours

Answer only **Four (04)** questions.

- 01). (a) What is “osmoregulation”? (02 marks)
- (b) List out osmoregulatory strategies in fish. (06 marks)
- (c) Explain the osmoregulatory mechanisms of marine teleosts and fresh water teleosts. (42 marks)
- 02). **Either**
- A. Write short accounts on the following
- (a) Gas transport in fish (25 marks)
- (b) Median & Paired fin propulsion (MPF) swimming modes in fish. (25 marks)
- Or**
- B. “Structure of the fish eye has number of adaptations to sustain life in aquatic environment.” Explain. (50 marks)
- 03). “Digestion and absorption of nutrients are very important physiological functions in teleosts”. Justify this statement. (50 marks)
- 04). Write short accounts on **any three** of the following. (50 marks)
- (a) Systemic circulation
- (b) Non-swimming locomotion
- (c) Ureotelism
- (d) Cell types of olfactory organ
- (e) Electroreceptors of fish

05). (a) What are the hormones that can contribute to control of reproduction in teleosts?

(10 marks)

(b) What are the organs responsible for secretion of those hormones? (10 marks)

(c) Briefly describe the role of each of the above mentioned hormones in successful completion of reproductive cycle of teleosts. (30 marks)

06). (a) Briefly describe the immune systems found in fish. (15 marks)

(b) Briefly describe the roles of B-cells and T-cells in maintaining immunity in teleosts. (35 marks)

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