SIR ARTHUR LEWIS COMMUNITY COLLEGE

DIVISION OF AGRICULTURE

END OF SEMESTER ONE EXAMS

CERTIFICATE IN GENERAL AGRICULTURE

ANIMAL STUDIES- ANS 104 **DECEMBER 2013**

Duration: 2 ½ hrs

#A63

SECTION A

This section consists of 20 True and False questions. You are to answer ALL questions. Indicate your answer by SHADING the letter T for true or F for false on the answer sheet provided. EACH question is worth 1 mark.

1. An anatomic plane is an imaginary slice through an animal's body.
2. Anatomy deals with the function of the body and its parts.
3. Prokaryotic cells have a nucleus.
4. Mitochondria contain the DNA, RNA, and enzymes necessary to make protein.
5. The cell membrane is considered to be selectively permeable because it allows some molecules to pass through but not others.
6. Two processes by which substances are actively moved into or out of a cell are active transport and osmosis.
7. The cytoplasm is the inner substance of the cell, excluding the nucleus.
8. Centrioles are the largest organelles in the cell.
9. Ribosomes attached to the endoplasmic reticulum synthesise proteins intended for use in the plasma membrane.
10. The golgi apparatus modifies proteins.
11. The nucleus is surrounded by a fully permeable membrane called the nuclear pore.
12. The cell membrane is also known as the plasma membrane.
13. The cell membrane is made of a phosphor-lipid bi layer.
14. Cilia help regulate protein synthesis and other molecular interactions.
15. Exocytosis refers to the process whereby cells engulf solid substances in order to destroy them.
16. Diffusion is defined as the movement of water molecules from an area of high concentration of water molecules to an area of low concentration of water molecules across a semi permeable membrane.
17. Tissues are made up of groups of organs that work together for common purposes.
18. The four main types of tissues found in the bodies of animals are; epithelial tissue, nervous tissue, cardiac tissue, muscle tissue.

19. Epithelial tissue filter biochemical substances, manufactures secretions and provides sensory inputs.

20. Muscle tissue enables movement.

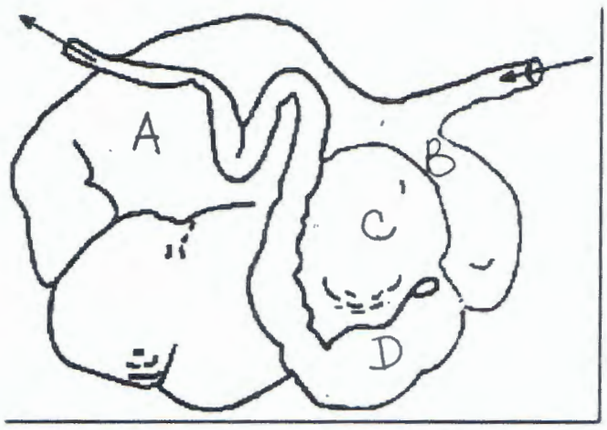
SECTION B

This section consists of FIVE questions, you are to answer ALL. Marks allocated to each part of the question are indicated in brackets at the end of each question.

1.

a. Explain the steps involved in digestion in a sheep. (20 mks)

