

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.

How do the physical properties of the earth and materials on it impact on physiological systems? In your answer use relevant examples.

[Total Marks = 25]

QUESTION 2.

Describe and discuss how the nervous system works together with the endocrine system in mammals?

[Total Marks = 25]

QUESTION 3.

(a) What is meant by resting potential. (10 Marks)

(b) Write notes on the following:

(i) Gap junctions (5 Marks)

(ii) Chemical synapse (5 Marks)

(iii) Myelin sheath (5 Marks)

[Total Marks = 25]

QUESTION 4.

(a) What are vitamins and what is their role in human nutrition? (10 Marks)

(b) Write briefly on the following (5 Marks each)

(i) Pyridoxine

(ii) Thiamin

(iii) Iron

[Total Marks = 25]

QUESTION 5.

(a) Compare water and air in terms of partial pressures of the gases they contain and the availability of these gases to animals. (10 Marks)

(b) Describe, inasmuch as possible with sketches, two types of respiratory organs.

(15 Marks)

[Total Marks = 25]

QUESTION 6.

Write out a full discussion on the structure and function of the three types of muscles. (25 Marks)