

GWANDA STATE UNIVERSITY



FACULTY OF LIFE SCIENCES

DEPARTMENT OF ANIMAL SCIENCES

BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL SCIENCE

ANIMAL ANATOMY AND PHYSIOLOGY 11

LAS 2102

First Semester Final main Examination Paper

November 2019

This examination paper consists of 3 pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: None

Examiner's Name: Dr B. Moyo

INSTRUCTIONS

1. Answer **all** questions in Section A
2. Answer **only two** questions in Section B

MARK ALLOCATION

QUESTION	MARKS
SECTION A	60
SECTION B	40
TOTAL ATTAINABLE MARKS	100

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SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION 1

- a. Discuss the thermo-regulation of testes in bovine bulls. [8]
- b. How are the gametes transported in the female animals? [2]
- c. Write short notes on the following:
 - i) Bilateral cryptorchid. [3]
 - ii) Sertoli cells. [4]
 - iii) Pampiniform venous plexus. [3]

Question 2

- a. Describe how digestion takes place in ruminants in the following:
 - i. Mouth; [3]
 - ii. Reticulo-rumen; [7]
 - iii. Omasum; [2]
 - iv. Abomasum. [8]

Question 3

- a. Discuss the main function of the respiratory system in the animal's body. [6]
- b. What are the functions of the lymphatic system in the animal's body? [4]
- c. The skeleton facilitates mobility in animals, outline the different bones that articulate with those listed using below using the relevant directional terms and the respective joints they form. [4]
 - i. Scapula;
 - ii. Pelvic bone;
 - iii. radius and ulna;
 - iv. Tibia and Fibula.
- d. Discuss sperm maturation (transformation) in the female reproduction tract. [6]

SECTION B. Answer only **TWO** questions in this section

Question 4

- a. Draw and label organs of the urinary system. [6]
- b. Describe the functions of the urinary system. [6]
- c. Outline the different bones found in the fore-quarter and the respective joints they form. [8]

Question 5

- a. What do you understand by trophic hormones? [indicate marks]
- b. Give **four** examples of these hormones, and indicate what the function of each of them is in a cow. [20 marks]

Question 6

- a. Write short notes on the function of the following hormones in the excretory system of farm animals.
 - i. Angiotensin II [2]
 - ii. Renin [2]
 - iii. Urogastrone [2]
 - iv. Erythropoietin [2]
 - v. Vasopressin [2]
- b. Describe how urine is formed in cattle. [10]