

Chuka University

Resit/ Special exams for the Award of Bachelor of Animal Science

ANSC 221: Environmental Physiology, Ethology and Animal welfare

Instructions: Answer All questions in Section A and any two in section B.

SECTION A: 40 MARKS

1. Define the following terms (12 Marks)
 - a. Homeostasis
 - b. Ethology
 - c. Ecological Niche
 - d. Sentience
 - e. Acclimation
 - f. Biotic environment
2. Write short notes on the following
 - a. Care relationship among animals (4 Marks)
 - b. Opportunistic pathogens (4 Marks)
 - c. Internal thermal gradient of the body (4 Marks)
 - d. Adaptation of animals to high altitude (4 Marks)
3. Explain the following
 - a. Difference between radiative and evaporative cooling (4 Marks)
 - b. Difference between parasitic and pathogenic relationships (4 Marks)
 - c. The role played by ADH in the maintenance of osmotic pressure in the body (4 Marks)

SECTION B: 30 Marks

4.
 - a. Describe the positive feedback mechanism (4 Marks)
 - b. Outline the differences between physiological and behavioral mechanisms in homeostasis (3 Marks)

- c. How do animals respond to cold environment? (8 Marks)
5. Discuss the 'five freedoms' under the following subtopics
- a. Name four of these freedoms (2 Marks)
 - b. List 6 indicators that provide best information on animal welfare (3 Marks)
 - c. Name three positive conditions considered in animal welfare (3 Marks)
 - d. Discuss the welfare issues in livestock feeding (7 Marks)
6. Animals survive the environment through appropriate behavior
- a. Describe three causes of behaviors in animals (3 Marks)
 - b. List 4 types of learning in animals (4 Marks)
 - c. Discuss light management practices in layers (8 Marks)