



**SIR ARTHUR LEWIS COMMUNITY COLLEGE
FACULTY OF AGRICULTURE AND TOURISM
ACADEMIC YEAR (2024/2025) – SEMESTER ONE
END OF SEMESTER FINAL EXAMINATION**

COURSE CODE : AGR116

COURSE TITLE : Animal Science

LECTURER : Allan Oculien

DATE : Wednesday 11th December 2024

TIME : 9:00 AM

DURATION : 1 ½ Hours

STUDENT ID # : _____

GENERAL INFORMATION AND INSTRUCTIONS

This paper consists of **Two Sections**. You are required to answer **ALL** questions. Use the answer sheet provided.

SECTION A consists of thirty (30) Multiple Choice Questions. One mark will be awarded for each correct answer.

SECTION B consists of Three (3) questions. Answer **ALL** questions. This section is worth **Thirty (34) marks**.

- Students must sign **IN** and **OUT** on the examination class list.
- Write your ID number on the question paper.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

SECTION A

INSTRUCTIONS: You have been provided with an answer sheet for this section. Answer all THIRTY (30) questions in this section by shading the letter which corresponds to the correct answer.

1. Ribosomes produce:
 - a. Glucose
 - b. Lipids
 - c. Proteins
 - d. Bacteria

2. This cell structure modifies, packages, and distributes proteins destined for secretion or intracellular use.
 - a. Golgi apparatus
 - b. Lysosomes
 - c. Ribosomes
 - d. Mitochondria

3. Functions of epithelial cells include:
 - a. Secretion or excretion of biochemical substances
 - b. Filtering of biochemical substances
 - c. Providing sensory input
 - d. All of the above

4. Which of the following are functions of connective tissue?
 - a. Forms protective sheath around organs
 - b. Acts as a reserve for energy
 - c. Plays a vital role in the healing process and in controlling invading organisms
 - d. All of the above

5. Fat, cartilage, and bone are examples of:
 - a. Epithelial tissue
 - b. Connective tissue
 - c. Muscle tissue
 - d. Nervous tissue

6. Examples of irregularly shaped bones include:
 - a. Sesamoids and vertebrae
 - b. Vertebrae and tarsal bones
 - c. Scapulas and sesamoids
 - d. Skull bones and carpal bones

7. What type of muscle is referred to as voluntary striated muscle?
 - a. Cardiac muscle
 - b. Smooth muscle
 - c. Skeletal muscle
 - d. None of the above

8. Which of the following is a function of the liver?
 - a. Production of aminopeptidase and carboxypeptidase
 - b. Production of red blood cells
 - c. Production of ascites
 - d. Production of cholesterol

9. What carries bile acids from the gallbladder to the common bile duct?
 - a. Cystic duct
 - b. Pancreatic duct
 - c. Hepatic duct
 - d. Hepatic portal system

10. The posterior pituitary gland receives these hormones from the hypothalamus.
- Luteinizing hormone
 - Oxytocin
 - Antidiuretic hormone
 - b and d
11. The pituitary gland is also known as the:
- Hypophysis
 - Parahypophysis
 - Lesser hypothalamus
 - Portal pituitary
12. This hormone helps trigger and maintain lactation:
- Prolactin
 - Luteinizing hormone
 - Oxytocin
 - Parathormone
13. The hyperglycemic effect results from the release of _____ from the anterior pituitary.
- Insulin
 - Thyroid-stimulating hormone
 - Growth hormone
 - Prolactin
14. Follicle-stimulating hormone (FSH):
- Simulates the lining cells of follicles in the female to produce estrogen
 - Stimulates the production of testosterone in males
 - Stimulates oogenesis in males
 - Stimulates the lining cells of follicles in the female to produce testosterone
15. This structure produces progestin hormones needed to maintain pregnancy:
- Uterus
 - Corpus luteum
 - Ovary
 - The embryo
16. Rising amounts of this hormone in the blood cause the anterior pituitary to produce less and less follicle-stimulating hormone (FSH).
- Progestins
 - Estrogen
 - Oxytocin
 - Prolactin
17. This hormone stimulates strong uterine contractions in the uterus at the time of parturition:
- Prolactin
 - Estrogen
 - Progesterone
 - Oxytocin
18. Calcitonin:
- Is released by the parathyroid gland
 - Functions to prevent hypercalcemia
 - Functions to prevent hypocalcemia
 - Is released by the adrenal medulla
19. The target for epinephrine and norepinephrine is:
- Bones only
 - Mammary gland only
 - Thyroid gland only
 - The whole body

