



UNIVERSITY OF RUHUNA
FACULTY OF FISHERIES AND MARINE SCIENCES & TECHNOLOGY

Academic Year 2023/2024

Bachelor of Science Honours in Fisheries and Marine Sciences Degree

Level I Semester I Examinations - October/ November 2024

FAQ 1113: Evolution & Biology of Fin-fish

Time: 2 hours

Answer any four (04) questions

1. (a) Briefly explain the following

- (i) General characteristics of Phylum Chordata
- (ii) Classification of Division Gnathostomata
- (iii) Significance of the transition from jawless to jawed fish in finfish evolution
- (iv) Contribution of evolution of fins to the mobility of finfish

(40 marks)

(b) Briefly describe the key evolutionary adaptations that have allowed finfish to thrive in aquatic environments.

(60 marks)

2. Giving suitable diagrams and examples, briefly explain different body shapes/forms found in bony fish. Emphasize the importance of each body shape to facilitate life in different aquatic environments.

(100 marks)

3. Write an account on "Tooth types" of bony fish.

(100 marks)

4. Briefly explain the morphological and biological adaptations that enable sharks to thrive as efficient predators in their environment.

(100 marks)

Page 1 of 2

5. Compare the following pairs.

- (a) Superior mouth and inferior mouth in fish
- (b) Median fins and paired fins in fish
- (c) Spiny rays (spines) and soft rays (rays) in fins of bony fish
- (d) Ganoid scales and leptoid scales in fish

(100 marks)

6. Write short accounts on **any four (04)** of the following.

- (a) Life cycle of sea lamprey
- (b) Comparison of families of Subclass Dipnoi
- (c) Swim bladder modifications in teleosts
- (d) Meristic characters of fish
- (e) Morphometric characters of fish

(100 marks)

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FAQ 1122:

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