

**UNIVERSITY OF SWAZILAND**

**MAIN EXAMINATION PAPER 2009**

**TITLE OF PAPER : ANIMAL PHYSIOLOGY**

**COURSE CODE : B401**

**TIME ALLOWED : THREE HOURS**

**INSTRUCTIONS :**

- 1. ANSWER ANY FOUR QUESTIONS**
- 2. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS**
- 3. WHEREVER POSSIBLE ILLUSTRATE YOUR ANSWERS WITH LARGE CLEARLY LABELLED DIAGRAMS**

**SPECIAL REQUIREMENTS:**

- 1. CALCULATORS (CANDIDATES MAY BRING THEIR OWN)**
- 2. GRAPH PAPER (ORDINARY)**

**THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN  
GRANTED BY THE INVIGILATORS**

**QUESTION 1.**

- (a) Using relevant examples discuss the role of counter-current systems in living organisms. (12 Marks)
- (b) Discuss fully the relationship between size of an animal and metabolic rate. (13 Marks)

**[Total Marks = 25]**

**QUESTION 2.**

How does the nervous system relate to the endocrine system? Answer with a full discussion giving clear examples.

**(25 Marks)**

**QUESTION 3.**

- (a) Differentiate between feeding, digestion and nutrition. (15 Marks)
- (b) Discuss fully any vitamin (10 Marks)

**[Total Marks = 25]**

**QUESTION 4.**

By using sketches describe and discuss the structure and function of the human penis.

**(25 Marks)**

**QUESTION 5.**

Compare the costs of the three modes of locomotion.

**(25 Marks)**

**QUESTION 6.**

How would you design a weight loss programme for human beings? Give a factual basis for your design.

**(25 Marks)**