

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF PUBLIC HEALTH

PUHE 251: ANATOMY AND PHYSIOLOGY OF FOOD ANIMALS

STREAMS: PUHE (Y2S1)

TIME: 2 HOURS

DAY/DATE: TUESDAY 19/12/2023

2.30 P.M. – 4.30 P.M.

INSTRUCTIONS

1. Do not write anything on the question paper.
2. Mobile phones and any other reference materials are NOT allowed in the examination room.
3. The paper has three sections. Answer ALL questions in Sections I, II and III.
4. All your answers for Section I (MCQs) should be on one page.
5. Number ALL your answers and indicate the order of appearance in the space provided in the cover page of the examination answer booklet.
6. Write your answers legibly and use your time wisely

SECTION 1: MULTIPLE CHOICE QUESTIONS [10 MARKS] (Tick correct answer)

1. An imaginary plane passing through the body so as to divide the body into equal right and left halves is

- [a]. Midsagittal plane
- [b]. Transverse plane
- [c]. Horizontal plane
- [d]. Sagittal plane

2. The term ovine is used in food animals to refer to

- [a]. Boar
- [b]. Goat
- [c]. Pig
- [d]. Sheep

3. Pleural sacs in meat animals surrounds the
 - [a]. Heart
 - [b]. Lungs
 - [c]. Kidney
 - [d]. Liver
4. _____ is generally a property of nerve and muscle cells only
 - [a]. Excitability
 - [b]. Conductivity
 - [c]. Contractility
 - [d]. Secretion
5. Which of the following elements is not a major chemical component of animal proteins
 - [a]. Carbon
 - [b]. Hydrogen
 - [c]. Nitrogen
 - [d]. Fluoride
6. The pigment, melanin, in food animals can have the following colours, EXCEPT
 - [a]. Brown
 - [b]. Red
 - [c]. Yellowish-brown
 - [d]. Black
7. _____ are connective tissue bands that connect muscle to bone
 - [a]. Tendons
 - [b]. Fascia
 - [c]. Ligaments
 - [d]. Cartilage
8. Muscles that tend to pull a limb toward the median plane are functionally known as
 - [a]. Flexor muscles
 - [b]. Adductor muscles
 - [c]. Extensor muscles
 - [d]. Abductor muscles

In questions 9 and 10, indicate whether the statement is TRUE or FALSE.

- 9. Pronation is the act of turning toward a position in which the ventral aspect of the body or palmar or plantar aspect of an extremity is uppermost [True/False]
- 10. The bone marrow (hematopoietic tissue) is generally red in young meat animals [True/False]

SECTION II: SHORT ANSWER QUESTIONS [40 MARKS]

- 1. Define the following terms
 - [a]. Pathophysiology [2 marks]
 - [b]. Hyperplasia [2 marks]
 - [c]. Rigor mortis [2 marks]
- 2. State six (4) major functions of the integumentary system in food animals [4 marks]
- 3. The layers of the body wall and the layers of the digestive tract show a striking similarity, although in reverse order. List the layers of the gut wall of food animals, from outside inward [5 marks]
- 4. Outline five (5) key characteristics of skeletal muscles in food animals [5 marks]
- 5. Using a well-labelled diagram, describe the basic anatomy of the heart of a healthy bovine [10 marks]
- 6. The skeletal system of food animals is generally a framework of bones and connective tissues. Citing relevant examples, describe five (5) main structural groupings of bones [10 marks]

SECTION III: LONG ANSWER QUESTIONS [20 MARKS]

- 1. The digestive system (digestive tract) of food animals consists of a muscular tube lined with mucous membrane that is continuous with the external skin at the mouth and at the anus. Describe the basic anatomy and physiology of ten (10) general elements of the digestive tract of meat animals. [20 marks]

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