



KISII UNIVERSITY

UNIVERSITY EXAMINATIONS

**THIRD YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN ANIMAL SCIENCE
SECOND SEMESTER 2024/2025
[JANUARY – APRIL, 2025]**

**ANSC 221: ENVIRONMENTAL PHYSIOLOGY, ETHOLOGY & ANIMAL
WELFARE**

STREAM: Y2 S2

TIME: 2 HOURS

DAY: WEDNESDAY, 3:00 - 5:00 P.M.

DATE: 23/04/2025

INSTRUCTIONS:

- 1. Do not write anything on this question paper.***
- 2. Answer ALL questions in section A and any other TWO in section B.***

SECTION A: 30 MARKS

1. Define the following terminologies as used in animal welfare and ethology
 - a) Ethology (2.5 Marks)
 - b) Animal welfare (2.5 marks)
2. Describe ways in which Heat stress is physiologically combated in the body (5 marks)
3. Briefly explain the pathophysiology of hypothermia in animals. (5 marks)
4. The hypothalamus controls important aspects of parenting and attachment behaviors, describe the functions of hypothalamus in mammals (5 marks)
5. Describe the general principles of developing and evaluating animal welfare policies (5 marks)
6. Explain what is meant social defeat in ethology (5 marks)

SECTION B; (40 MARKS)

7. Discuss the animal freedoms also known as Brambell's freedoms as adopted by the World Organisation for Animal Health (20 marks)

8. The environment can have major influences on animal physiology.

Discuss the alterations in thermoregulation in the animal body due to outside stresses (20 marks)

9. Acclimatization is the process in which an individual animal adjusts to a gradual change in its environment such as a change in temperature, humidity, photoperiod, or pH. Discuss the various ways in which animals acclimatize. (20 marks)