



MAASAI MARA UNIVERSITY

REGULAR UNIVERSITY EXAMINATIONS

2023/2024 ACADEMIC YEAR

FIRST YEAR SECOND SEMESTER

**SCHOOL OF NATURAL RESOURCES, TOURISM
AND HOSPITALITY**

**BACHELOR OF SCIENCE IN ANIMAL HEALTH
AND PRODUCTION**

COURSE CODE: AHP 1203-1

**COURSE TITLE: GROSS ANATOMY AND
EMBRYOLOGY II**

DATE: 15/5/2024

TIME: 1100-1300 HRS

INSTRUCTIONS TO CANDIDATES

Answer ALL questions.

This paper consists of 3 printed pages besides this cover page. Please turn over

QUESTION ONE

a) Describe the anatomy of the heart of a sheep using the following guidelines:

- i) The position in the body (6 marks)
- ii) The chambers of the heart (8 marks)
- iii) Major vessels draining blood **into** the heart (4 marks)
- iv) The tissue that constitutes the bulk of the heart wall (2 marks)

QUESTION TWO

a) Using a simple well-labeled sketch, illustrate the anatomical structure of the stomach of a pig (12 marks)

b) Name or state:

- i) The TWO major parts of avian stomach (2 marks)
- ii) The segments of the small intestine (3 marks)
- iii) THREE major salivary glands in the head region (3 marks)

QUESTION THREE

a) Name:

- i) THREE organs of the digestive system that develop from the foregut (6 marks)
- ii) The germ layer from which the epithelium lining the bronchiole tree develops (2 marks)
- iii) The germ layer of origin from which the tunica muscularis externa of the small intestine develops (2 marks)

b) Briefly describe following congenital anomalies:

i) Gastroschisis (9 marks)

ii) Omphalocele (6 marks)

c) Briefly explain the advantages of nipple-feeding milk to the calf as compared to bucket/pail-feeding (5 marks)

QUESTION FOUR

a) Using a simple well-labeled sketch, illustrate the components of the conducting air passages of the respiratory system excluding the parts in the head region (6 marks)

b) Briefly explain the functions conducting air passages in a bull (8 marks)

c) Outline the lobation of the left lung in the bovine (6 marks)

QUESTION FIVE

a) Use the photo/image below to answer questions beneath it:



i) Identify the organ shown (2 marks)

ii) From which species of domestic animals is the organ? (2 marks)

- iii)** State a reason/basis for your answer in part **(ii)** above
(2 marks)
- b)** Briefly explain the following:
- i)** The urine of a donkey appears turbid or foamy (4 marks)
 - ii)** The urine continuously trickles into the urinary bladder yet its flow to the exterior through the urethra is not continuous
(4 marks)
- c)** Name the parts of the urethra in the ram (4 marks)
- d)** Name the duct that conveys urine from the renal pelvis to the urinary bladder (2 marks)

QUESTION SIX

- a)** State:
- i)** The location of the male gonad in domestic mammals (2 marks)
 - ii)** TWO roles of the epididymis in the ram (4 marks)
- b)** Name the penis types found in domestic mammals (4 marks)
- c)** Explain why spermatozoa require some time in the female genital tract before they can fertilize the oocyte (4 marks)
- d)** Outline the position of kidneys in the cock (4 marks)
- e)** Name the part of the male genital duct system that runs in the spermatic cord (2 marks)

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