



# THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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**MAIN EXAMINATION**

**AUGUST – DECEMBER 2018 TRIMESTER**

**FACULTY OF SCIENCE**

**DEPARTMENT OF BIOLOGY**

**PART TIME PROGRAMME**

**BIO 307: COMPARATIVE ANIMAL PHYSIOLOGY**

**Date: DECEMBER 2018**

**Duration: 2 Hours**

**INSTRUCTIONS: Answer Question ONE and any other TWO Questions**

- Q1. a) Describe the application of homeostasis to animals **(2 marks)**
- b) 1) Define the term osmoregulation **(1 mark)**
- 2) List the major challenges organisms face depending on their habitat **(4 marks)**
- c) Describe fluid feeders **(4 marks)**
- d) 1) Differentiate between **(2 marks)**
- i) External respiration'
- ii) Internal respiration
- 2) List and explain 3 major factors influencing the evolution of respiratory mechanisms **(6 marks)**
- 3) Briefly describe closed circulatory system **(4 marks)**
- e) 1) List the 4 major functions of the gut **(2 marks)**
- 2) Differentiate between intracellular and extracellular digestion **(5 marks)**
- Q2. Give a comparative account of gaseous exchange in birds and animals **(20 marks)**

- Q3. Describe the various feeding patterns in animals (20 marks)
- Q4. Compare and contrast digestion in Herbivores and omnivores (20 marks)
- Q5. Discuss various asexual reproductive mechanisms (20 marks)

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