



# MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF EDUCATION (SCIENCE)

BACHELOR OF AGRICULTURAL EDUCATION AND EXTENSION

BACHELOR OF SCIENCE IN BIOLOGY

SZL 201: INVERTEBRATE ZOOLOGY

DATE: 16/3/2022

TIME : 8:30 – 10:30 AM

---

## INSTRUCTIONS

Answer Question One And Any Other Two Questions

Answer Question 1 and Any two other questions

### Question 1

- i. Define the following terminologies (3 marks)
  - a) Collar cells
  - b) Spongin
  - c) Pore cells
- ii. Using examples describe two forms of Coelenterata (3 marks)
- iii. Describe how Clams and bivalves get their food (3 marks)
- iv. Explain the function of hydrostatic skeleton in the phylum annelida
- v. Describe the following terminologies (3 marks)
  - a) Isogamous
  - b) anisogamous
  - c) Oogamous
- vi. Using a diagram describe the Cestode tegument (3 marks)
- vii. Outline the unique features of the Schistosome life cycles (3 marks)
- viii. Using a diagram describe an arthropod simple eye (3 marks)
- ix. Describe the following terminologies (3 marks)
  - a) Opisthosoma
  - b) Cephalothorax
  - c) Hemocoel

- x. Describe the step by step mode of action of the gatrovascular compartment during feeding of Cnidarians (3 marks)

**Question 2**

- a) Discuss an arthropod exoskeleton (8 marks)  
b) With the help of a diagram discuss the internal and external morphology of spiders (20 marks)

**Question 3**

- a) Describe the host-vector pattern of a known Zoomastigophora parasite in Africa (10 marks)  
b) Illustrate the life cycle of *Entamoeba histolytica* (10 marks)

**Question 4**

Discuss the great specialization of the Crustacean appendages (20 marks)

**Question 5**

Using a diagram discuss the general feature, internal morphology and anatomy of a bivalve (20 marks)