UNIVERSITY OF SWAZILAND

RESIT/SUPPLEMENTARY EXAMINATION PAPER 2016/2017

TITLE OF PAPER: VERTEBRATE ZOOLOGY

COURSE CODE: BIO242/B302

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS:

1. ANSWER ANY FOUR QUESTIONS.
2. EACH QUESTION CARRIES TWENTY FIVE (25) MARKS.
3. ILLUSTRATE YOUR ANSWERS WITH LARGE AND CLEARLY LABELED DIAGRAMS WHERE APPROPRIATE.

SPECIAL REQUIREMENTS:

NONE

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

ANSWER ANY FOUR (4) OUT OF THE SIX (6) QUESTIONS

QUESTION 1

With the aid of drawings, depict the cranium of a typical solenoglyph snake and that of a typical lizard. Show how these two skulls differ, and how this affects cranial kinesis in these two groups of reptiles. **[25 marks]**

QUESTION 2

Write an essay on the diversity and life histories of Swaziland's reptiles.

[25 marks]

QUESTION 3

The digestive systems of herbivorous mammals show remarkable adaptations for the processing of plant material. With the aid of diagrams, explain how digestion is achieved in different mammalian herbivores; and how this differs from that of a typical (e.g. carnivorous) mammal.

[25 marks]

QUESTION 4

Discuss and compare the circulatory systems of Osteichthyes, Amphibia, Reptilia and Mammalia.

[25 marks]

QUESTION 5

Describe in detail the brain and sensory organs of reptiles. Ensure that you cover the various groups of extant reptiles in your answer.

[25 marks]

QUESTION 6

Describe the modes of locomotion in a typical chondrichthyian and osteichthyian fish. Discuss in detail the role that the swim bladder plays in the osteichthyians, and how the condrichthyians manage without it.

[25 marks]