20. The pancreas produces insulin, which functions to:
- Raise blood levels of glucose
 - Lower blood levels of glucose
 - Inhibit the secretion of growth hormone (GH)
 - Diminish the activity of the gastrointestinal tract
21. Luteinizing hormone is also known as:
- Testosterone
 - Interstitial cell-stimulating hormone (ICSH)
 - Androgens
 - Follicle-stimulating hormone (FSH)
22. When are spermatozoa transported from the vas deferens to the abdominal urethra?
- During ejaculation
 - Just before they enter the efferent ducts
 - Immediately after leaving the seminiferous tubules
 - Right after they fertilize an ovum
23. Where does fertilization USUALLY take place?
- Fallopian tube
 - Round ligament
 - Vagina
 - Uterus
24. What hormone level must increase (or surge) before ovulation will occur?
- Follicle stimulating hormone
 - Estrogen
 - Luteinizing hormone
 - Progesterone
25. This tissue transmits information around the body and controls body functions:
- Nervous
 - Connective
 - Muscle
 - Epithelial
26. Which activity requires energy expenditure?
- Osmosis
 - Facilitated diffusion
 - Active transport
 - Passive diffusion
27. This cell structure modifies, packages, and distributes proteins destined for secretion or intracellular use
- Golgi apparatus
 - Lysosomes
 - Ribosomes
 - Mitochondria

28. The end of telophase is marked by:
- a. Metaphase
 - b. Cytokinesis
 - c. Anaphase
 - d. Prophase
29. Why is the mid-piece of the spermatozoon referred to as the “power plant” of the cell?
- a. Its long thin tail propels it forward.
 - b. It contains enzymes that allow it to reach and penetrate the ovum.
 - c. It is responsible for the male libido.
 - d. It contains many energy-producing mitochondria.
30. Reproductive cells divide via a process known as:
- a. Interphase
 - b. Mitosis
 - c. Meiosis
 - d. Prophase

SECTION B

INSTRUCTIONS: This section consists of **THREE (3)** questions. You are to answer **ALL** questions, however, marks allocated to each part of a question are indicated in brackets at the end of each part.

QUESTION ONE

Nervous and Endocrine Systems

- A. Complete the following table comparing the endocrine and nervous systems. [10 marks]

Characteristic	Endocrine system	Nervous system
General function		
Reaction to stimuli		
Duration of effects		
Chemical messenger		
Target tissues		

- B. Differentiate between the following pairs of terms: [6 marks]

- i. Central nervous system (CNS) and peripheral nervous system (PNS)
- ii. Afferent and efferent nerves
- iii. Somatic nervous system and autonomic nervous system

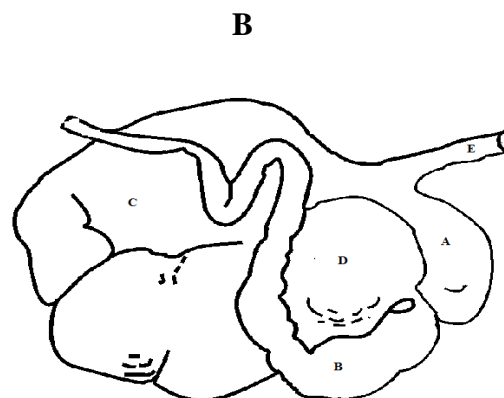
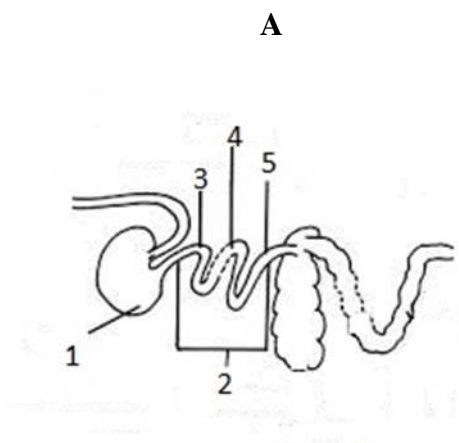
Total 16 marks

QUESTION TWO

Digestive, Cardiovascular & Urinary Systems

The process of digestion occurs differently in animals based on the diets they consume. Diagrams A and B illustrate two types of digestive systems found in farm animals.

- i. For EACH diagram, correctly identify the structures labelled 1-5 and A-E respectively. [10 marks]

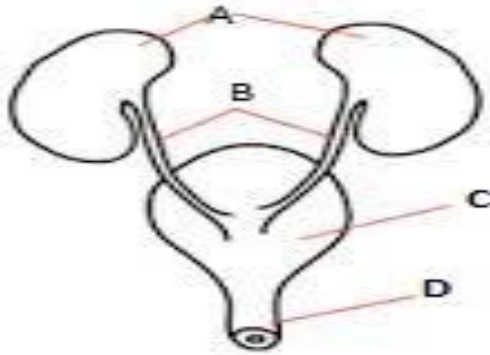


Total 10 marks

QUESTION THREE

The following simplified diagram illustrates one body system.

- i. Correctly identify this system and label the parts of the diagram indicated by letters A to D. **[5 marks]**



- ii. State THREE (3) functions of the part labelled A.

[3 marks]

Total 8 marks