



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
DEPARTMENT OF BIOLOGICAL SCIENCES
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE IN BIOLOGICAL SCIENCES AND BACHELOR OF EDUCATION
(SCIENCE) WITH IT
FIRST YEAR FIRST SEMESTER 2018/2019 ACADEMIC YEAR
MAIN CAMPUS - REGULAR

COURSE CODE: SZL 101/ SBI 3112
COURSE TITLE: INVERTEBRATE ZOOLOGY
EXAM VENUE: STREAM: (BED/BIO)
DATE: EXAM SESSION:
TIME: 2 HOURS

Instructions:

- 1. Answer ALL questions in Section A and Any two questions in Section B**
 - 2. Candidates are advised not to write on question paper**
 - 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**
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SECTION A: SHORT ANSWER QUESTIONS (30 MARKS)

1. Explain the three major distinguishing differences between invertebrates and vertebrates (3 marks)
2. Annelids and arthropods are believed to have a closer ancestral origin. List three similarities between both groups (3 marks)
3. Name three phyla of invertebrates that have developed neurons (3 marks)
4. Explain three ways in which a pellicle contributes to the survival of protozoa in various habitats. (3 marks)
5. List three phyla that exhibit *organ-system level* of organization (3 marks)
6. Name a phylum that exhibits metagenesis and describe the biological significance of this phenomenon (3 marks)
7. Name a phylum that is distinguished based on the presence of:
 - a) Dorsoventrally flattened body (1 mark)
 - b) Body covered by a calcareous shell (1 mark)
 - c) Have a vascular water system and endoskeleton made of calcareous ossicles (1 mark)
8. Describe three unique characteristics of nematodes (3 marks)
9. Comment on each of the following features in mollusks:
 - a) Excretory structures (1 mark)
 - b) Gaseous exchange (1 mark)
 - c) Mouth (1 mark)
10. Explain why traditional classification of invertebrates is considered to be invalid (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Citing three examples discuss the biology of Porifera. (20 marks)
12. Describe the biology of Platyhelminthes and ten mechanisms by which some of the species are adapted to parasitic mode of life. (20 marks)
13. Discuss the factors that influence the distribution of invertebrates in the world (20 marks)
14. Using specific examples explain why the study of invertebrates should be encouraged in Kenya (20 marks)