



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL, PHYSICAL, MATHEMATICS AND ACTUARIAL
SCIENCES

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN
BIOLOGICAL SCIENCES

3rd YEAR 1st SEMESTER 2022/2023 ACADEMIC YEAR

MAIN CAMPUS - REGULAR

COURSE CODE: SPB 9205
COURSE TITLE: ARTHROPOD BIOLOGY
EXAM VENUE: LAB 8/9 STREAM: (BED.SC)
DATE: 16/12/2022 EXAM SESSION: 9.00-11.00AM
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. Define the following terms: (3 marks)
 - i. Hemocoel
 - ii. Progoneate
 - iii. Uniramous
 - iv. Autotomy
 - v. Gonopods
 - vi. Ecdysis
2. Give three common names of members of the Phylum Annelida which is closely related to Arthropoda. (3 marks)
3. State names of at least three members of the class Arachnida. (3 marks)
4. Name three classes of Arthropoda that have only one pair of antennae. (3 marks)
5. State the scientific names of three species of mites and what each is known for. (3 marks)
6. Describe the difference in the life cycle of hard and soft ticks. (3 marks)
7. Briefly describe the morphology, anatomy and autotomy in Crayfish. (3 marks)
8. Give full common names of three types of centipedes. (3 marks)
9. State the three body regions of Hexapoda and appendages found on each of them. (3 marks)
10. Describe three forms of metamorphosis. (3 marks)

SECTION B: ESSAY QUESTIONS (40 MARKS)

11. Define Arthropods and outline the major characteristics of Arthropoda that sets the phylum apart from other invertebrates? (20 marks)
12. a). Which classes constitute the Subphylum Atelocerata?
b). Which are the general characteristics of Atelocerata?
c). Compare Millipedes and Centipedes. (20 marks)
13. a). Differentiate between Chelicerata and Mandibulata.
b). Describe how Crustaceans differ from other Arthropods. (20 marks)
14. Describe the characteristics of the Class Hexapoda including the anatomy and physiology of members of this class which distinguishes them from all other arthropods. (20 marks)