



# MACHAKOS UNIVERSITY

University Examinations 2018/2019

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

FIRST YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF SCIENCE IN BIOLOGY

KST 101: AGRICULTURAL ZOOLOGY

DATE: 26/7/2019

TIME: 11.00-1.00 PM

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## INSTRUCTIONS

1. Answer Question 1 (compulsory) and **any two** questions in Section B.
2. Use clean well labelled diagrams wherever appropriate.

## SECTION A

### QUESTION ONE

- a) Describes the hypotheses put across to explain the origins of the atmospheric oxygen in the Origin of Earth's and life forms (3 marks)
- b) What is the importance of classification of organisms (3 marks)
- c) Give at least 6 symptomatic features of the African sleeping sickness (3 marks)
- d) Highlight at least 6 key characteristics of the kingdom animalia (3 marks)
- e) Draw a well labelled structure of the animal Nucleus structure (3 marks)
- f) Describes three mechanisms of cell endocytosis (3 marks)
- g) Highlight three MAIN functions of macrophages in helping our bodies resist diseases (3 marks)
- h) Name and describe the functions of at least 2 hormones produced during the heat stress (3 marks)
- i) Describe how fish osmoregulate their body in freshwater (3 marks).
- j) Briefly describe what you understand by the term 'microevolution' giving its mechanism. (3 marks)

## **SECTION B**

### **QUESTION TWO**

Identify at least 5 human heat related illness and in each case give the causes, signs, symptoms and the methods of preventions (20 marks)

### **QUESTION THREE**

- a) Compare and contrast Systolic and pulmonary circulation. (8 marks)
- b) Discuss in details any 6 problems associated with the human circulatory systems (12 marks)

### **QUESTION FOUR**

- a) Discuss in details at least three types of asexual reproductions in the animalia kingdom (10 marks)
- b) Discuss in details the event in animal sexual reproductions (10 marks)