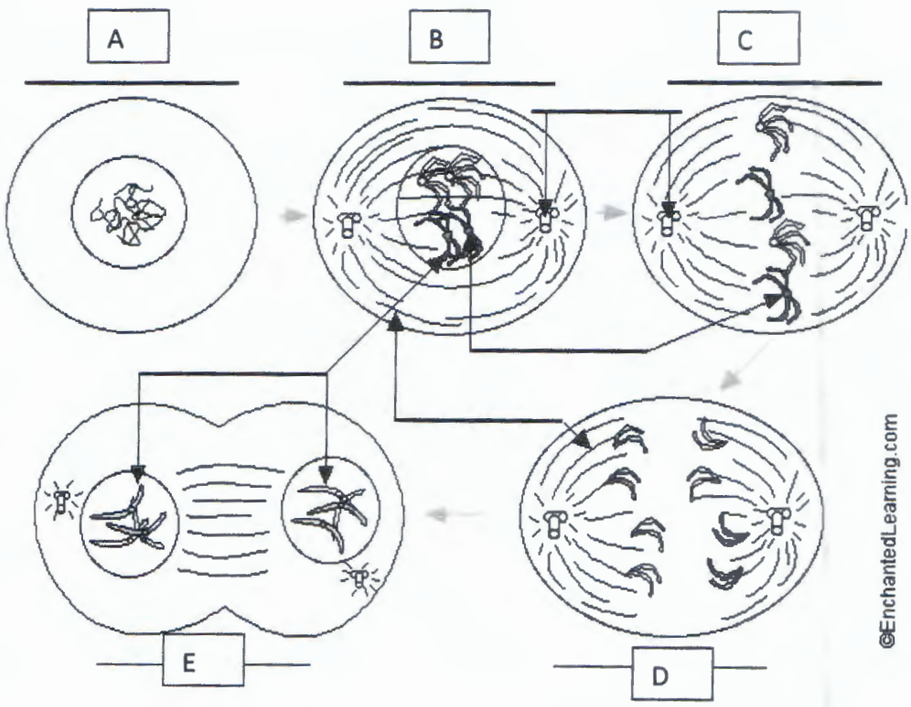
b. Correctly name the parts labelled A-E in the following diagram. (5mks)



2. The following diagrams illustrate a process in an animal cell.

(a) Name the process. *(1 mk)*

(b) Complete the diagram by providing the correct label for letters A-E. *(4mks)*



(c) Explain the process named in 2 (a) above. *(20 mks)*

3. (a) A list of terms has been provided below. Match these terms with the descriptions provided in the table on your answer sheet. (11mks)

Synapse, Axon, Myelin sheath, Nerve impulse, Sense receptor, Response, Reflex, Cell body, Dendrite, Neurotransmitter, Axon terminal

(b) Neurons are the basic functional units of the nervous system. Name the different types of neurons. *(3 mks)*

(c) Differentiate among the types of neurons listed above. *(6 mks)*

4. (a) You have been given a list of endocrine glands on your answer sheet. Use the information given here to complete the table on your answer sheet. *(18 mks)*

HORMONE	FUNCTION
Follicle Stimulating hormone	Controls blood glucose levels.
Testerone	Prepares the lining of the uterus for pregnancy.
Insulin	Stimulates the growth of long bones.
Progesterone	Stimulates development of the ovarian follicle.
Thyroxine	Causes contractions during parturition and stimulates milk let down.
Growth hormone	Influences of growth and development of young animals.
Antidiuretic hormone	Regulate blood calcium levels.
Parathyroid hormone	Stimulates the development of the male sexual characteristics.
Oxytocin	Stimulates absorption of water from the kidney tubule

(b) Give **ONE** way in which the endocrine system is similar to the nervous system and ONE way in which they are different. *(2 mks)*

3. (a)

Term	Function
	1. The long fibre that carries the nerve impulses.
	2. The connection between adjacent neurons.
	3. The chemical secreted into the gap between neurons at a synapse.
	4. A rapid automatic response to a stimulus.
	5. The covering of fatty material that speeds up the passage of nerve impulses.
	6. The structure at the end of an axon that produces neurotransmitters to transmit the nerve impulse across the synapse.
	7. The high speed signals that pass along the axons of nerve cells.
	8. The branching filaments that conduct nerve impulses towards the cell.
	9. The sense organ or cells that receive stimuli from within and outside the body.
	10. The reaction to a stimulus by a muscle or gland.
	11. The part of the nerve cell containing the nucleus.

SECTION A

ENDOCRINE GLAND	HORMONE	FUNCTION
Parathyroid gland		
Anterior Pituitary		
Anterior Pituitary		
Corpus luteum		
Thyroid		
Pancreas		
Posterior pituitary		
Pineal gland		
Testes		

Choose the Best Answer
Fill-in Bubble Completely

Student ID: _____

Semester: 1

1. Ⓘ Ⓔ
2. Ⓘ Ⓔ
3. Ⓘ Ⓔ
4. Ⓘ Ⓔ
5. Ⓘ Ⓔ
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18. Ⓘ Ⓔ
19. Ⓘ Ⓔ
20. Ⓘ Ⓔ