



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
RESIT EXAMINATIONS FOR DEGREE OF BACHELOR OF EDUCATION SCIENCE
WITH IT
MAIN CAMPUS - REGULAR

COURSE CODE: SZL 304
COURSE TITLE: COMPARATIVE ANIMAL PHYSIOLOGY
EXAM VENUE: STREAM: (BSC)
DATE: EXAM SESSION:
TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in Section A and Any two questions in Section B**

SECTION A: Short Answer Questions (30 MARKS)

1. Outline three broad agenda for comparative physiology (3 marks)
2. Distinguish among acclimation, acclimatization and adaptation. (3 marks)
3. Explain two different body temperature regulation mechanisms in named vertebrates. (3 marks)
4. Outline the generation of ATP in vertebrates through chemostasis. (3 marks)
5. Explain the functions of the skin. (3 marks)
6. State three organs that have evolved in diverse vertebrates to support them in digestion. (3 marks)
7. Give any three specific physiological effects of estrogen and progesterone in mammals. (3 marks)
8. Name any three nitrogenous waste products in three different vertebrates. (3 marks)
9. Describe the process of neurotransmission through electrical synapse. (3 marks)
10. Explain the physical properties of the lung. (3 marks)

SECTION B: Essay Questions (40 Marks)

11. In mammals, heart rate during periods of exercise is linked to the intensity of exercise.
Discuss the interactions of the respiratory, circulatory and nervous systems during exercise. (20 marks)
12. Explain the role of hypothalamus as an endocrine system (20 marks)
13. Discuss how feedback mechanism maintain homeostasis of glucose and calcium ions concentration in blood of a named mammal. (20 marks)
14. Analyse the role of the liver in detoxification. (20 marks)