

# Uganda Martyrs University

## Faculty of Agriculture

**BACHELOR OF AGRICULTURE, JANUARY INTAKE YEAR I SEMESTER I -  
2020/21 EXAM**

**COURSE UNIT: ARE1101- ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS**

**Date: 07<sup>th</sup> July 2021**

**Time: 9:30am to 3:30pm**

**Instructions:**

**i. Answer ALL questions in section A and any THREE in section B**

**ii. Time: Six Hours**

**iii. Ensure your work is *clear* and *readable*. Untidy work shall be penalized**

**iv. Any type of examination malpractice will lead to automatic disqualification**

**v. Submit your examination answers to the course unit lecturer (email provided)**

**vi Email address: *piusm.nina@gmail.com***

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

Use the correct term which best describe each of the following: **(25 marks)**

1. A clear fluid that aids circulation, excretion, and other body functions.

.....

2. A group of tissues that work together to perform specific functions.

.....

3. Caring for animals so that their needs are met and they do not suffer.

.....

4. A collection of organs that work together to perform a function for an organism. ....

5. The study of the functions of cells, tissues, organs, and organ systems of a living organism. ....

6. A group of cells that is alike in activity and structure.

.....

7. The study of the form, shape, and appearance of an animal.

.....

8. Breaking down food into molecules that the body can absorb.

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9. A group of animals that are covered with hair, and in which the females give birth to live young and secrete milk as food for their babies.

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10. The process of the body ridding itself of wastes.....

**Section B: Answer any THREE Questions in this section (75 marks)**

11a) In his Origin of Species, published in 1859, Darwin proposed how one species might give rise to another. He argued that where food was limited, competition meant that only the fittest individuals would survive. Explain how this argument supports natural selection. **(15marks)**

b) Speciation is the evolution of one or more species from a single ancestor species. It can occur when members of a population become isolated from each other, a situation described as isolation mechanism. Explain the different types of isolation mechanism. **(10 marks)**

12 People who care for animals need to understand the fundamentals of anatomy and physiology. Giving examples, explain how anatomy and physiology is important in animal production, as they relate to:

a) Animal well-being—caring for animals so that their needs are met; animals do not suffer **(5 marks)**

b) Environmental needs of animals **(5 marks)**

c) Provision of facilities to meet needs of different animal species **(5 marks)**

d) Provision of care based on age and condition **(5 marks)**

e) Animal production capacity in breeding selection **(5 marks)**

13. In organ systems, each system is equally balanced with its responsibility, and none can survive without the other systems. Choose two organ systems and describe in detail how the functions they perform make them relate to each other **(25 marks)**

14. State and explain FIVE functions of the skeletal system in domesticated animals **(25 marks)**
15. Domestic animals can be classified into 3 groups based on their digestive systems.
- a) State the 3 classifications giving examples of each **(9 marks)**
  - b) Describe digestion process in the stomach of a ruminant animal **(8 marks)**
  - c) List four accessory digestive organs and state their role in the digestion process **(8 marks)**
16. Explain FIVE major functions of integumentary system **(25 marks)**

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