



MACHAKOS UNIVERSITY

University Examinations 2017/2018

SCHOOL OF PURE AND APPLIED SCIENCES

DEPARTMENT OF BIOLOGICAL SCIENCES

SECOND YEAR SECOND SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE IN BIOLOGY

SZL 201: INVERTEBRATE ZOOLOGY

DATE: 15/12/2017

TIME: 11.00-1.00 PM

INSTRUCTIONS

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

SECTION A

1. a) explain briefly the ecological roles played by sponges in their environment. (4 marks)
- b) Explain why "Insects are economically important to human". Briefly explain. (3 marks)
- c) explain the importance of nematodes to human. (3 marks)
- d) Differentiate between triploblastic and diploblastic body conditions. (3 marks)
- e) Explain the meaning of the following:
 - i. Tortion (1 mark)
 - ii. Lophophore (1 mark)
- f) Outline the life cycle of *Aurelia SPP* (3 marks)
- g) State **three** adaptations of terrestrial animals to their environments. (3 marks)
- h) Explain briefly **three** bivalve groups arising from adaptive radiation. (3 marks)
- i) Draw a well labeled structure of a trypanosome. (3 marks)
- j) Outline the characteristics of **three** classes of the phylum Echinodermata. (3 marks)

SECTION B

- 2 . Discuss insect reproduction and development. (20 marks)
3. Discuss the differences between protostomes and deuterostomes. (20 marks)
4. With the help of diagrams, describe the sponge body forms. (20 marks)
5. Describe the lifecycle of *Fasciola hepatica* and explain the economic importance of the parasite to man. (20 marks)