



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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University Examinations 2023/2024

FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF BIOCHEMISTRY, BACHELOR OF SCIENCE IN BIOTECHNOLOGY, BACHELOR OF SCIENCE IN ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT AND BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES

SZL 3150: INTRODUCTION TO ANIMAL PHYSIOLOGY

DATE: APRIL 2024

TIME: 2 HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

- a) Distinguish between neural, systemic and patho – physiology (3 marks)
- b) i. Highlight three functions of epithelial tissues (3 marks)
ii. Describe types of muscle tissue (3 marks)
- c) Sketch a typical blood vessel showing the arrangement of various tissues (3 marks)
- d) Describe girdles as a component of the skeletal system (3 marks)
- e) i. Outline three factors governing gastric emptying (3 marks)
ii. Explain the process of absorption in the small intestines (3 marks)
- f) Describe the activities at
 - i. The Bowman’s capsule of a kidney tubule (3 marks)
 - ii. The synaptic cleft or synapse of a nerve cell (3 marks)

g) Describe the hormones from anterior pituitary that play a role in the oestrous cycle
(3 marks)

QUESTION TWO (20 MARKS)

Discuss functional homeostasis (20 marks)

QUESTION THREE (20 MARKS)

Describe probable disorders of the cardiovascular, lymphatic and immune systems
(20 marks)

QUESTION FOUR (20 MARKS)

Discuss the physiology of the mammalian lung in gaseous exchange (20 marks)