



UNIVERSITY OF SWAZILAND

1st SEM. 2014/2015

FINAL EXAMINATION PAPER

PROGRAMME: B.Sc. AGRICULTURAL EDUCATION YEAR 2, B.Sc. ANIMAL SCIENCE YEAR 2 AND B.Sc. ANIMAL SCIENCE (DAIRY OPTION) YEAR 2

COURSE CODE: AS 201

TITLE OF PAPER: ANATOMY AND PHYSIOLOGY OF FARM ANIMALS

TIME ALLOWED: TWO (2) HOURS

INSTRUCTIONS: ANSWER ANY FOUR (4) QUESTIONS.

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR.

QUESTION ONE

Write short Notes on:

- (a) Blood water homeostasis (Osmoregulation). **(5 Marks)**
- (b) Hypophyseal portal circulation. **(5 Marks)**
- (c) Importance of Anatomy and Physiology. **(5 Marks)**
- (d) Oestrous signs in cattle. **(5 Marks)**
- (e) The pelvic cavity in cattle. **(5 Marks)**

QUESTION TWO

Compare between:

- (a) Compact bone and spongy bone. **(5 Marks)**
- (b) Rumen and the Monogastric stomach of a pig. **(10 Marks)**
- (c) Describe and explain the function and classification of the muscular system. **(5 Marks)**
- (d) Rigor mortis and muscle contraction. **(5 Marks)**

QUESTION THREE

- (a) Describe the structural and functional organization of the foetal blood circulatory system in farm animals. **(15 Marks)**
- (b) List the modifications of the foetal blood circulatory system from that of the adult pulmonary and systemic blood circulatory systems. **(5 Marks)**
- (c) What are the reasons for the modification of the foetal blood circulatory system from that of the adult system? **(5 Marks)**

QUESTION FOUR

- i. Describe the anatomy and function(s) of the following anatomical structures:
- 1) The Nasal cavity **(5 Marks)**
 - 2) The Brain stem **(5 Marks)**
 - 3) The Articular disc **(3 Marks)**
 - 4) Legs and Ankles **(3 Marks)**
 - 5) The Udder **(5 Marks)**
- ii. Explain why it is important to carefully judge and evaluate the external anatomical features of Farm animals. **(4 Marks)**

QUESTION FIVE

Explain and/ or contrast the following:

- (a) The Nerve impulse **(5 Marks)**
- (b) Terminal and respiratory bronchioles **(5 Marks)**
- (c) Polarised and depolarised Nerve impulse membrane **(5 Marks)**
- (d) Digestion in the crop and gizzard in poultry **(5 Marks)**
- (e) How milk production is continued and maintained during the lactation period. **(5 Marks)**