

UNIVERSITY OF SWAZILAND

EXAMINATION PAPER 2011

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 MUST BRING THEIR OWN.
2. GRAPH PAPER (ORDINARY)

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

QUESTION 1.

Describe and discuss the relationship between the mammalian nervous system and endocrine system? Give clear examples.

(25 Marks)

QUESTION 2.

(a) What are the functions of excretory systems in organisms? (10 Marks)

(b) Discuss fully the structure and function of the excretory system found in insects (15 Marks)

[Total Marks = 25]

QUESTION 3.

Describe any 3 (three) endocrine glands, detailing their functions and those of their secretions.

(25 Marks)

QUESTION 4.

Discuss fully the role played by the following in human physiology:

(i) Riboflavin (5 Marks)

(ii) Calcium (5 Marks)

(iii) Ascorbic acid (5 Marks)

(iv) Magnesium (5 Marks)

(v) Vitamin E (5 Marks)

[Total Marks = 25]

QUESTION 5.

(a) Describe the structure and functioning of the two types of lungs giving examples of the animals in which they are found. (10 Marks)

(b) Compare regulation of respiration in aquatic and terrestrial animals. (15 Marks)

[Total Marks = 25]

QUESTION 6.

Define what is meant by the "metabolic rate" of an animal. Describe and discuss the components of metabolic rate? (25 Marks)
