

**GWANDA STATE UNIVERSITY**



**FACULTY OF LIFE SCIENCES**

**DEPARTMENT OF ANIMAL SCIENCES**

**BACHELOR OF SCIENCE HONOURS DEGREE IN ANIMAL SCIENCE**

**ANIMAL PHYSIOLOGY**

**LAS 4202**

**Second Semester Final Examination Paper**

**June 2019**

This examination paper consists of 3 pages

**Time Allowed:** 3 hours  
**Total Marks:** 100  
**Special Requirements:** None  
**Examiner's Name:** Prof. N. Assan

**INSTRUCTIONS**

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

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
<b>SECTION A</b>	<b>60</b>
<b>SECTION B</b>	<b>40</b>
<b>TOTAL ATTAINABLE MARKS</b>	<b>100</b>

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**SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION**

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**QUESTION 1**

- a) Differentiate mammogenesis, lactogenesis and lactopoiesis. [6]
- b) Give ONE hormone that regulate each of the above mentioned physiological processes. [3]
- c) Describe the let-down reflex (milk ejection reflex). [7]
- d) Mention FOUR farm activities that act as conditioned stimuli in milk ejection reflex in dairy cattle. [4]

**QUESTION 2**

- a) Define the concept environment as it relates to environmental physiology. [2]
- b) Describe the indicators of stress in livestock and poultry production. [10]
- c) Explain the role of hypothalamus in animal physiology. [8]

**QUESTION 3**

Describe in detail how homeostasis is accomplished in maintenance of a steady internal body environment in animals. [20]

**SECTION B: ANSWER ONLY TWO QUESTIONS**

**QUESTION 4**

- (a) Discuss the relationship between nephron structure and its functions. [10]
- (b) Discuss the hormones that affect osmoregulation. [10]

**QUESTION 5**

- (a) Name the ANY THREE gastric cell types and their secretions. [6]
- (b) Briefly highlight what activities takes place during the different phases of gastric secretion. [9]
- (c) What are the general functions of gastrointestinal tract? [5 ]

**QUESTION 6**

- (a) Discuss hormonal and ovarian changes during the estrous cycle. [10]
- (b) Summarise the functions of the ovaries and the uterus in ewes' reproductive system. [6]
- (c) Enumerate TWO hormones produced by corpus luteum and their role in female reproduction? [4 ]

### **QUESTION 7**

- a) Discuss the hormonal regulation during parturition in sows. [10]
- b) What are the FOUR properties of hormones. [4]
- c) There are about 1,000 seminiferous tubules in each testis. Discuss their role in male reproductive system. [6]