

UNIVERSITY OF SWAZILAND

MAIN EXAMINATION PAPER 2016

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.

Discuss fully ANY THREE of the following:

- | | | |
|-------|------------|-----------|
| (i) | Retinol | (5 Marks) |
| (ii) | Thiamin | (5 Marks) |
| (iii) | Iron | (5 Marks) |
| (iv) | Pyridoxine | (5 Marks) |
| (v) | Vitamin K | (5 Marks) |

[Total Marks = 25]

QUESTION 2.

The hypophysis is considered by some to be the "master gland" in the human body. Justify or contradict this statement by giving a full account of the structure and function of this gland.

(25 Marks)

[Total Marks = 25]

QUESTION 3.

How is body temperature regulated in endotherms? Comment on the differences between endotherms and ectotherms"

(25 Marks)

[Total Marks = 25]

QUESTION 4.

What is meant by the "metabolic rate" of an animal? Describe and discuss the contributing elements to an animal's metabolic rate?

(25 Marks)

[Total Marks = 25]

QUESTIONS 5.

Describe the structure of human skeletal muscle and explain how it functions.

(25 Marks)

[Total Marks = 25]

QUESTION 6.

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|-----|--|------------|
| (a) | Describe the structure and function of the mammalian lung. | (15 Marks) |
| (b) | How is respiration regulated in terrestrial animals. | (10 Marks) |

[Total Marks = 25]