

GWANDA STATE UNIVERSITY



FACULTY OF LIFE SCIENCES

DEPARTMENT OF ANIMAL SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL SCIENCE

ANIMAL ANATOMY AND PHYSIOLOGY 1

LAS 1102

First Semester Final main Examination Paper

November 2019

This examination paper consists of 3 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: None

Examiner's Name: Dr B. Moyo

INSTRUCTIONS

1. Answer **all** questions in Section A
2. Answer **only two** questions in Section B

MARK ALLOCATION

QUESTION	MARKS
SECTION A	60
SECTION B	40
TOTAL ATTAINABLE MARKS	100

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SECTION A: Answer **ALL** questions in this section

QUESTION 1

- a. What is the difference between an atom and a molecule? [4]
- b. Name the body cavity in which the following organs are found:
- i. Heart; [1]
 - ii. Urinary bladder; [1]
 - iii. Liver; and [1]
 - iv. Lungs. [1]
- c. Describe two mechanisms which the skin uses to help prevent heat loss when an animal is in a cold environment. [6]
- d. Name the bones in the forelimb. [6]

Question 2

- a. i). How would you differentiate a white blood cell from a red blood cell under a microscope? [4]
- ii). How does the blood help fight invasion by bacteria and viruses? [5]
- b. i). What is the process by which oxygen moves from the alveoli into the blood? [1]
- ii). Why does this process occur? [4]
- iii). How does the structure of the alveoli make gas exchange efficient? [4]
- iv). Describe how oxygen is carried in the blood? [2]

Question 3

- a. The vertebral column is divided into **five** regions. State their region and their respective position in the body. [10]
- b. i). Outline seven functions of bones. [7]
- ii). Describe systole phase. [3]

SECTION B: Answer only TWO questions

Question 4

- a. Discuss the functions of the nervous system in farm animals. [10]
- b.
 - i) State the functions of the liver in farm animals. [6]
 - ii). How does the liver help control glucose levels in blood? [4]

Question 5

Glands produce various secretions which mix with the food as it passes along the gut. Discuss these various secretions. [20]

Question 6

- a.
 - i. With the aid of a diagram, describe a synovial joint. [5]
 - ii. What is the difference between tissue fluid and lymph? [2]
- b.
 - i). State the functions of blood in an animal's body. [7]
 - ii). Briefly describe the skin. [3]