



UNIVERSITY OF ZAMBIA
SCHOOL OF AGRICULTURAL SCIENCES
DEPARTMENT OF ANIMAL SCIENCE
AGA 2110- ANATOMY AND PHYSIOLOGY OF FARM ANIMALS
ASSIGNMENT 1
DUE DATE: 26 May 22

Instructions: Typed work, Maximum 4 pages (Excluding cover + reference pages),
Font: Times New Roman, size 12, 1.15 line spacing, Alignment – justify

QUESTION 1

What are exocrine glands? Differentiate the types of exocrine glands by their methods of secretions, and for each type, give an example of the gland found in the body of an animal
(10 marks)

QUESTION 2

A sarcomere is the smallest functional unit of striated muscle tissue. It is composed of two main protein filaments which slide past each other during contraction. The model that best describes muscular contraction is called the **sliding filament theory**.

- Draw a simple sketch of a sarcomere, showing how the protein filaments are arranged and label the different regions **(5 marks)**
- Briefly explain the changes that occur to the different parts and regions of the sarcomere during muscle contraction **(5 marks)**

QUESTION 3

- What are the anatomical sites of origin for the sympathetic and parasympathetic nervous systems **(2 marks)**
- Differentiate the sympathetic and parasympathetic nervous systems by the circumstances under which they are activated, target organs and their effects on target organs **(8 marks)**

QUESTION 4

With the aid of simple labeled sketches, differentiate microscopic structures of compact and spongy bones? What are their relative locations in the body of an animal and what are their specific roles? **(10 marks)**

QUESTION 5

- Clearly explain why the mitochondria is called a cell that lives within a cell **(4 marks)**
- Aside from being the 'powerhouse of the cell', what other functions might mitochondria have? **(6 marks)**

THE END