

SIR ARTHUR LEWIS COMMUNITY COLLEGE

DIVISION OF AGRICULTURE

END OF SEMESTER ONE EXAMS



ASSOCIATE DEGREE IN GENERAL AGRICULTURE

PAPER II

ANIMAL SCIENCE- ASC 102

Duration: 2 ½ hrs

AS2

**READ ALL INSTRUCTIONS CAREFULLY BEFORE
BEGINNING THE PAPER**

1. Ensure that ALL personal electronic devices are switched off for the duration of this exam.
2. This paper consists of TWO sections, Sections A and B.
3. Section A consists of ONE COMPULSORY question. Section B consists of 4 questions, of which you must do ANY THREE.
4. Instructions for EACH section are written at the beginning of that section.
5. You are to answer **ALL** questions on the paper provided.
6. Answer **EACH** question on a separate sheet of paper.

SECTION A

This section consists of one (1) compulsory question worth 40 marks. Marks allocated to each part of a question are indicated in brackets at the end of each part.

1.

a. (i) Differentiate between **somatic** and **germline** cells. (2 mks)

(ii) With the aid of diagrams, explain the cell cycle of a somatic cell. (20 mks)

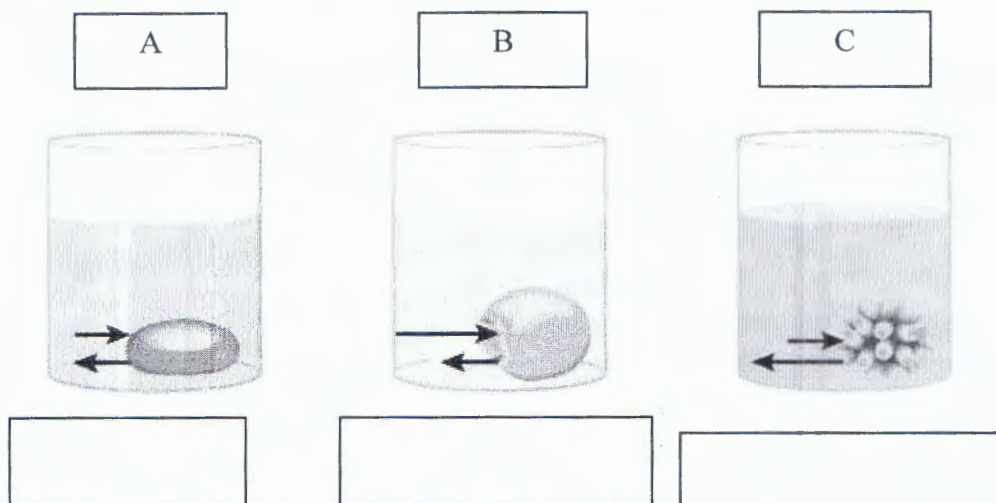
b. (i) Differentiate between the terms “active” and “passive” cell membrane processes. (2mks)

(ii) Explain ANY THREE active membrane processes. (6 mks)

c. The following diagrams represent the results obtained at the end of a laboratory exercise investigating cell membrane processes.

i. What membrane process is represented in the diagrams A, B and C? Is it an active or a passive membrane process? (1 mk)

ii. Explain what happened in each beaker A, B and C. (9 mks)



