

UNIVERSITY OF SWAZILAND

MAIN EXAMINATION PAPER 2021

TITLE OF PAPER : ANIMAL PHYSIOLOGY

COURSE CODE: BIO431

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.

How is body temperature regulated in endotherms? (25 Marks)

QUESTION 2.

What is an oxygen dissociation curve? Describe and discuss the factors that determine the positioning of oxygen dissociation curves detailing the advantages (and disadvantages) of the position of an animal's oxygen dissociation curve. (25 Marks)

QUESTION 3.

Discuss fully ANY THREE of the following:

- (i) Riboflavin
- (ii) Calcium
- (iii) Ascorbic acid
- (iv) Iron
- (v) Vitamin D

(25 Marks)

QUESTION 4.

- (a) Differentiate between resting potential and action potential. (10 Marks)
- (b) Write notes on the following:
 - (i) Post-synaptic potentials (5 Marks)
 - (ii) Conduction speed (5 Marks)

[Total Marks = 25]

QUESTION 5.

Describe and discuss, fully, the relationship and the elements involved in the relationship between the hypothalamus and the hypophysis. [25 Marks]
