



RAJARATA UNIVERSITY OF SRI LANKA
FACULTY OF APPLIED SCIENCES

Bachelor of Science in Applied Sciences
Second Year - Semester I Examination – July/August 2023

ZOO 2204 - FISH BIOLOGY

Time: Two (02) hours

Answer FOUR (04) questions only.

1. a) An adult fish inhabiting the bottom of shallow area of seabed, feeds on small molluscs from the bottom.
 - i. State the mouth type that could be present in the fish. **(05 marks)**
 - ii. Describe the structure of the mouth with special reference to the arrangement of bones in the buccal cavity and the pharynx of the fish with appropriate diagrams. **(20 marks)**
 - iii. Explain the feeding mechanism shown by the fish. **(45 marks)**
- b) “The luring of prey facilitates the feeding of carnivorous fish which are exhibiting lie and wait feeding behaviour”. Using TWO (02) suitable examples, justify this statement. **(30 marks)**
2. a) Describe how a fish acquires the sensations through the lateral line emphasizing its structure. **(80 marks)**
b) Discuss the advantages of possessing lateral line/s on a fish. **(20 marks)**
3. a) Explain the process of osmoregulation in *Cyprinus carpio*. **(80 marks)**
b) If above mentioned fish is placed in water with a salinity of 35ppt, comment on the problems it will encounter. **(20 marks)**

4. a) Mention the migratory pattern shown by *Salmo salar*. (05 marks)
- b) Discuss the migratory pattern of *Salmo salar* emphasizing on each stage of its life cycle. (80 marks)
- c) Explain how the above-mentioned fish is facilitated to cross a constructed barrier across its migratory pathway. (15 marks)
5. Write short notes on the following.
- a) Characters used in a Classical taxonomy study of fish
 - b) Structure of a typical fish ovarian follicle
 - c) Different types of swim bladders seen in fish
 - d) Red and white muscles in tuna
- (25 marks x 4 = 100 marks)

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