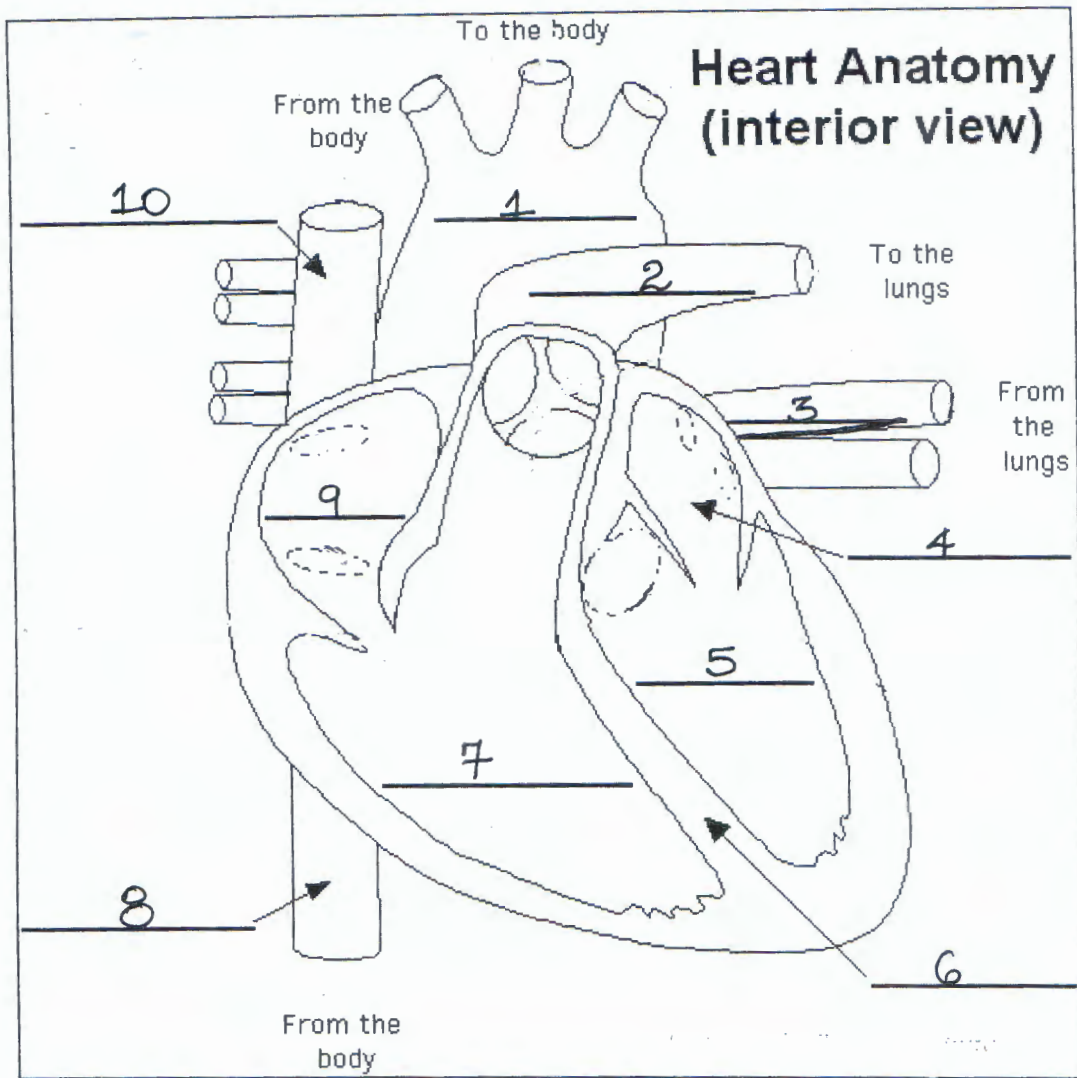
SECTION B

*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. (i) Using **ANY** six (6) hormones, complete the following table by indicating the hormone, the gland where each hormone is produced and ONE function of each hormone. (18 marks)

HORMONE	GLAND WHERE PRODUCED	FUNCTION

- (ii) What four hormones have hyperglycaemic effects in the body? (2 mks)
2. a. Differentiate between the following pairs of terms; (6 mks)
- i. **Central nervous system** (CNS) and **peripheral nervous system** (PNS)
 - ii. **Afferent** and **efferent** nerves.
 - iii. **Somatic nervous system** and **autonomic nervous system**
- b. By what other names are afferent and efferent nerves known? (2 mks)
- c. Using a clearly labelled diagram to assist you, explain the reflex arc. Be sure to indicate the roles of each type of neuron involved. (12 mks)
3. a. Briefly compare and contrast the process of digestion in monogastric and ruminant stomachs. (12 mks)
- b. Explain FOUR functions of the kidney. (4 mks)
- c. Briefly explain how urine is produced. (4 mks)
4. a. Label the diagram of the heart which follows: (10 mks)



- b. Explain the flow of blood through the heart. (10 mks)

END OF TEST