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| <b>UNIVERSITY OF BUEA</b>                                |  |
| <b>FACULTY OF SCIENCE</b>                                |  |
| <b>FIRST SEMESTER EXAMINATIONS FOR 2008/2008 SESSION</b> |  |
| <b>DEPARTMENT:</b> PAS                                   | <b>COURSE INSTRUCTORS:</b> Salah, Fokam                  |
| <b>MONTH:</b> February 2009                              | <b>COURSE CODE:</b> ZOO 409                              |
| <b>DATE:</b> 27/02/09                                    | <b>COURSE TITLE:</b> Comparative Vertebrate Physiology I |
| <b>TIME ALLOWED:</b> 3 Hourse                            | <b>DURATION:</b> 15-18hrs                                |
| <b>INSTRUCTIONS:</b> Answer all the two Questions        |  |

**(1) (a) Describe the aspects of gastrointestinal physiology with respect to:**

- (i) Nervous control (5 Marks)**
- (ii) Motility (5 Marks)**
- (iii) Secretions (10 Marks)**
- (iv) Digestion and Absorption (10 Marks)**

**(b) Describe the mechanism and control of the renal physiology (10 Marks)**

**(c) How is oxygen and carbon dioxide transported by blood? (4 Marks)**

**(d) In which way is the brain-Testicular Axis involved in the control of the reproductive function? (3 Marks)**

**(e) Using a diagram only, show the structural and functional elements of a Eukaryotic cell membrane (3 Marks)**

**(Total 50 Marks)**

**(2) a) (i) What is the greatest challenge to the circulatory system (Precise answer please) (2 marks)**

**(ii) How have the different classes of vertebrates overcome this challenge? (6 Marks).**

**(b) Explain the role of the circulatory system in the cooling of an animal's body (5 Marks)**

**(c) In a diagrammatic manner, outline haematopoiesis from a stem cell (4 marks)**

**(d) In a tabular manner, compare the composition of blood, plasma and serum (3 marks)**

**(Total 20 Marks)**

**Grand Total: 70 Marks**

.....**Good Luck**.....