Wednesday, 16th of January 2008
10.30-12.00

University of Buea

Faculty of Sciences

Department of Plant & Animal Sciences

ZOO 409
(COMPARATIVE VERTEBRATE PHYSIOLOGY I)

Continuous Assessment (2007-2008)

Instructions: Answer Section 1 and Section 2 in two different papers

SECTION 1: (10 MARKS)

1. **What are the implications of the type of nitrogenous wastes produced by vertebrates on the type of excreta formed by the animals? (2mks)**
2. **Discuss the central role of sodium ions (Na^+) in osmoregulation (3mks)**
3. **(i) In a simple tabular manner, display the major differences in composition between the plasma, nephric filtrate and urine.**
   (ii) Explain how the differences in concentration of major solutes are attained. (3+2= 5mks)

SECTION A (20 Marks)

4. **Using a diagram only, present the primary functions of membrane proteins (5 Marks)**
5. **With the aid of a diagram, illustrate the functioning of sodium-potassium-ATPase pump (5 Marks).**
6. **Using a peptide ligand as an example, describe the events of signal transduction mechanisms for the plasma membrane receptors (5 Marks).**
7. **In relation to the cell membranes, how do lipophilic ligands such has steroids and thyroxine act to produce their physiological effects (5 Marks).**

SECTION A

Total Marks (30)

Good Luck

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