

SIR ARTHUR LEWIS COMMUNITY COLLEGE

DIVISION OF AGRICULTURE

END OF SEMESTER ONE EXAMS

ANIMAL SCIENCE- ASC 102

#A34

Duration: 2 ½ hrs

Tuesday, 9th December 2008

9:00 a.m.



INSTRUCTIONS:

This paper consists of two sections, sections A and B. Section A consists of two compulsory questions and section B consists of 4 questions, of which you must do any three.

You are to answer the questions on the paper provided.

Answer each question on a separate sheet of paper.

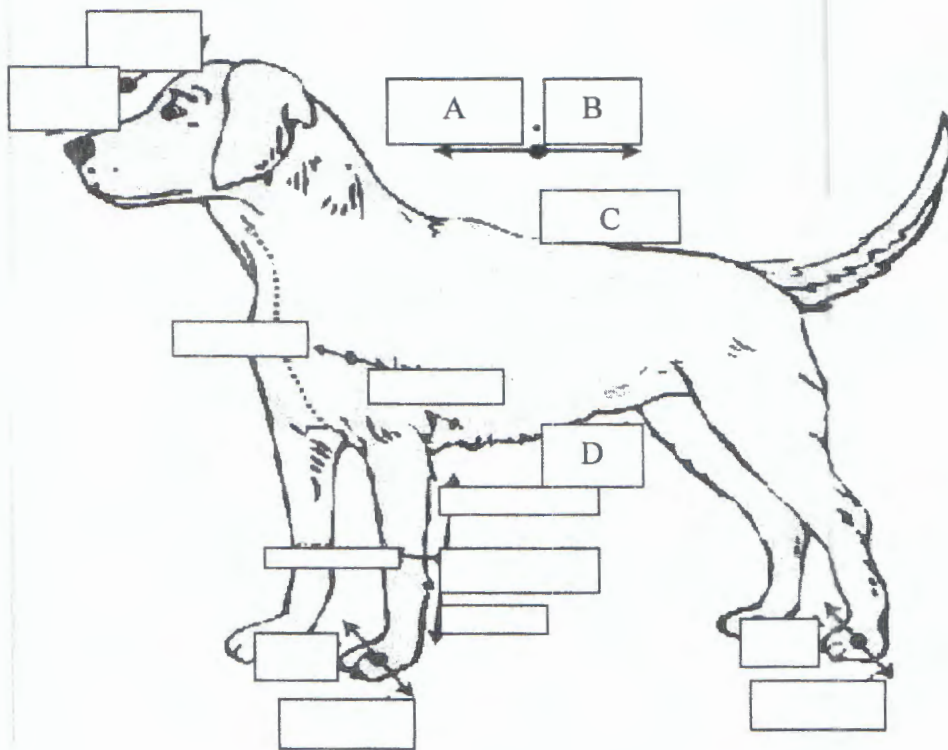
SECTION A

This section consists of two (2) questions, questions 1 and 2. You **MUST** answer **BOTH** questions. Each question is worth a total of 20 marks, but marks allocated to each part of a question are indicated in brackets at the end of each part.

1. (a) With the aid of diagrams, describe the cell cycle of a germline cell. 7
~~15~~ marks)
- (b) Give **THREE** (3) differences between mitosis and meiosis. 3
~~5~~ marks)
2. (a) By stating differences in **structure** and **function**, distinguish between:
- (i) rough endoplasmic reticulum and smooth endoplasmic reticulum. (4 marks)
- (ii) nucleus and mitochondria (4 marks)

(b) Several terms are used to describe the anatomy of animals. On the diagram which follows, letters A, B, C and D have been used to indicate some parts of a dog's body. What anatomical terms are used to describe each of the parts labelled A, B, C and D?

