

UGANDA MARTYRS



UNIVERSITY

NGETTA CAMPUS
FACULTY OF AGRICULTURE

DIPLOMA IN ANIMAL PRODUCTION MANAGEMENT
DIPLOMA IN CROP PRODUCTION MANAGEMENT

DAPM 2102: APPLIED ANATOMY AND PHYSIOLOGY OF FARM ANIMALS
FINAL ASSESSMENT

ACADEMIC YEAR 2023/2024 SEMESTER ONE

DAPM I/DCPMI

DATE: 12th/DEC/2023

TIME ALLOWED: 3 HOURS (9:00am-12:00pm)

INSTRUCTIONS:

- *Attempt any four questions of choice*
 - *All questions carry equal marks*
 - *Start every question on a new page*
 - *Do not write anything on the question paper*
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Question One

- a) The **Skin** is the largest organ in the body, list the various parts of the integumentary system of the cow that make a good protective cover for the animal (5 marks).
- b) Discuss the **functions** of the integumentary system relating these functions to the corresponding structures of the system (20 marks).

Question Two

- a) Other than the kidneys, there are many other organs/structures that are involved in the removal of unwanted materials from the body, list the organs/structures that do this; stating the product(s) so removed (5 marks)

- b) With the aid of a well levelled diagram, discuss the structure and functions of the renal **nephron** of a mature animal (15 marks)
- c) Briefly describe the anatomy and functions of the penile urethra in the bull (5marks)

Question Three

- a) A piece of meat was thrown to the dog by a well-wisher, list the various organs/structures that the lump of meat may have to traverse from being grasped by the canine teeth up to when some parts of it is voided through the anal opening of the dog (5 marks)
- b) Compare and contrast the anatomical and physiological differences between monogastric and ruminant digestive systems (20 marks).

Question Four

- a) Sexual reproduction occurs when two gametes of opposite sex fuse to form a zygote; the structure and functions of the two organs (gonads) responsible for gametogenesis in the bull and the cow (10 marks)
- b) Assume a bull mounts a cow on heat and deposits semen in her reproductive receptacle, describe the structures and functions of the various organs the sperm cells will follow on their way up to where fertilization may occur (15 marks).

Question Five

- a) Cardiovascular system is responsible for delivering oxygen and nutrients to all the tissues in the body as well as transporting metabolic wastes from their points of generation to where they are removed from the body; discuss the anatomy and physiology of the organs involved in this (the heart and the blood vessels) (12 marks)
- b) Describe the various constituents of blood that makes it the fluid connective tissue of life (8 marks)
- c) How is lymph formed and what is the significance of lymphatic system in an animal (5marks)

Question Six

- a) Respiratory system is one of the most vital systems; describe the passage inhaled air would move through from the external meatus until it reaches the alveoli. (15 marks)

- b) Explain how gaseous exchange takes place in the lungs (5 marks)
- c) As part of body defence system, how is the respiratory system suited for this? (5 marks)

Question Seven

- a) The musculoskeletal system enables the body to function properly; mention the various types of bones that are found in the body (5 marks)
- b) With help of bones, muscles form joints necessary for locomotion, mention the various types of joints found in a bull (5 marks)
- c) Describe in details the functions of the musculoskeletal system (15 marks)

Question Eight

- a) The nervous system is made up of both the central nervous and the peripheral nervous systems; describe the various structures (parts) and functions of the **brain** (15 marks)
- b) With the aid of a well levelled diagram describe the various structures and functions of the mammalian eye (10 marks)

THE END