



EASTERN UNIVERSITY, SRI LANKA
THIRD EXAMINATION IN SCIENCE (SPECIAL REPEAT) - 2008/2009
(FEBRUARY-2010)
FISH BIOLOGY - ZI. 302

Time: 1 hour

Answer all questions:

(Illustrate your answer with clear labeled diagrams where necessary).

1. What is meant by the term “ Adaptive Radiation”? Discuss the adaptive radiation of fin fish in the different aquatic ecosystem.

2. Comment on the following:

- a). Fish Migration
- b). Osmoregulatory Mechanism in Euryhaline species
- c). Swimming Pattern in Fin fishes

(10 marks)

where Λ - molar conductivity, Λ^∞ - molar conductivity at infinite dilution and α - degree of dissociation of a weak electrolyte. **XXXXXX** (15 marks)

(a) The resistance of a 0.01 M solution of acetic acid measured in a cell of cell constant 0.20 cm² was found to be 750 Ω at 25 °C. The limiting molar conductivity of CH₃COONa, HCl and NaCl at the same temperature are 425.0, 425.0 and 128.0 S cm² mol⁻¹ respectively. Calculate

- (i) the molar conductivity (Λ) of the acid solution (20 marks)
- (ii) the molar conductivity of acetic acid at infinite dilution (Λ^∞) (20 marks)
- (iii) the degree of dissociation (α) (10 marks)

Turn Over