



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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University Examinations 2024/2025

FIRST YEAR FIRST SEMESTER EXAMINATION FOR CERTIFICATE IN ANIMAL HEALTH AND PRODUCTION

AAP 1101: ANATOMY AND PHYSIOLOGY I

DATE: JANUARY 2025

TIME: 1½ HOURS

INSTRUCTIONS:

*Answer question **ONE** and any other **TWO** questions*

QUESTION ONE (30 MARKS)

- a) State the functions of Epithelial tissue (5 Marks)
- b) List three body cavities and their anatomical boundaries (3 Marks)
- c) Define Homeostasis (2 Marks)
- d) Describe the structure and the functions of the following cell organelles
 - i. Cytoplasm (2 Marks)
 - ii. Nucleolus (2 Marks)
 - iii. Lysosomes (2 Marks)
 - iv. Mitochondria (2 Marks)
- e) List the components of the lymphatic system (5 Marks)
- f) Draw and label parts of a neuron (5 Marks)
- g) State two hormones secreted by the pituitary gland (2 Marks)

QUESTION TWO (15 MARKS)

- a) Discuss FIVE factors affecting the rate of diffusion (5 Marks)
- b) With the aid of examples describe the two mechanisms of homeostasis (10 Marks)

QUESTION THREE (15 MARKS)

- a) List the components of the Central Nervous System (CNS) (2 Marks)
- b) Outline three muscles of mastication indicating their points of origin (6 Marks)
- c) Discuss pituitary gland under the following subheadings
 - i. Anatomical location (2 Marks)
 - ii. Sub-divisions (2 Marks)
 - iii. List two hormones secreted by each subdivision in (ii) above (3 Marks)

QUESTION FOUR (15 MARKS)

- a) State the point of origin and insertion of *Gastrocnemius* muscle (2 Marks)
- b) State three Cranial nerves and their functions (6 Marks)
- c) Compare and contrast the structure of a cardiac muscle from that of a skeletal muscle (3 Marks)
- d) Outline two connective tissues and their functions (4 Marks)