

SIR ARTHUR LEWIS COMMUNITY COLLEGE

DIVISION OF AGRICULTURE

END OF SEMESTER ONE EXAMS



ASSOCIATE DEGREE IN GENERAL AGRICULTURE

ANIMAL SCIENCE- ASC 102

PAPER 2

A60

12th December, 2012

Duration: 2 ½ hrs

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

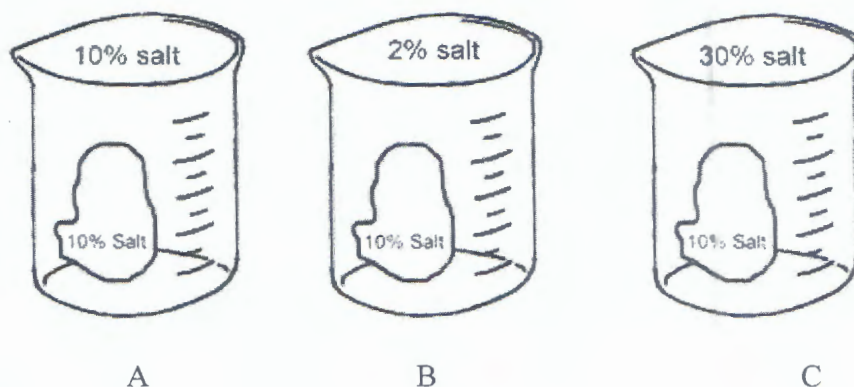
1. Ensure that ALL personal electronic devices are switched off for the duration of this exam.
2. This paper consists of TWO sections, Sections A and B.
3. Section A consists of ONE COMPULSORY question. Section B consists of 4 questions, of which you must do ANY THREE.
4. Instructions for EACH section 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 germline 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 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 is likely to happen 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. a. Give FOUR functions of the musculoskeletal system. (4mks)
b. Differentiate among the three types of cells that make up bone. (6 mks)
c. Compare the different types of muscles which make up the muscular system. (6mks)
d. Explain how a muscle contraction occurs. (4mks)

2. a. Explain the similarities and differences between the endocrine and nervous system. (10 mks)
- b. Using a clearly labelled diagram to assist you, explain the reflex arc. Be sure to indicate the roles of each type of neuron involved. (10 mks)
3. a. Briefly compare and contrast the process of digestion in monogastric and ruminant stomachs. (14 mks)
- b. Name the parts of the small intestine and give ONE function of each part. (6 mks)
4. a. Explain the flow of blood through the heart. (8 mks)
- b. Correctly identify the parts of the heart labelled 1-12 on the diagram which follows: (12 mks)

