



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY
SCHOOL OF BIOLOGICAL AND PHYSICAL SCIENCES
DEPARTMENT OF BIOLOGICAL SCIENCES
4th YEAR SECOND SEMESTER 2016/2017 ACADEMIC YEAR UNIVERSITY
EXAMINATION FOR THE DEGREE OF BACHELOR OF EDUCATION (SCIENCE) WITH
IT
REGULAR

COURSE CODE: SZL 408
COURSE TITLE: GENERAL ENTOMOLOGY
EXAM VENUE: STREAM: (BED. SC.)
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. Outline three features that you would use to identify insects from the rest of the invertebrates during an ecological field survey along the shores of Lake Victoria. (3 marks)
2. List three distinguishing features of tsetse flies. (3marks)
3. How would you distinguish between the eggs, larvae and adult stages of *Anopheles* and *Culex mosquitoes* during a vector biology course. (3 marks)
4. State the similarities between the feeding habits of male and female adult sand flies and mosquitoes as vectors of human diseases. (3 marks)
5. List and explain how three species of parasites cause Leishmaniasis in man. (3 marks)
6. Name the parasite and vector responsible for the following diseases in humans. (3 marks)
 - (a) Filariasis
 - (b) Sleeping sickness
 - (c) Onchocerciasis
7. Explain why ecologists prefer biological control to chemical methods of insect pest and vector control. (3 marks)
8. List three main groups of insecticides used to control insects of agricultural and public health importance and name one example of target insect for each group of insecticide. (3 marks)
9. Describe three potential evolutionary outcomes of interspecific competition among insects. (3 marks)
10. Explain how you would enhance safety while implementing a vector control program where insecticides are used. (3 marks)

SECTION B: ESSAY (40 MARKS)

11. Describe beneficial and destructive effects of insects to man and his environment. (20 marks)
12. Discuss the life cycle and behavior of tsetse flies. (20 marks)
13. Insect vector populations fluctuate over time and in space. Outline factors that account for such dynamics. (20 marks)
14. Describe methods that are used for the management of tsetse fly and mosquito populations. (20 marks)