



**1<sup>st</sup> SEMESTER 2006/2007**

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**UNIVERSITY OF SWAZILAND  
FINAL EXAMINATION PAPER**

**PROGRAMME : DIPLOMA IN AGRICULTURE YEAR II AND  
AGRICULTURAL EDUCATION YEAR II**

**COURSE CODE : APH 201**

**TITLE OF PAPER : ANATOMY AND PHYSIOLOGY**

**TIME ALLOWED : TWO HOURS**

**INSTRUCTIONS : ANSWER ANY FOUR QUESTIONS**

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

**QUESTION ONE**

- a. Describe the organization of the thoracic cavity and the arrangements of the pericardium and the pleural membranes in relation to the heart, the lungs and the wall of the thoracic cavity. (15 Marks)
- b. Explain how the process of invagination resulted in the heart being covered by the pericardium. (10 Marks)

**QUESTION TWO**

- a. Name two (2) parts of the skeleton of farm animals and list the components under each part. (5 Marks)
- b. Describe the general structure of a typical synovial joint of farm animals. (15 Marks)
- c. Name the types of synovial joints of farm animals and indicate the type (s) of movement (s) each type of synovial joint allows. (5 Marks)

**QUESTION THREE**

- a. Describe the structural organization of the respiratory portion of the respiratory system of farm animals. (5 Marks)
- b. Explain how the exchange of gases oxygen and carbon dioxide take place in the respiratory system of farm animals. (5 Marks)
- c. Trace the route an oxygen molecule will take from the alveolus in the lungs to the cell in the small intestine and the route carbon dioxide molecule will take from the cell in the small intestine to the alveolus in the lungs. (15 Marks)

**QUESTION FOUR**

- a. List the parts of the digestive tract in a pig in their order from the mouth to the anus. (5 Marks)
- b. Describe the chemical digestion of the carbohydrates and proteins in the mouth, stomach and small intestine in the pig. (20 Marks)

**QUESTION FIVE**

Describe the functions of the following hormones.

- |    |                                       |           |
|----|---------------------------------------|-----------|
| a. | Follicular Stimulating Hormone (FSH). | (5 Marks) |
| b. | Luteinizing Hormone (LH).             | (5 Marks) |
| c. | Oestrogen                             | (5 Marks) |
| d. | Testosterone.                         | (5 Marks) |
| e. | Progesterone                          | (5 Marks) |

**QUESTION SIX**

- a. Give an account of how you would influence the gilt to attain puberty at an early age. (15 Marks)
- b. Explain why the breeding of this gilt should be delayed for several months after she has attained puberty. (10 Marks)