

**UGANDA MARTYRS UNIVERSITY**  
FACULTY OF AGRICULTURE

Supplementary / Special Examinations 2015-2016  
**Exam: Anatomy and Physiology of Domestic Animals**

Time: 10:00am – 01:00pm (3 Hrs)

Date: 06<sup>th</sup> August 2015

**Instructions:**

- i. *Attempt any 4 questions*
- ii. *Write clearly, number the questions appropriately on the answer booklet*
- iii. *Read and understand the instructions on the last page of the answer booklet*
- iv. *Do not write anything on a question paper*

- 1a. Define the term Animal coordination (2 marks)
- b. Name two systems involved in coordination in animals (2 marks)
- c. Differentiate between endocrine hormone and endocrine gland (4 marks)
- d. List two hormones and their functions produced by the posterior pituitary gland (4 marks)
- e. Discuss the functions of the major regions of the animals' brain (8 marks)
- 2a. Name the major components of Peripheral nervous system in animals (4 marks)
- b. Explain the process of urine formation in the kidneys of animals (6 marks)
- c. List three organs that are part of the excretory system in animals (3 marks)
- d. Mention the functions of three organs that are part of the excretory system in animals (3 marks)
- e. Name two types of muscles involved in the urinary reflexes in animals (2 marks)
- f. List two regions of the mammalian kidney (2 marks)
- 3a. Define the term cryptorchid (3 marks)
- b. Explain the reason(s) why testes in male animals descend into scrotal sacs (scrotum) at sexual maturity (4 marks)
- c. Differentiate between ovarian and oestrus cycles in animals (4 marks)
- d. Discuss the formation and significance (importance) of corpus luteum during the ovarian cycle in female reproductive system (4 marks)
- e. List five signs of oestrous (heat) period in dairy cattle (5 marks)
- 4a. Explain the three important tasks performed by the lymphatic system (3 marks)
- 4b. List four components of secondary organs of the animal lymphatic system. (4 marks)

- 4c. Explain the functions of the four components of secondary organs of the mammalian lymphatic system (8 marks)
- 4d. List two components of primary organs of the mammalian lymphatic system (2 marks)
- 4e. Name 3 types of blood plasma protein in animals (3 marks)
- 5a. Explain the three important tasks performed by the lymphatic system (3 marks)
- 5b. List four components of secondary organs of the animal lymphatic system. (4 marks)
- 5c. Explain the functions of the four components of secondary organs of the mammalian lymphatic system (8 marks)
- 5d. List two components of primary organs of the mammalian lymphatic system (2 marks)
- 5e. Name 3 types of blood plasma protein in animals (3 marks)
- 6a. List five differences between the digestive system of fowls and mammals (5 marks)
- 6b. Discuss briefly different types of prehension in animals (4 marks)
- 6c. Why is it common for farmers to graze cattle with sheep and not with goats? (2 marks)
- 6d. Define the term fermentative digestion in ruminant animals (2 marks)
- 6e. Explain the benefits of fermentative digestion to ruminant animals (2 marks)
- 6f. Name 4 products of fermentative digestion in ruminants (4 marks)
- 6g. How do ruminant animals contribute to climate change? (1 marks)
- 7a. Discuss the process of gaseous exchange in the lower respiratory tract in animals (5 marks)
- 7b. Explain the regulation of breathing activity in animals (5 marks)
- 7c. List five functions of the upper respiratory tract (5 marks)
- 7d. Write short notes on the following terms: (5 marks)
- i. Dyspnea ii. Hyperpnea iii. Eupnea iv. Apnea v. Polypnea
- 8a. Differentiate between lymphatic system and cardiovascular system in animals (4 marks)
- 8b. Discuss three forms of blood circulation in animals (6 marks)
- 8c. List three types of nerve cells that transmit nerve impulses (3 marks)
- 8d. Explain the process of transmitting nerve impulses in the animal's body (7 marks)