



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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University Examinations 2022/2023

SECOND YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF SCIENCE IN EDUCATION SCIENCE AND BACHELOR OF SCIENCE
BIOCHEMISTRY

SZA 3250: COMPARATIVE ANIMAL PHYSIOLOGY

DATE: APRIL 2023

TIME: 2 HOURS

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

QUESTION ONE (30 MARKS)

- a) Explain the evolution of viviparity (4 marks)
- b) Describe the characteristics of respiratory surfaces found in animals (5 marks)
- c) Outline the role of blood in terrestrial animals (5 marks)
- d) Evaluate the role of saliva in digestion in animals (5 marks)
- e) List the merits of internal gills over external gills in organisms where they are found (5 marks)
- f) Define the following terms:
 - (i) Herbination (2 marks)
 - (ii) Aestivation (2 marks)
 - (iii) Heterothermy (2 marks)

QUESTION TWO (20 MARKS)

Discuss asexual reproductive mechanisms in animals (20 marks)

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QUESTION THREE (20 MARKS)

Write an essay on hormonal influence in reproduction, growth and development in animals
(20 marks)

QUESTION FOUR (20 MARKS)

Describe the adaptations of the vertebrate eye to different habitats/function (20 marks)