(4 marks)



- (c) What does the term "bilateral symmetry" mean? (2 marks)

- (d) Place the following list of taxonomic categories in their correct sequence beginning with the largest unit of classification and ending with the smallest.

genus phylum, family, species, order, class
(3 marks)

- (e) Name a genus of insects. (1 mark)
- (f) Name two types of neurons. (2 marks)

SECTION B

This section consists of FOUR (4) questions. You are to answer ANY THREE. Each question is worth a total of 20 marks, however marks allocated to each part of a question are indicated in brackets at the end of each part.

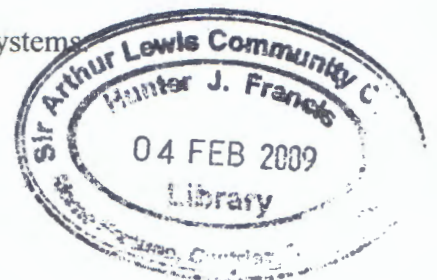
1. a. Copy the following table onto your answer sheet.

Complete it by providing the missing information relating to target cell and origin of EACH hormone produced. (8 marks)

HORMONE	TARGET CELL	ORIGIN
Thyroxine		
Insulin		
Follicle stimulating hormone		
Melatonin		
Epinephrine		
Parathyroid hormone		
Antidiuretic hormone		
Androgen		

- b. Using the following categories, compare the endocrine and nervous systems

general function
reaction to stimuli
duration of effects



target tissues

chemical messenger

messenger producing cells

(12 marks)

2. (a) What is meant by the term “cellular respiration”? (2 marks)
- (b) What is the equation for cellular respiration? (1 mark)
- (c) Cellular respiration takes place in three stages. Briefly explain what happens at each stage. (9 marks)
- (d) List the four major types of tissues. (4 marks)
- (e) State the function of ^{any two} each type listed in (a) above. (4 marks)
3. (a) There are five stages of the oestrus cycle, name them. (5 marks)
- (b) The stages of the oestrus cycle are closely linked with the events taking place in the ovarian cycle. Explain what is happening in the ovarian cycle during each of the stages that you listed in (a) above. (15 marks)
4. (a) The following diagrams illustrate the digestive systems of two classes of livestock.

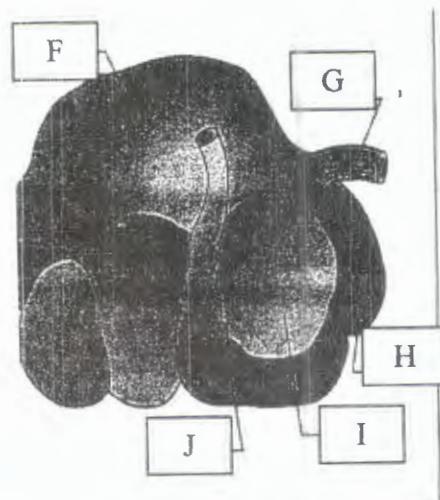
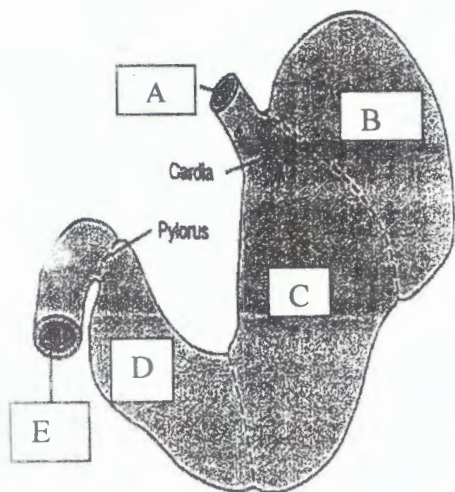


Diagram A _____

Diagram B _____

- (a) Label each diagram. (2 marks)
- (b) Name the parts labelled A-J. (10 marks)
- (c) Explain how digestion takes place in the stomach of a goat. (8 marks)

END OF TEST

Animal Science Semester 1 2008/2009 December 9th 2008