Examination paper for BI2064 Fish anatomy and physiology

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Examination time (from-to): 09.00-13.00
Permitted examination support material: None

Other information:

Language: English
Number of pages (front page excluded): 1
Number of pages enclosed: 0
1 (1.5 h) Describe and discuss anatomical and physiological adaptations in fish locomotion.

2 (0.5h)
   a) Make a drawing illustrating the main parts of the Atlantic salmon life cycle.
   b) Which hormones are central in changing the salmon’s habitat during its lifecycle?

3 (0.5h)
   a) What specific mechanisms do sharks use to regulate the extracellular osmolality?
   b) What physiological problems does this strategy lead to, and how do they solve the problems?

4 (1.0h)
   a) Describe the different parts and their function of a salmonid digestive system (mouth to rectum)
   b) How do the different parts differ from that of a typical herbivore fish?
   c) Describe the cellular organization (histology) of a typical midgut in fish (draw and name the layers from enterocytes to serosa)

5 (0.5h) Describe the central differences between cartilagous fish (Chondrichthyes) and bony fish (Osteichthyes). Answers already given in question 3 should only be referred to.