

國立嘉義大學九十六學年度 水生生物科學系碩士班招生考試試題

科目：專業英文

一、請寫出下列水生生物的中文名字：(25分)

1. *Cyprinus carpio*, 2. *Oreochromis mossambica*, 3. *Anguilla japonica*, 4. *Chanos chanos*, 5. *Penaeus monodon*, 6. *Macrobrachium rosenbergii*, 7. *Crassostrea gigas*, 8. *Meretrix lusoria*, 9. *Corbicula fluminea*, 10. *Oncorhynchus mykiss*.

二、英翻中：(每題 25 分，共 75 分)

1. Hypoxia includes environmental hypoxia which refers to environmental water with low dissolved oxygen, and cellular hypoxia which refers to hemolymph or cytosol with low dissolved oxygen. Environmental hypoxia is due to a decrease in the oxygen flux from the air into water, while cellular hypoxia is due to a reduction in the oxygen flux from water into an organism. Cellular hypoxia can be induced by environmental hypoxia or by chemicals which inhibit respiration or impede the oxygen flux from water into an organism.
2. Fishes have evolved three fundamental strategies in handling the composition of the extracellular fluid: (1) osmoconformity, where fish plasma osmolality matches the marine environment; (2) hyper-osmoregulation, where fish plasma osmolality is regulated at a level higher than the environment; and (3) hypo-osmoregulation, where fish regulate body fluid composition below that of sea water. Some other species such as salmon and eel undergo metamorphic changes in their lives for anadromous (upstream) and catadromous (downstream) reproductive migrations into and out of freshwater streams are often euryhaline animals, which vary in their ability to adapt to salinity changes.
3. Marine microalgae are important food sources for aquaculture animals such as crustacean larvae and bivalve mollusca. The optimum nutritional value of microalgae, as aquaculture feed species, is influenced by the fatty acid composition of lipids and, to a lesser extent, by the amino acid composition of protein and the sugar composition of the carbohydrates. It is well established that the presence of highly unsaturated fatty acids in the lipid profile, especially EPA and/or DHA in the microalgal diet were associated with high growth rate of many juvenile aquaculture organisms.