

UNIVERSITY OF SWAZILAND

MAIN EXAMINATION PAPER 2010

**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.**

- (a) Describe the structure and function of flagella. (10 Marks)
- (b) Write out a full discussion on the stimulation and response to stimulation of vertebrate skeletal muscle. (15 Marks)
- [Total Marks = 25]

**QUESTION 2.**

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

[Total Marks = 25]

**QUESTION 3.**

- (a) How is body temperature regulated in endotherms? (15 Marks)
- (b) What is acclimation? (5 Marks)
- (c) Define and describe torpor (5 Marks)
- [Total Marks = 25]

**QUESTION 4.**

What is an oxygen dissociation curve? List and discuss the various factors that affect the positioning of the oxygen dissociation curves of the blood of named animals.

(25 Marks)

**QUESTION 5.**

- (a) Briefly describe the structure and function of the human male reproductive system (10 Marks)
- (b) What is meant by puberty? Write out a discussion on puberty in humans describing the role played by hormones. (15 Marks)
- [Total Marks = 25]

**QUESTION 6.**

Compare the costs of the three modes of locomotion.

(25 Marks)

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